

# **LEBANESE AMERICAN UNIVERSITY**

The Role of Perceived Supervisor Support in Moderating the  
Influence of Professional Isolation Experienced During  
COVID-19 Remote Work on Employee Engagement

By

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A thesis submitted in partial fulfilment of the requirements for  
the degree of Masters of Science in Human Resources  
Management

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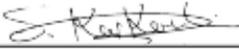
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To my number 1 supporter and my source of inspiration,

My brother & backbone, Dr. Garo Agopian

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# The Role of Perceived Supervisor Support in Moderating the Influence of Professional Isolation Experienced During COVID-19 Remote Work on Employee Engagement

Lori Agopian

## ABSTRACT

The primary aim of this research is to study the influence of professional isolation experienced during COVID-19 remote work on employee engagement while simultaneously studying the moderating role of perceived supervisor support on this relationship. In addition, this research study analyzes the varying need for supervisor support based on age, gender and educational level. This study utilizes the need-to-belong theory as its theoretical framework. For data collection purposes, an online questionnaire was leveraged to gather data from respondents, around the world, who experienced remote work during the COVID-19 pandemic. The present study uses SPSS statistical software to investigate the relationship between the different variables. The study finds that although employee engagement may not be a function of professional isolation, for remote workers who have high levels of professional isolation, nevertheless, when supervisor support is high, employee engagement levels tend to be high too. The study recommends that organizations empower supervisors in supporting and guiding their teams virtually during times of crisis. Finally, this study recommends future research to tackle the topic in cultural context and considering additional control variables.

Keywords: Professional Isolation, Remote Work, Employee Engagement, Engagement, Perceived Supervisor Support

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## **List of Abbreviations**

PSS: Perceived Supervisor Support

Federal Employee Viewpoint Survey : FEVS

# **Chapter One**

## **Introduction**

### **1.1. Introduction**

In an effort to contribute to previous literature related to remote work and further dwell on engagement theories, this thesis utilizes a survey to investigate the relationship between professional isolation experienced during remote work and employee engagement while simultaneously examining the role of perceived supervisor support, through moderation. This research also analyzes the need for supervisor support based on differences in gender, age and educational level.

### **1.2. General background**

On March 11, 2020, the World Health Organization (WHO) declared the emergence of a new virus which can be characterized as a pandemic, namely COVID-19. The sudden COVID-19 outbreak brought by a preventive phenomenon known as “social distancing” which infers a deliberate physical space between people (Prin and Bartels, 2020). Consequently, the WHO urged governments and organizations to adopt the remote work practice as a preventive measure to stop the spread of the virus. This new work model, whether referred to as remote work, telework, virtual work or telecommuting, is characterized by not following the traditional work norm of operating in an office along with colleagues and under the control of a supervisor (Bartel et al., 2012) but rather working from a distance using technological tools. The search for a mutually accepted definition for the above-mentioned work arrangements has been constantly debated among scholars throughout time (Sullivan, 2003, p. 158). In the present study, and for standardization purposes, the researcher adopts the term “remote work” to represent the above mentioned new working arrangements.

Although remote work dates back to the 1970s where organizations started performing customer support services remotely, it was not until the beginning of the 21<sup>st</sup> century that this practice gained major importance (Taboroši et al., 2020). Additionally, it was not until the end of 2019 and the emergence of COVID-19 that this practice became rather unavoidable. In fact, prior to the pandemic, remote work had always been more of a “luxurious” option for those who have specific types of jobs (Desilver, 2020). In today’s world and considering the radical shift in working ways due to the COVID-19 pandemic, it is no surprise that researchers have been allocating special attention to the organizational; psychological and social facets of remote work (Taboroši et al., 2020).

Remote work does not usually alter employees’ work responsibilities but massively impacts their work environment: the way they interact, engage with each other and the company (Golden et al. 2008). In a typical and traditional workplace setting, employees share informal encounters in common areas, hallways or by the coffee dispenser (Zahn, 1991). Such accidental encounters allow for disclosing personal and professional interests and by that, help nourish trust and companionship (Sarbaugh- Thompson & Feldman, 1998). That being said, researchers have often associated remote work with feelings of professional isolation (Cooper & Kurland, 2002). Throughout literature, scholars have discussed the impact of the physical isolation of remote workers on their feeling of belongingness and identification with the organization (Thatcher and Zhu 2006, Wiesenfeld et al. 2001). Also, remote workers have reported to feel “out of the loop” when it comes to workplace politics (Gainey et al., 1999) and decreased feelings of connection to the organization (Wiesenfeld et al. 2001).

This new work context, namely the COVID-19 pandemic, has left companies with no other choice than to revisit their processes and reconsider how to adapt to the situation by letting go of the conventional ways (Arora & Suri, 2020). Organizations’ main challenge nowadays is to keep their remote and scattered workforce engaged and by that ensure sustainability of the business. Through this study, the researcher analyzes the impact of the feelings of professional isolation encountered during remote work on an employee’s engagement. The researcher also studies the moderating role of perceived supervisor support on this relationship while studying the varying need for support based on three different respondent demographics: gender, age and educational level. The researcher bases this study on the need-to-belong theoretical framework. The need-to-belong theory proposes that human beings have an inborn desire to belong through nourishing meaningful relationships with others (Baumeister and Leary, 1995).

In Lebanon specifically, the COVID-19 outbreak was not only unprecedented but also proved to be not very easy to deal with. On a national level, Lebanon had a very hard time coping with the emerging pandemic as the country was also facing a political and economic turbulence (Khoury et al., 2020). In addition, unlike other countries, Lebanese authorities did not implement any measures or plans for the country's economic recovery (Yacoub & ElHajjar, 2021), thus industries were left to struggle on their own. This left organizations with no choice but to reshuffle their priorities, put key projects on hold and focus solely on restricting and revising their processes and put new ones in hand. Some organizations resorted to decentralizing their models by empowering supervisors and leaders to run their own departments (Yacoub & ElHajjar, 2021). This also called for massive financial investments made in technology, IT equipment and other e-solutions that would facilitate remote work. The effects of the COVID-19 pandemic proved to many Lebanese organizations that there is a crucial need for planning for future outbreaks (Yacoub & ElHajjar, 2021). All this pushed the researcher to dwell further on the impact of the outbreak not only on a local level but internationally shedding light specifically on the impact of professional isolation experienced during COVID-19 remote work.

This research contributes to the existing body of literature as it does not measure the impact of remote work at large on employee engagement but focuses specifically on the feelings of professional isolation experience during remote work. In addition, this study fills the gap in contextual remote work literature as it encompasses findings during the COVID-19 era in specific. Moreover, previous literature on remote work considers employees who willingly exercised remote work (Kaduk et al., 2019) however, this study adds value to existing research as it tackles the remote work experiences at a time where employees have no other option. Finally, a unique contribution of this research is that it analyzes how the need for supervisor support may vary among different variables such as age, gender and educational level.

### **1.3Need for the study**

Numerous scholars have addressed different outcomes of remote work such as work-family conflict (Golden et al., 2006; Hill et al., 1998), work exhaustion (Golden, 2006) and work engagement (Gerard et al., 2018). Through their study, Gerard et al. (2018) take a deep dive

and examine the impact of “new ways of working” (NWW) on work engagement focusing on several facets including levels of autonomy, flexible work location & time and flexibility in relations at work (Gerard et al., 2018). However, research that tackles specifically professional isolation experienced during remote work remains scarce. Consequently, understanding the impact of professional isolation experienced by remote workers on their engagement levels is key for leadership within organizations. On the other hand, identifying the impact of perceived supervisor support on the above-mentioned relationship is vital and can provide new insights and recommendations.

Another crucial need for this study is the context of the research itself. Considering the large body of research, one might think that there must be sufficient evidence regarding remote work (Grant et al., 2013); however, literature has long studied this concept in a “normal” context and without the existence of such an unprecedented force. Thus, the majority of existing research about remote work practice lack contextual significance in the ongoing COVID-19 calamity (Wang et al., 2021). That being said, another key need for this research is to focus on remote work experience during COVID-19 within the existing pandemic context.

The present study also contributes to the body of literature on remote working simply by the fact that it examines the practice on such considerable scale. Existing literature on remote work has studied employees who practiced remote work occasionally or only upon need (Wang et al., 2021) and on much smaller scales. According to Lapierre et al. (2016), existing literature on the topic might suffer from selection bias as it involves employees who deliberately chose to work remotely. The researcher deems this contribution noteworthy as it is expected to find significant differences in outcomes when comparing two types of remote workers: those who work remotely extensively and for indefinite periods of time and those who practice remote work infrequently and within a limited and definite timeframe.

Finally, a distinctive contribution of the present study is the fact that it analyzes differences in age, gender and educational level as they relate to need for supervisor support. Literature has addressed this type of need on a broader context focusing mainly on organizational support however; research focusing solely on need for supervisor support among different demographic variables is scarce. This contribution is crucial to provide additional insights to organizations’ leadership regarding which employee groups might be in higher need for supervisor support compared to others.

All the above being said, the researcher infers that the current study does not answer the question of whether or not remote work should be implemented within organizations but rather it provides insights to how to leverage the compulsory remote work practice and make the most out of it for different types and groups of employees.

#### **1.4 Purpose of the study**

The purpose of this study is to investigate how professional isolation experienced during remote work impacts engagement levels. The study will also investigate the role that perceived supervisor support plays in moderating the relationship between both variables. Finally, the present research aims to investigate the changing need for supervisor support based on employee gender, age and educational level.

Through this study, the researcher aims to tackle the below questions and come up with recommendations for organizations facing HR challenges during the COVID-19 period:

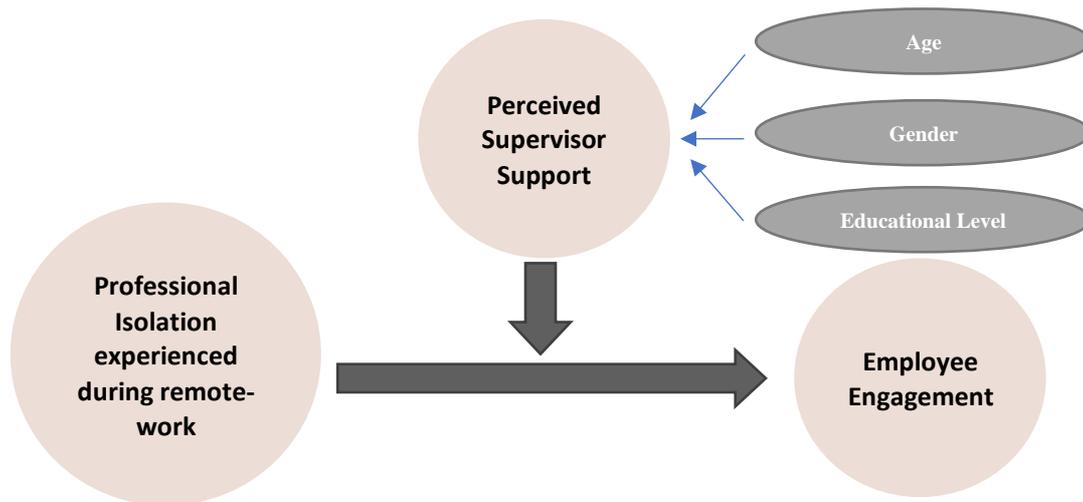
- How can companies optimize remote work experience for their employees?
- How can organizations diminish feelings of professional isolation experienced by remote employees?
- How can organizations maintain employee engagement levels when the majority of their workforce is operating remotely?
- What is the role of supervisors in the relationship between professional isolation during remote work and employee engagement?
- Does the need for supervisor support vary with demographic differences in the workforce?
- What can organizations do to attain and ensure supervisor support in such a disruptive era?

#### **1.5 Research hypotheses**

The researcher represents the framework of this thesis graphically based on findings of the literature review that was carried out. The researcher hypothesizes that the independent variable, professional isolation, has a negative impact on the dependent

variable, employee engagement. Also, this study examines the role of the moderating variable, perceived supervisor support, on this relationship. Finally, the researcher analyzes the differences in the need for supervisor support based on three demographics: age, gender and educational level.

The figure below shows the research framework of this study:



**Figure 1.5** Hypothesized relationship between the variables

Thus, the researcher hypothesizes the following:

H1: Employee engagement is negatively related to professional isolation during remote work

H2: The relationship between professional isolation during remote-work and employee engagement will be moderated by perceived supervisor support, such that the isolated employees during remote work who have high supervisor support will be more engaged

H3a: Females have a higher need for supervisor support

H3b: Age is negatively related to supervisor support

H3c: Educational level is negatively related to supervisor support

## 1.6 Operational definition of terms

### 1. Remote Work

Remote work is considered as a work arrangement where employees work from a place different than their primary workplace, for some portion of their work week, using technological tools to interact with others within and outside the organization (Bailey & Kurland, 2002).

### 2. Professional Isolation

Professional isolation is the feeling that one is “cut off from others” (Diekema, 1992, p. 484). Professional isolation happens “when the desire for support, understanding, and other social and emotional aspects of interaction are not met” (Taha & Caldwell, 1993, p. 277). This type of isolation reflects the sense that one lacks adequate connection to “critical networks of influence and social contact” (Miller, 1975, p. 261).

### 3. Employee Engagement:

“When employees are in a state of engagement, they employ and combine varying levels of their emotional and cognitive selves as they transform their work tasks and specific activities into meaningful accomplishment.” (Byrne, 2015, p. 17). Another explanation of engagement states that “Individuals can be ‘personally’ engaged in their work, investing positive emotional and cognitive energy into their role performance.” (Truss et al., 2013, p. 195)

### 4. Perceived Supervisor Support

Perceived supervisor support is employees' perceptions about how much their supervisors are concerned with their well-being and values their contributions and work (Kottke and Sharafinski, 1988).

## **1.7 Overview**

This thesis is set to understand the moderating effect of perceived supervisor support on the relationship between professional isolation experienced during COVID-19 remote work and employee engagement. It also aims to analyze the moderating role of perceived supervisor support while studying the need for support based on different demographics such as age, gender and educational level.

The structure of the paper is as follows:

Chapter I – Introduction

Chapter II – Literature Review & Theoretical Framework

Chapter III – Methodology

Chapter IV – Data Analysis and Results

Chapter V – Discussion and Conclusion

# **Chapter Two**

## **Literature Review & Theoretical Framework**

### **2.1. Remote work & Professional Isolation**

#### **2.1.1 Remote work definition**

Remote work, also known as telework or telecommuting, is a form of virtual work that involves working some part of the workweek outside the traditional workplace, usually from home, and communicating with coworkers using technology (Nilles, 1994). A more recent definition of remote work is any kind of work that is done in a distance, without being present in the organization, using information technology where employees are subject to less supervision and most of the times manage their own time (Wojcack et al., 2016). Despite the compulsory growth of the remote work practice, the concept itself is still considered as a double-edged sword (Wang et al., 2020) with scholars studying both its advantages and disadvantages.

#### **2.1.2 Professional isolation experienced during remote work**

One of the major outcomes brought by remote work is professional isolation which is the feeling employees get when they are physically far from their colleagues and unable to participate in co-learning activities leading them to miss the social aspect of their work (Contreras et al., 2020). According to Baumeister & Leary (1995), professional isolation is experienced when one's innate desire to connect socially with others in the workplace is unmet. Most research relevant to the cause and impact of professional isolation experienced by remote workers remains controversial (Shellenbarger, 2006).

#### **2.1.3 Outcomes of professional isolation**

Literature has found many consequences of professional isolation experienced by remote workers. In terms of knowledge sharing, Krauss & Fussell (1990) found that isolated remote workers are less able to manage interactions with their coworkers to solve complex tasks and foster understanding that originates from sharing tacit knowledge. According to the social learning theory, employees who lack interactions have to work with limited information and insights (Bandura, 1977, 1986). Having said that, remote workers who are professionally isolated engage in poor decision making and have to adopt corrective actions which often pushes them to experience anxiety (Baumeister & Tice, 1990) and consequently, diminish their job performance (Golden et al., 2008). Another consequence of professional isolation is the decreasing levels of ownership and organizational commitment of remote workers (Duffy et al., 2002). Over time, professionally isolated employees' morale levels decrease and they feel less bound to the firm (Ashforth & Humphrey, 1995; Mann et al., 2000). Finally, according to Baumeister & Leary (1995), employees who engage in remote work for long periods of time are more likely to experience job dissatisfaction and burnout.

## **2.2. Engagement**

### **2.2.1 Engagement background and definition**

In an era of unprecedented pandemic, and outside the “normal” working context and conditions, managing employee engagement levels becomes a challenge for most organizations. Companies who never prioritized or recognized the importance of employee engagement, were faced with the sudden compulsory practice of remote work (Sukoco et al., 2020). The latter posed a major challenge to organizations partly due to the fact that interactions among remote workers, which happen over technological tools, are less likely to cultivate feelings of involvement and are less fulfilling (Short et al., 1976). In their study, Sukoco et al., (2020) emphasize the importance of employee engagement and enablement in helping organizations grow during COVID-19 where most companies are practicing work-from-home.

The concept of engagement dates back to 1990, when the Scholar William Kahn first defined employee engagement as the “the harnessing of organizational members' selves to their work roles” (p.694). Harter et al. (2002) described engagement as an employee's level of satisfaction and enthusiasm shown when working. Karkoulian et al. (2019) defined engagement as an employee's involvement and commitment to both his/her organization and its values. When

defining engagement, some scholars tend to differentiate between engagement and employee engagement, the former being on the individual-level and the latter pertaining to the organizational-level (Hameduddin and Fernandez, 2019; Karkoulian et al., 2019).

### **2.2.2 Advantages of employee engagement**

The advantages of employee engagement are numerous. In fact, the concept of engagement can be leveraged to achieve organizational outcomes (Hameduddin and Fernandez, 2019). According to the Towers Perrin International Survey Research Report (2003), engagement can be used as a tool through which an organization can enhance the dedication and contribution of its employees and by that achieve favorable business outcomes. Compared to less engaged workers, engaged employees are less stressed and in general, more satisfied with their lives; they also demonstrate less absenteeism, more productivity and tend to stay with their companies for longer periods of time (Gallup Organization, 2006).

### **2.2.3 Professional isolation and employee engagement**

To date, the relationship between professional isolation and employee engagement has not yet been fully clarified. Golden et al. (2008) studied the impact of professional isolation on the remote worker's job performance as well as turnover intentions. Golden (2006a) also previously studied the impact of work exhaustion brought by remote work on employee commitment levels and turnover intentions. Thus, and building on the gap in literature, in the present study, the researcher seeks to investigate the impact of professional isolation experienced during remote work on employee engagement levels. Therefore, the following hypothesis is drawn:

*H1: Employee engagement is negatively related to professional isolation during remote work*

## **2.3. Perceived Supervisor Support**

### **2.3.1 Importance of supervisor support during remote work**

Recent research about HR practices during COVID-19, emphasize the importance of leadership in managing the change brought by the virus (Sukoco et al., 2020). According to Sukoco et al. (2020), most organizations were not ready and had not acquainted their leaders with managing such a radical shift. Thus, the need to have leaders and supervisors who are able to respond positively to change and helping team members adapt became inevitable. During remote work, the influence of supervisors or leaders in building virtual teams and guide them towards goals becomes more evident (Contreras et al., 2020). According to Kowalski and Swanson (2005), good management or supervisor support is critical to the success of remote work. On the contrary, non-supportive supervisors were reported to make employees feel alienated (Bendl and Schimdt, 2012) Accordingly, in this study, the researcher investigates the role of PSS in moderating the influence of professional isolation during remote work on employee engagement.

By definition, PSS is the perception of employees regarding how much their work and efforts are appreciated by their supervisor and how much their supervisor is concerned with their well-being (Kottke and Sharafinski, 1988). Previous research has emphasized the importance of employee-supervisor trust in achieving effective remote work (Golden and Raghuram, 2010). Not only has PSS been associated with positive remote work practices but also it has found to have a key impact on various work outcomes. Eisenberger et al. (2002) studied the impact of PSS in minimizing employee turnover intentions. PSS was also found vital in influencing extra-role behaviors at work (Chen and Chiu, 2008). Melián-González (2016) explains the relationship between PSS and task performance using the social exchange theory framework: when employees receive support from their supervisors, they tend to perform well as reciprocation.

But why has supervisor support gained the attention of scholars from the beginning of COVID-19? Relationships are essential to the proper functioning of any organization (Gabarro, 1990). According to the information richness theory (Rice, 1993), relationships between remote workers might be challenged since technological tools used to communicate embed less cues to interpret a message or interaction. Managers create nourish useful interactions with their subordinates through communicative exchanges (Golden, 2006c). The leader-member exchange (LMX) theory suggest that quality of relationships between leaders and members, which are formed in a social context, is determined by the exchange of resources among them (Wayne et al., 1997). Having said that, during remote work and in the absence of face-to-face

interaction between members and their leaders, key components of relationships are likely to suffer (Short et al., 1976). According to Thompsen et al. (1990), in such demanding work arrangements, supervisor support facilitates employees cope with the situation. Supportive supervisors ease strains by providing team members with direction, emotional support and motivation (Anderson et al., 2002). In this light, the researcher hypothesizes that perceived supervisor support plays an essential role in keeping a remote worker experiencing isolation engaged.

***H2: The relationship between professional isolation during remote-work and employee engagement will be moderated by perceived supervisor support, such that the isolated employees during remote work who have high supervisor support will be more engaged***

### **2.3.2 Need for supervisor support based on demographics**

Considering the role of perceived supervisor support during remote work, the researcher took a deeper dive into the varying need for supervisor support based on demographics. The demographics taken into consideration and studies are gender, age and educational level as they relate to the need for supervisor support during extensive remote work. The objective here would be to understand: (1) Does the need for supervisor support vary between females and males? (2) Does the need for supervisor support vary among different age groups? (3) Does the need for supervisor support vary among different educational levels?

#### **2.3.2.1 Gender and the need for supervisor support**

Throughout literature, males and females are reported to have different workplace experiences and needs (Banerjee & Doshi, 2020). Resources at work were found to serve different purposes and have different effects among different genders (Friedman & Greenhaus, 2000). Compared to males, female were found to value more informal types of social organizational support such as supervisor support (Wayne et al., 2007). Previous studies found that males enjoy more supportive networks at work compared to females (Lyness & Thompson, 2000; McDonald, 201) which usually provides them with more resources for supervisor support (Fritz & van Knippenberg, 2020). Existing literature also considers male employees to be more independent and achievement-oriented (Gkorezis et al., 2012). According to Suan & Nasrudin (2016), for females to maintain their engagement levels, they require more supervisor support. Female

employees tend to value supervisor support more than males as it eases their job demands and work-life challenges (Suan & Nasrudin, 2016). This is also supported by the fact that females are usually more oriented towards nurturing relationships and driven by common goals (Eagly, 1987) whereas males practice a sense of individualism (Babin and Boles, 1998). Finally, a study examining the relationship between supervisor support and stress found that men's stress levels tend to remain constant regardless of supervisor support levels whereas that of women's tend to lower with high levels of supervisor support (Raghuram et al., (2012). Thus, the researcher hypothesizes that female employees are more likely to require supervisor support especially during demanding arrangements such as remote work.

***H3a: Females have a higher need for supervisor support***

2.3.2.2 Age and the need for supervisor support

Another demographic variable to consider when analyzing need for supervisor support is age. In their study, Van Vianen et al. (2011) concluded that when it comes to learning and development activities within the organization, older employees are as interested as younger ones; however, the formers' attitudes might differ in cases of low supervisor support. This is also related to the difference in self-efficacy among different age groups. According to Bandura (1986), self-efficacy is influenced by the verbal persuasion of an employee's supervisor. When older employees do not experience verbal persuasion and support from their supervisors, they tend to nurture their self-efficacy beliefs through other sources (Van Vianen et al., 2011). In contrast, in his life-span model, Super (1990) states that as employees age they pass through different career stages: early-career, middle-career and late-career. Younger employees during their early-career stages, tend to seek supervisor support more because they usually have fewer resources for social resources within the organization (Super, 1990). Ebner et al. (2006) also explain younger employees high needs for supervisor support by their drive to learn and grow and attain more advanced roles. Although literature regarding need for supervisor support among different age groups remains controversial, in the present study, the researcher hypothesizes that younger employees have a higher need for supervisor support.

***H3b: Age is negatively related to supervisor support***

### 2.3.2.3 Educational level and the need for supervisor support

Finally, the researcher explores the need for supervisor support among different educational levels within the workforce. Literature shows no consensus regarding whether or not employee's educational levels are positively or negatively related to their need for supervisor support. A significant body of research argues that higher levels of education are related with higher autonomy and by that, less need for supervisor support. According to Wang et al. (2015), individuals that are highly educated reflect greater attitudes of self-control and personalized leadership. That being said, this sense of personalized leadership decreases the highly educated employees' desires of association and support (Wang et al., 2015). In addition, Glenn & Weaver (1982) argue that higher levels of education help employees reach positions that automatically provide them with a high level of autonomy and sense of control. This is mainly backed up by Baker et al.'s (1994) findings that employee promotion probabilities and chances increase with increases in levels of education. Another school of thought argues that the higher and employee's educational level, the higher are his/her expectations of resources from the organization (Bellou, 2009). Highly educated employees tend to be more critical regarding the way they are selected, assessed, trained, appraised and compensated by their supervisors or leaders compared to their less educated counterparts (Nurse and Devonish, 2006). Studies supporting this argument found that employees with less education tend to settle with organizational offerings, even when not satisfied, simply because they do not have sufficient job alternatives (Agarwal & Bhargava, 2013). In this study, the researcher hypothesizes that employees with higher educational level have a lower need for supervisor support than those with lower educational levels.

***H3c: Educational level is negatively related to supervisor support***

## **2.4. Need-to-belong Theory**

The researcher bases the present study on the need-to-belong theory (Baumeister and Leary, 1995). This theory suggest that humans are social beings by nature and require frequent

interactions with others in order to fulfill their needs of belongingness and acceptance (Buss, 1991; Gainey et al., 1999). These interactions and relationships are key to one's physical, emotional and mental well-being (Wang et al., 2019).

In 1975, John Donne cited "No [person] is an island". Through this study, the researcher relates this quote to the feeling of alienation experienced by remote workers and how support from their supervisors can impact their engagement levels at work. When employees are isolated, they do not feel that they belong. This shortfall in the sense of belongingness has variety of consequences both on the psychological and physical level (Baumeister and Leary, 1995).

For relationships to be cultivated among people, there should be ongoing interactions among people who share mutual concern and expectations (Bowlby, 1958; Kessler, 2013). According to Baumeister and Leary (1995, p. 501), physical proximity is essential in relationship foundation. Thus, isolation experienced during remote work, limits the employee's opportunities to get in direct contact with other counterparts (Bartel et al., 2012). When it comes to remote work, literature shows a consensus that although technological communication tools facilitate interaction among workers, they simply do not make up for the "human touch" that coworkers experience when they are face-to-face (Wang et al., 2019, Crampton, 2001, 2002; Golden and Veiga, 2005; Golden et al., 2008). Thus, remote workers are left with an unfulfilled need for belongingness (Golden et al., 2008).

This theory provides a robust framework and lens through which the researcher examines the impact of professional isolation during remote work on employee engagement while simultaneously studying the moderating impact of perceived supervisor support. Based on the need-to-belong theory, this research assumes that remote working employees look for opportunities to connect with their team mates or supervisors and by that, create a sense of belongingness (Wang et al., 2019).

## **Chapter Three**

### **Methodology**

In this chapter, the researcher discusses the methodology of the present study in details and sheds a light on the process through which analysis was carried out. The topics tackled are the design of the questionnaire, the instruments used to measure each variable and the data collection method and process. The section is concluded with the analysis methods utilized to study the data.

#### **3.1 Survey Method**

For this study, the researcher adopted a quantitative approach in the form of a well-structured e-survey aiming to achieve consistency and reliability. The survey consists of close-ended questions which helped in standardizing findings without giving room for vague and broad answers. The survey was created using “Google Forms” and was shared with participants through e-mails, WhatsApp and other social media platforms.

#### **3.2 Questionnaire Design**

The period during which this study was conducted was from March to April 2021. It was conducted through an e-questionnaire, Google survey, which was designed specifically for this study: to test the moderating effect of perceived supervisor support on the influence of professional isolation experienced during COVID-19 remote work on employee engagement.

The questionnaire consists of five sections. Section one includes the consent form along with a “yes” or “no” button indicating if the respondent agrees to participate in the survey study or not. Section two examines the respondents’ demographics including age, gender, educational level, current job level, total years of experience and current industry. Section three entails two questions that assess what percentage of one’s time was allocated to remote work and if the organization the respondent works for practiced remote work before the COVID-19 pandemic.

The remaining three sections adopt a different variable each. Section four adopts a 7-item scale by Golden (2008) to measure the independent variable being professional isolation. Section five adopts 14 items from the Utrecht Work Engagement Scale (UWES-17) (Schaufeli et al.,

2006) scale to measure the dependent variable being engagement. Section six adopts 9 items from Federal Employee Viewpoint Survey (2018) to measure the moderating variable being perceived supervisor support. For each of the items in section four, five and six, a 5-point Likert scale was adopted, 1 being “Strongly Disagree” to 5 being “Strongly Agree”. For a copy of the questionnaire, please refer to Appendix 1.

Before the questionnaire was distributed electronically to respondents, it was reviewed and approved by the Lebanese American University’s (LAU) Institutional Review Board (IRB). This was done in order to ensure integrity and approval from an international standard of research and ethical principles. Approval was then granted by the LAU IRB and the questionnaires were sent out to respondents. For a copy of the IRB approval letter, please refer to Appendix 2.

### ***Ethical considerations***

During the construction and administration of the survey, the researcher took into consideration the below ethical issues:

- Respondents’ right to anonymity and confidentiality
- Respondents’ right to not fill out any detailed personal information
- Respondents’ right to have the data reported in the thesis anonymously
- Respondents’ right to informed and voluntary consent

## **3.3 Measurement Instruments**

### **3.3.1 Independent Variable**

To measure the independent variable, professional isolation, the researcher used the seven-item scale developed and validated by Timothy Golden (2008). This scale was developed by Golden (2008) due to the lack of previous measure of professional isolation and relying on the qualitative studies of Cooper & Kurland (2002) and Vega & Brennan (2000). The responses were measured using a five-point Likert scale ranging from 1= “Strongly Disagree” being the lowest to 5= “Strongly Agree” being the highest. Items include “I feel left out on activities and meetings that could enhance my career”, “I feel out of the loop” and “I miss informal

interaction with others” (Golden, 2008). This scale shows a high reliability coefficient alpha of  $\alpha = 0.739$ , which indicates a high level of internal consistency for our scale with this specific sample.

**Table 4.1** Reliability Statistics of Professional Isolation

<b>Reliability Statistics</b>		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.739	.814	7

### 3.3.2 Moderating Variable

To measure the moderating variable, perceived supervisor support, the researcher has used nine-items from the Federal Employee Viewpoint Survey (FEVS) (2018). The FEVS is a type of a climate survey administered annually by the U.S. Office of Personnel Management (OPM) to its team members. Its results have gained trust and credibility and has served as part of the “Best Places to Work” rankings (Thompson, J. R., & Siciliano, M. D. (2021). Previous literature has utilized data from the FEVS to produce abundant publications that tackle management, leadership, trust, performance management and other relevant topics (Resh et al., 2019). Many scholars have also assessed the FEVS by reviewing numerous articles that has relied on this scale as a primary source of data (Fernandez et al., 2015; Somers, 2018). Items are measured using a five-point Likert scale ranging from 1= “Strongly Disagree” being the lowest to 5= “Strongly Agree” being the highest. Sample items include “My supervisor provides me with opportunities to demonstrate my leadership skills” and “My supervisor provides me with constructive suggestions to improve my job performance”. This scale shows a high reliability coefficient alpha of  $\alpha = 0.937$ , which indicates a high level of internal consistency for our scale with this specific sample.

**Table 4.2** Reliability Statistics of Perceived Supervisor Support

<b>Reliability Statistics</b>		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.937	.939	9

### 3.3.3 Dependent Variable

To measure the dependent variable, engagement, the researcher used fourteen items out of the seventeen-item Utrecht Work Engagement Scale (UWES-17) (Schaufeli et al., 2006). The original scale comprises of seventeen items related to three main themes: dedication, vigor and absorption. This scale has been used and validated in different regions (Fairlie, 2011; Karkoulian et al., 2019). Another 9-item version of this scale, UWES-9, was adopted by Ismail et al (2019) when studying employee engagement and job performance in Lebanon. The items in this scale were rated on a five-point Likert scale (1= strongly disagree, 5=strongly agree) noting that higher scores of UWES-17 reflect high engagement levels whereas lower scores reflect lower levels of engagement. Sample items include “I am enthusiastic about my job”, “I can continue working for very long periods at a time” and “I am enthusiastic about my job”. This scale shows a high reliability coefficient alpha of  $\alpha = 0.940$ , which indicates a high level of internal consistency for our scale with this specific sample.

**Table 4.3** Reliability Statistics of Employee Engagement

<b>Reliability Statistics</b>		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.940	.940	14

**3.3.4 Degree of professional isolation.** To measure the extent to which employees work remotely away from the traditional workplace where their colleagues are present, the researcher used a single-item scale by Bartel et al. (2012). This scale indicates the percentage of an employee's time spent in an isolated setting away from the workplace and coworkers ranging from no time (0%) to all of the time (100%). Respondents were asked to answer the following question "On average, what percent of your total work time do you work in a physically isolated setting away from the organization, your supervisor and coworkers, and other members of the organization?" (Barterl et al., 2012). It is important to mention that higher scores on this question represent higher levels of isolation.

### **3.4 Sample & Data Collection**

The survey was filled by respondents who fit the following criteria: Full-time employees, working anywhere around the world, have experienced complete or partial remote work during any point of the COVID-19 pandemic. This was done in order to enhance the credibility of the survey findings and align the results with the purpose of our study.

The survey was distributed electronically to friends, colleagues, acquaintances, professional networks and relatives who match the criteria mentioned above. The link of the Google survey was sent via e-mails, WhatsApp, LinkedIn and other social media platforms. The present study relied on snowball sampling targeting employees working remotely worldwide. Snowball sampling is utilized when "members of the population of interest are hard to identify." (Marpsat and Razafindratsimam 2010). Respondents were also asked to share the link with their fellow peers and friends who also match the criteria. Participation in the survey was voluntary. Respondents were asked to go through the consent form and click on "Yes" if they agreed to the terms of the questionnaire. Should a respondent click "No" after reading the consent form, the survey would automatically end. This was done in accordance to the LAU IRB office guidelines.

### **3.5 Analysis Methods**

In an effort to analyze the accumulated data, the researcher adopted four methods. The methods are: descriptive statistics, Reliability and Validity of Constructs, multiple regression analysis and One-way Multivariate Analysis of Variance

### **3.5.1 Descriptive Statistics**

The researcher will use descriptive statistics to highlight the characteristics of the existing sample. “Descriptive statistics can apply to the measurement of various characteristics of a population.” (Bickel & Lehman, 1975).

### **3.5.2 Reliability and Validity of Constructs**

In order to assess the reliability and consistency of each of the variables, the researcher used Cronbach’s (1951) coefficient alpha. Cronbach’s alpha is usually adopted when the research’s questionnaire consists of multiple Likert-scale. For an item to be considered desirable for a study, it should have a minimum coefficient alpha of 0.70 (Cronbach, 1951). Higher values of Cronbach’s alpha reflect high inter-correlations among the items of a specific variable.

Cronbach’s alpha was used in order to measure the reliability of the variables of interest: professional isolation, employee engagement and perceived supervisor support.

### **3.5.3 Multiple Regression Analysis**

In order to verify the relationship between the independent and the dependent variables and in order to verify that the moderating variable, perceived supervisor support, has an impact on the dependent variable, employee engagement, a multiple regression analysis was performed.

### **3.5.4 One-way Multivariate Analysis of Variance**

In order to verify the changing need for supervisor support based on three demographics being age, gender and education level, the researcher adopted a one-way multivariate analysis of variance.

## **3.6 Survey Administration**

The sample includes all employees who experienced remote work, whether partly or fully, due to the COVID-19 pandemic. The questionnaire was sent out as a google survey through e-mails, WhatsApp, LinkedIn and other social media platforms. The total number of collected responses was 379. Out of the 379, 3 respondents were dropped as they clicked on “No” after

the consent form and the questionnaire closed immediately. Another 14 respondents were also dropped as they stated that the time spent remote working is “0%”, thus their answers do not reflect their remote work experience. Consequently, the data of **362** respondents was entered into SPSS.

# Chapter Four

## Data Analysis & Results

### 4.1 Descriptive Statistics

Table 4.1 Descriptive Statistics

Demographic Variable	Frequency	Percentage
<b>Age</b>		
- 18-25	79	21.9%
- 26-43	237	65.7%
- 44-54	32	8.9%
- 55-65	13	3.6%
<b>Gender</b>		
- Male	133	36.8%
- Female	228	63.2%
<b>Education Level</b>		
- High school or less	11	3.0%
- University/BA/BS Degree	195	54.0%
- Master's Degree	137	38.0%
- Doctorate Degree	16	4.4%
- Other	2	0.6%
<b>Job Level</b>		
- Entry-level position	36	10.0%
- Middle Level Manager	62	17.2%
- Non-managerial position	133	36.8%
- Supervisory position	74	20.5%
- Top Level Manager	56	15.5%
<b>Years of Experience</b>		
- None	3	0.8%
- 1-5	128	35.5%
- 6-10	127	35.2%
- 10-15	7	1.9%
- 15-20	59	16.3%
- 20+	37	10.2%
<b>Current Industry</b>		
- Accounting and legal	13	3.6%
- Banking and finance	34	9.4%
- Education/Higher education	69	19.1%
- Health care	16	4.4%
- Hospitality	19	5.3%
- Information technology	38	10.5%
- Manufacturing	20	5.5%
- Media	17	4.7%
- Retail	17	4.7%
- Other	118	32.7%

[Table 4.1] Table 4.1 summarizes the demographics of the study's respondents.

Starting by the age of respondents, the majority of respondents fall into the age group of 26-43 (65.7%), second to the age group of 18-25 (21.9%), followed by the age group of 44-54 (8.9%) and finally the age group of 55-65(3.6%).

The majority of the respondents were female, representing 63.2% of the sample. Whereas the males represented the remaining 36.8%.

As for the educational level of respondents, the majority of respondents hold a University/BA/BS Degree (54.0%), second to the group holding a Master's degree (38.0%), followed by the group holding a Doctorate degree (4.4%), followed by the group holding a high school or less degree (3.0%) and finally the group holding an educational level not similar to the ones mentioned and labeled as "other" (0.6%).

As for the job level of the respondents, the majority hold a non-managerial position (36.8%), second to the group holding a supervisory position (20.5%), followed by the group holding a middle level manager position (17.2%), followed by the group holding a top level manager position (15.5%) and finally, those holding an entry-level position (10.0%).

As for the years of experience, the majority of the respondents have 1-5 years of experience (35.5%), followed by a very close percentage of those who have 6-10 years of experience (35.2%), followed by those who have 15-20 years of experience (16.3%), followed by those who have 20+ years of experience (10.2%), followed by those who have 10-15 years of experience (1.9%) and finally those with no experience (0.8%).

Finally, in terms of which industry do the respondents work in, the majority of respondents mentioned that they work in an industry not mentioned and labeled as "other" (32.7%), followed by those who work in the education/higher education industry (19.1%), followed by those who work in the information technology industry (10.5%), followed by those who work in the banking and finance industry (9.4%), followed by those who work in the manufacturing industry (5.5%), followed by those who work in the hospitality industry (5.3%), followed by equal proportions of the respondents working in the media (4.7%) and the retail industries (4.7%), followed by those working in the health care industry (4.4%) and finally, those working in the accounting and legal industry (3.6%).

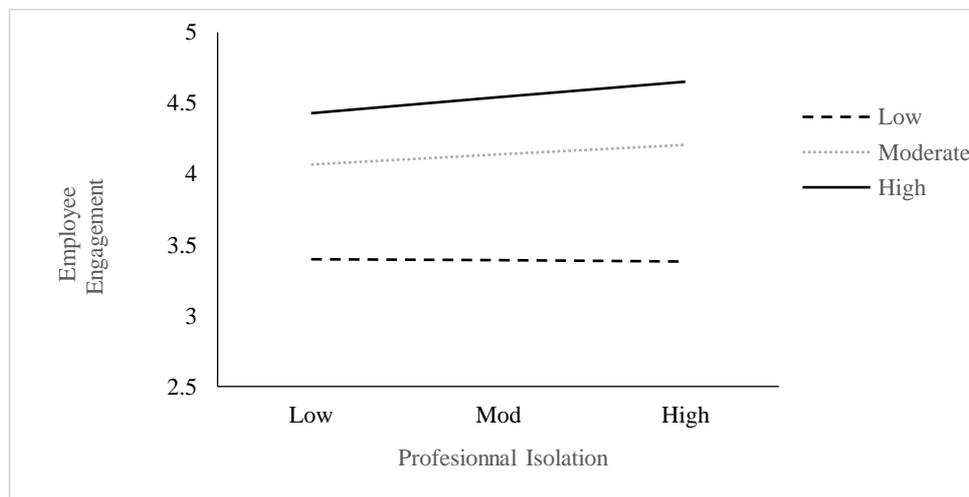
## 4.2 Reliability and Validity of Constructs

In an effort to estimate the internal consistency of the scales adopted, the researcher used Cronbach's alpha, a very well-known coefficient of reliability. Usually, the accepted lower limit for Cronbach's alpha is 0.70. Table 4.2 summarizes the coefficient alpha for all three variables: professional isolation, perceived supervisor support and employee engagement.

**Table 4.2.** Reliability and validity of constructs of the variables

Variable	Number of Items	Cronbach's Alpha	Cronbach's Alpha based on standardized items
Professional Isolation	7	.739	.814
Perceived Supervisor Support	9	.937	.939
Employee Engagement	14	.940	.940

## 4.3 Testing H1 and H2: Multiple Regression Analysis



**Figure 4.3.** Interaction of PSS and professional isolation on employee engagement

To test the hypothesis that engagement is a function of professional isolation and to test whether perceived supervisor support is moderating the relationship between the independent and

dependent variables, the researcher conducted a multiple regression analysis utilizing Hayes Process Macro model 1 (Hayes, 2018).

The researcher did not find a relationship neither predictive characteristics between professional isolation and work engagement. Nonetheless, the moderation analysis highlighted a crucial interactional influence exercised by supervisor support and professional isolation on work engagement.

Precisely, to test the hypothesis that employee engagement is a function of professional isolation, and more specifically whether supervisors' support moderates the relationship between professional isolation level and employee engagement, a multiple regression analysis was conducted through Hayes Process Macro model 1 (Hayes, 2018). In a first step, two variables have been included: professional isolation and supervisor support. These variables accounted for a significant amount of variance in employee engagement,  $R^2\text{-chng} = .417$ ,  $F(2, 360) = 127.97$ ,  $p < .001$ .

Next, the interaction term between professional isolation and supervisor support was added by in the regression model, which accounted for a significant amount of the variance in employee engagement  $\Delta R^2 = .01$ ,  $\Delta F(1, 360) = 5.95$ ,  $b = .07$ ,  $t(360) = 2.44$ ; 95% confidence interval [CI] = .0142, .1323;  $p = .0152$ . Examination of the interaction plot showed an enhancing effect that as professional isolation and supervisor support increased, employee engagement increased (see figure 4.3). At low supervisor support, work engagement is similar whether professional isolation is low, moderate, or at a high level.

Therefore, H1 stating that employee engagement is negatively related to professional isolation during remote work was not supported. However, H2 stating that the relationship between professional isolation during remote-work and employee engagement will be moderated by perceived supervisor support, such that the isolated employees during remote work who have high supervisor support will be more engaged was supported.

**Table 4.3.1** Test of highest order unconditional interaction

Model	R2-chng	F	df1	Df2	P
X*W	0.0096	5.9547	1.0000	357.0000	0.0152

Focal predict: Prof\_iso (X)

Mod var: sup\_sup (W)

**Table 4.3.2.** Conditional effects of the focal predictor at values of the moderator

Sup_sup	Effect	se	t	p	LLCI	ULCI
2.8800	-.0094	.0406	-.2323	.8164	-.0892	.0704
4.1111	.0808	.0410	1.9681	.0498	.0001	.1615
4.7778	.1296	.0533	2.4299	.0156	.0247	.2345

#### 4.4 Testing H3a, H3b, H3c: One-Way Multivariate Analysis of Variance

In order to analyze the varying need for supervisor support based on age, gender and education level, the researcher adopted one-way multivariate analysis of variance. The one-way multivariate analysis of variance (one-way MANOVA) is used to determine whether there are any differences between independent groups on more than one dependent variable.

In this regard, the researcher used a one-way MANOVA to understand whether there were differences in the perceptions of Supervisor Support in different groups of Age, Gender, and Education Levels (i.e., the dependent variables are those listed in the Supervisor Support Scale whilst the independent variable are Age, Gender, and Education Levels).

For easy reference, the researcher listed and designated the dependent variables that fall under the Supervisor Support Scale in Table 4.4.

**Table 4.4** Variable designations of Perceived Supervisor Support

Dependent Variable	Variable Designation
My supervisor supports my need to balance work and other life issues	Work-Life Balance
My supervisor provides me with opportunities to demonstrate my leadership skills	Leadership
Discussions with my supervisor about my performance are worthwhile	Performance
The leadership I am working for takes pride in my accomplishments at work	Pride
My supervisor provides me with constructive suggestions to improve my job performance	Constructiveness
My supervisor listens to what I have to say	Listening
My supervisor treats me with respect	Treatment
In the last six months, my supervisor has talked with me about my performance	Performance Discussion
I have trust and confidence in my supervisor	Trust

#### 4.4.1 Testing H3a: Females have a higher need for supervisor support

**Multivariate Tests<sup>a</sup>**  
**Table 4.4.1.1** Multivariate test of H3a

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>c</sup>
Intercept	Pillai's Trace	.953	792.951 <sup>b</sup>	9.000	351.000	.000	.953	7136.561	1.000
	Wilks' Lambda	.047	792.951 <sup>b</sup>	9.000	351.000	.000	.953	7136.561	1.000
	Hotelling's Trace	20.332	792.951 <sup>b</sup>	9.000	351.000	.000	.953	7136.561	1.000
	Roy's Largest Root	20.332	792.951 <sup>b</sup>	9.000	351.000	.000	.953	7136.561	1.000
Gender	Pillai's Trace	.047	1.944 <sup>b</sup>	9.000	351.000	.045	.047	17.498	.841
	Wilks' Lambda	.953	1.944 <sup>b</sup>	9.000	351.000	.045	.047	17.498	.841
	Hotelling's Trace	.050	1.944 <sup>b</sup>	9.000	351.000	.045	.047	17.498	.841
	Roy's Largest Root	.050	1.944 <sup>b</sup>	9.000	351.000	.045	.047	17.498	.841

a. Design: Intercept + Gender

b. Exact statistic

c. Computed using alpha = .05

The results found a statistically significant difference in Supervisor Support based on the employee's Gender,  $p < 0.05$ ; Wilk's  $\Lambda = 0.953$ , Observed Power = 0.841

**Tests of Between-Subjects Effects**  
**Table 4.4.1.2** Test of between-subjects effects of H3a

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Paramete r	Observ ed Power <sup>j</sup>
Gender	Work-Life Balance	2.440	1	2.440	1.654	.199	.005	1.654	.250
	Leadership	13.297	1	13.297	10.114	.002	.027	10.114	.887
	Performance	2.161	1	2.161	1.727	.190	.005	1.727	.259
	Pride	1.496	1	1.496	1.259	.263	.003	1.259	.201
	Constructiveness	6.589	1	6.589	4.582	.033	.013	4.582	.569

Listening	9.055	1	9.055	7.345	.007	.020	7.345	.771
Treatment	.876	1	.876	.889	.346	.002	.889	.156
Performance Discussion	4.250	1	4.250	2.405	.122	.007	2.405	.340
Trust	5.224	1	5.224	3.369	.067	.009	3.369	.449

There was a statistically significant difference in Supervisor Support based on the employee's Gender within the 3 highlighted characteristics (Leadership, Constructiveness, and Listening) noting that most of the observed power is due to the female participants as shown in the below table:

**Parameter Estimates**  
**Table 4.4.1.3** Parameter estimates of H3a

Dependent Variable	Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
						Lower Bound	Upper Bound			
Work-Life Balance	Intercept	3.820	.105	36.267	.000	3.612	4.027	.786	36.267	1.000
	Female	-.170	.133	-1.286	.199	-.431	.090	.005	1.286	.250
	Male	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Leadership	Intercept	3.955	.099	39.778	.000	3.759	4.150	.815	39.778	1.000
	Female	-.398	.125	-3.180	.002	-.644	-.152	.027	3.180	.887
	Male	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Performance	Intercept	3.774	.097	38.911	.000	3.584	3.965	.808	38.911	1.000
	Female	-.160	.122	-1.314	.190	-.400	.080	.005	1.314	.259
	Male	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Pride	Intercept	3.910	.095	41.368	.000	3.724	4.096	.827	41.368	1.000
	Female	-.133	.119	-1.122	.263	-.367	.100	.003	1.122	.201
	Male	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Constructiveness	Intercept	3.820	.104	36.731	.000	3.615	4.024	.790	36.731	1.000
	Female	-.280	.131	-2.140	.033	-.537	-.023	.013	2.140	.569
	Male	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Listening	Intercept	4.241	.096	44.047	.000	4.051	4.430	.844	44.047	1.000
	Female	-.328	.121	-2.710	.007	-.567	-.090	.020	2.710	.771
	Male	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Treatment	Intercept	4.466	.086	51.877	.000	4.297	4.635	.882	51.877	1.000
	Female	-.102	.108	-.943	.346	-.315	.111	.002	.943	.156
	Male	0 <sup>a</sup>	.	.	.	.	.	.	.	.
	Intercept	3.887	.115	33.726	.000	3.661	4.114	.760	33.726	1.000

Performance	Female	-.225	.145	-1.551	.122	-.510	.060	.007	1.551	.340
Discussion	Male	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Trust	Intercept	4.135	.108	38.301	.000	3.923	4.348	.803	38.301	1.000
	Female	-.249	.136	-1.836	.067	-.517	.018	.009	1.836	.449
	Male	0 <sup>a</sup>	.	.	.	.	.	.	.	.

a. This parameter is set to zero because it is redundant.

b. Computed using alpha = .05

Although the findings support H3a and show a statistical difference in supervisor support based on the employee's gender, it is noteworthy to mention that most of the observed power is due to the female participants.

#### 4.4.2 Testing H3b: Age is negatively related to supervisor support

**Multivariate Tests<sup>a</sup>**  
**Table 4.4.2.1** Multivariate test of H3a

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>d</sup>
Intercept	Pillai's Trace	.884	296.293 <sup>b</sup>	9.000	349.000	.000	.884	2666.638	1.000
	Wilks' Lambda	.116	296.293 <sup>b</sup>	9.000	349.000	.000	.884	2666.638	1.000
	Hotelling's Trace	7.641	296.293 <sup>b</sup>	9.000	349.000	.000	.884	2666.638	1.000
	Roy's Largest Root	7.641	296.293 <sup>b</sup>	9.000	349.000	.000	.884	2666.638	1.000
Age	Pillai's Trace	.145	1.978	27.000	1053.000	.002	.048	53.413	.998
	Wilks' Lambda	.861	1.992	27.000	1019.902	.002	.049	52.318	.997
	Hotelling's Trace	.156	2.004	27.000	1043.000	.002	.049	54.098	.998
	Roy's Largest Root	.093	3.609 <sup>c</sup>	9.000	351.000	.000	.085	32.483	.991

a. Design: Intercept + Age

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

d. Computed using alpha = .05

The results found a statistically significant difference in Supervisor Support based on the employee's age,  $p < 0.05$ ; Wilk's  $\Lambda = 0.861$ , Observed Power = 0.997

**Tests of Between-Subjects Effects**  
**Table 4.4.2.2** Test of between-subjects effects of H3b

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Paramete r	Observ ed Power <sup>j</sup>
Age	Work-Life Balance	8.359	3	2.786	1.900	.129	.016	5.699	.491
	Leadership	15.707	3	5.236	3.981	.008	.032	11.942	.834
	Performance	5.371	3	1.790	1.433	.233	.012	4.298	.379
	Pride	.668	3	.223	.186	.906	.002	.558	.085
	Constructiveness	7.550	3	2.517	1.743	.158	.014	5.230	.454
	Listening	9.106	3	3.035	2.449	.063	.020	7.347	.608
	Treatment	4.863	3	1.621	1.654	.177	.014	4.962	.433
	Performance Discussion	4.052	3	1.351	.760	.517	.006	2.280	.213
	Trust	1.386	3	.462	.294	.829	.002	.883	.107

There was a statistically significant difference in Supervisor Support based on the employee's age within the 3 highlighted characteristics (Leadership) noting that the majority of the observed power is due to the female participants as shown in the below table.

**Parameter Estimates**  
**Table 4.4.2.3** Parameter estimates of H3b

Dependent Variable	Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
						Lower Bound	Upper Bound			
Work-Life Balance	Intercept	4.000	.336	11.908	.000	3.339	4.661	.284	11.908	1.000
	[Age=18-25]	-.278	.362	-.768	.443	-.991	.434	.002	.768	.119
	[Age=26-43]	-.245	.345	-.709	.479	-.923	.434	.001	.709	.109
	[Age=44-54]	-.750	.398	-1.883	.061	-1.533	.033	.010	1.883	.467
	[Age=55-65]	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Leadership	Intercept	4.000	.318	12.575	.000	3.374	4.626	.307	12.575	1.000
	[Age=18-25]	-.532	.343	-1.549	.122	-1.207	.143	.007	1.549	.339
	[Age=26-43]	-.173	.327	-.530	.597	-.815	.469	.001	.530	.083
	[Age=44-54]	-.750	.377	-1.988	.048	-1.492	-.008	.011	1.988	.509

	[Age=55-65]	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Performance	Intercept	3.846	.310	12.406	.000	3.236	4.456	.301	12.406	1.000
	[Age=18-25]	-.036	.335	-.108	.914	-.694	.622	.000	.108	.051
	[Age=26-43]	-.184	.318	-.577	.564	-.810	.442	.001	.577	.089
	[Age=44-54]	-.502	.368	-1.367	.173	-1.225	.221	.005	1.367	.276
	[Age=55-65]	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Pride	Intercept	3.846	.303	12.675	.000	3.249	4.443	.310	12.675	1.000
	[Age=18-25]	.053	.327	.161	.873	-.591	.697	.000	.161	.053
	[Age=26-43]	-.036	.312	-.116	.908	-.649	.577	.000	.116	.052
	[Age=44-54]	-.096	.360	-.267	.789	-.804	.612	.000	.267	.058
	[Age=55-65]	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Constructiveness	Intercept	3.615	.333	10.849	.000	2.960	4.271	.248	10.849	1.000
	[Age=18-25]	.030	.360	.084	.933	-.677	.737	.000	.084	.051
	[Age=26-43]	.089	.342	.261	.794	-.584	.762	.000	.261	.058
	[Age=44-54]	-.428	.395	-1.083	.280	-1.205	.349	.003	1.083	.191
	[Age=55-65]	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Listening	Intercept	4.231	.309	13.702	.000	3.624	4.838	.345	13.702	1.000
	[Age=18-25]	-.256	.333	-.769	.443	-.911	.399	.002	.769	.120
	[Age=26-43]	-.125	.317	-.395	.693	-.749	.498	.000	.395	.068
	[Age=44-54]	-.668	.366	-1.825	.069	-1.388	.052	.009	1.825	.444
	[Age=55-65]	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Treatment	Intercept	4.462	.275	16.249	.000	3.922	5.002	.425	16.249	1.000
	[Age=18-25]	-.006	.296	-.020	.984	-.589	.577	.000	.020	.050
	[Age=26-43]	-.031	.282	-.110	.912	-.586	.523	.000	.110	.051
	[Age=44-54]	-.430	.326	-1.321	.187	-1.071	.210	.005	1.321	.261
	[Age=55-65]	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Performance Discussion	Intercept	3.846	.370	10.402	.000	3.119	4.573	.233	10.402	1.000
	[Age=18-25]	.053	.399	.132	.895	-.732	.837	.000	.132	.052
	[Age=26-43]	-.125	.380	-.328	.743	-.871	.622	.000	.328	.062
	[Age=44-54]	-.346	.438	-.789	.430	-1.208	.516	.002	.789	.123
	[Age=55-65]	0 <sup>a</sup>	.	.	.	.	.	.	.	.
Trust	Intercept	3.846	.348	11.068	.000	3.163	4.530	.255	11.068	1.000
	[Age=18-25]	.040	.375	.106	.915	-.698	.777	.000	.106	.051
	[Age=26-43]	.175	.357	.490	.624	-.527	.877	.001	.490	.078
	[Age=44-54]	.091	.412	.222	.825	-.719	.902	.000	.222	.056
	[Age=55-65]	0 <sup>a</sup>	.	.	.	.	.	.	.	.

a. This parameter is set to zero because it is redundant.

b. Computed using alpha = .05

The parameters for each variable decrease with the increase of age groups supporting the idea that age is negatively related to supervisor Support. Thus, H3b stating that age is negatively related to supervisor support was supported.

#### 4.4.3 Testing H3c: Educational level is negatively related to supervisor support

**Multivariate Tests<sup>a</sup>**  
**Table 4.4.3.1** Multivariate test of H3c

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>d</sup>
Intercept	Pillai's Trace	.717	97.739 <sup>b</sup>	9.000	348.000	.000	.717	879.651	1.000
	Wilks' Lambda	.283	97.739 <sup>b</sup>	9.000	348.000	.000	.717	879.651	1.000
	Hotelling's Trace	2.528	97.739 <sup>b</sup>	9.000	348.000	.000	.717	879.651	1.000
	Roy's Largest Root	2.528	97.739 <sup>b</sup>	9.000	348.000	.000	.717	879.651	1.000
EducationLevel	Pillai's Trace	.111	1.114	36.000	1404.000	.296	.028	40.106	.959
	Wilks' Lambda	.893	1.117	36.000	1305.854	.293	.028	37.624	.942
	Hotelling's Trace	.116	1.119	36.000	1386.000	.290	.028	40.278	.960
	Roy's Largest Root	.065	2.553 <sup>c</sup>	9.000	351.000	.007	.061	22.981	.938

a. Design: Intercept + EducationLevel

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

d. Computed using alpha = .05

There was no statistically significant difference in Supervisor Support based on the employee's education levels,  $p > 0.05$ . Thus, H3c was not supported.

# Chapter Five

## Discussion and Conclusions

The primary interest of the present study main aim was to examine the impact of professional isolation experienced by workers operating remotely on their engagement levels and to verify whether perceived supervisor support can have a moderating role on this relationship. Also, another aim of the present study was to assess whether different demographics have an impact in the varying need for supervisor support. Considering the recency of the excessive remote work practice and its compulsory nature due to COVID-19, the researcher found it imperative to study the topic empirically and provide insights for organizations facing such a challenge.

### 5.1 Discussion

The present study applies the need-to-belong theory to explore how professional isolation experienced during remote work impacts employee engagement levels. The present study encompasses employees who worked remotely whether fully or partially during the COVID-19 pandemic. Remote work, in its general sense is a work mode where employees operate from a place different than their typical workplace for some portion fraction of their work week (Bailey & Kurland, 2002). The researcher's first hypothesis stating that employee engagement is negatively related to professional isolation stemmed from the findings of previous literature expressing that professionally isolated employees tend to feel out-of-the loop from organizational interactions (Cooper and Kurland, 2002; Gainey et al., 1999). The present study's results did not find support for H1: a relationship or predictive characteristics between our independent variable, professional isolation and dependent variable, work engagement. This indicates that professional isolation does not necessarily impact employee engagement. How much a remote working employee is engaged is not a function of his/her isolation levels. This result comes in line with previous findings of no empirical correlation among work arrangement or mode and professional isolation (Golden et al. 2008).

The study's second hypothesis stating that the relationship between professional isolation and employee engagement will be moderated by PSS was supported. This hypothesis was based on a massive body of literature emphasizing the importance of perceived supervisor support many positive organizational outcomes such as decreasing employee turnover intentions and

improving extra role behavior (Chen and Chiu, 2008, Eisenberger et al., 2002). Coherent to the mentioned outcomes, the present study's results found PSS to have a significant impact on the relationship between professional isolation and employee engagement. When PSS was introduced as a moderator, the results showed a significant interactional influence applied by PSS and professional isolation on employee engagement. This indicated that as remote worker professional isolation and supervisor support increase, engagement levels increased as well. On the other hand, when supervisor support decreases, employee engagement levels decreased as well regardless of professional isolation levels. This alone emphasizes the importance of perceived supervisor support in maintaining the engagement levels of remote workers and supports one of the key purposes of the present study being to highlight the importance supervisors can play in guiding, motivating and engaging their team members, especially during times of change and crisis. This finding is in line with the findings of Sukoco et al., (2020) who discuss the importance of optimizing HR empowerment and specifically, implementing a transformational type of leadership during challenging times such as COVID-19 pandemic.

Finally, the present study supported H3a stating that females have a higher need for supervisor support. The researcher drew this hypothesis basing on previous literature arguing that at work, males often practice more networking activities than females and thus have more alternatives for supervisor support (Fritz & van Knippenberg, 2020). The present study found a significant difference for supervisor support based on gender while highlighting that the majority of the observed power is due to the female participants in the sample. In addition, results found a significant difference for supervisor support based on age (H3b) establishing a negative relationship such that the older the employee, the lower the supervisor support. This is in line with findings by Super (1990) stating that younger employees seek their supervisor's support and consider it as a social resource within the organization. This also validates Ebner et al.'s (2006) study stating that younger employees have a drive to learn and grow and thus have higher needs for supervisor support. Finally, the study did not support H3c and could not establish a significant relationship between employee educational level and supervisor support. This comes in line with the previous contradicting literature where there is no consent on an employee's educational level in relation to the need for supervisor support. One school of thought believes that higher levels of education provide employees with a higher sense of autonomy and by that, less need for supervisor support (Glenn & Weaver, 1982) and another

school stating that employees with higher educational levels have higher expectations of support from their supervisors (Bellou, 2009).

## **5.2 Recommendations and Managerial Implications**

The unprecedented COVID-19 outbreak has rendered millions of employees around the world remote workers overnight and created what is now known as “new normal” (Kniffin et al., 2020). Remote work, as a practice, is here to stay. Some organizations around the world have already announced staying with this new work arrangement for at least another year. Other organizations have leveraged the practice as a way to minimize their real estate expenses (Wells, 2001). The challenge for organizations however is to prevent their team members from feelings of isolation and by that maintain employee engagement. This calls for many interventions and specifically, as adopted in the present study, enhanced supervisor support.

Remote work, in its general sense, appears to impact the exchange relationship between supervisors and team members due to the fact that absence from the office brings changes in interaction ways among both parties. A key challenge for supervisors during COVID-19 era, is to guide their team members virtually without seeing them on a daily basis (De Leede and Kraijenbrink, 2014). It is important for supervisors to realize that they are not only expected to lead and guide team members but also act as a partner providing them with support and motivation to keep them engaged. A key recommendation would be for supervisors to review their leadership styles and practices. Literature has demonstrated a positive relationship between transformational leadership styles and employee work engagement (e.g. Bakker et al., 2011; Bailey et al., 2017). In this regard, Johnson (2004) argues that influencing skills needed to ensure team members are productive even when they are working remotely are not developed by supervisors overnight. One possible option suggested by Peters and Den Dulk (2003) is to apply “Management by Objectives” when culturally compatible. This would require supervisors to guide and monitor their team members based on short and team objectives and goals. Such a management practice would replace traditional micromanagement and electronic monitoring. Research shows that employees demonstrate negative attitudes towards electronic monitoring (Alge, 2001). Thus, it is recommended for supervisors to abandon predispositions about remote work and abandon the belief that remote workers are usually loafing and instead, empower them with trust (Wang et al., 2020).

Another suggestion for supervisors would be to foster social interactions virtually. This could be introduced through virtual gatherings, activities and informal discussions that can enhance a team member's sense of belonging. According to Grant et al. (2013), organizations can implement team-building initiatives that can pave room for employees across levels to interact informally.

Finally, a compulsory remote work practice across the board calls for building a "culture of trust" where team members are empowered and are evaluated based on results and performance (Martínez-Sánchez et al., 2007). This calls for revisiting performance management systems, enhanced delegation and improved communication about supervisor-subordinate expectations. For this purpose, specifically, Wang et al. (2020) suggest adopting online surveys for remote workers to feel that they are heard and that their input is recognized by the organization.

### **5.3 Limitations**

Similar to any research, the present study comes with limitations. First and foremost, the study does not include control variables that may affect a remote workers experience such as the salary, personality and character traits, relationships with colleagues, etc.. (Grant et al., 2013). These factors may highly impact all three variables: remote workers' feelings of isolation, their need for supervisor support and levels of engagement.

Second, the present study's e data was gathered globally without taking into account different countries, regions and cultures. This might raise concerns as different cultures with different characteristics might react to feelings of professional isolation during remote work differently. The need-to-belong, our theoretical framework, is existent in all cultures. However, the researcher expects to have differences in its strength and in how people behave to satisfy this need (Baumeister and Leary, 1995).

Another limitation is that the present study does not take into account the difference in the respondents' operating environment and whether or not their organizations are fully equipped to leverage the benefits of remote work. This might majorly affect how supervisors interact with team members, how employees connect with each other and how the company provides employees with all the necessary tools for an enjoyable remote experience.

In addition, the present research model is limited to the dependent variable of employee engagement without dwelling on other consequences of remote work such as work-family conflict, job performance, turnover intentions and job satisfaction (Golden et al., 2008, Coenen and Kok, 2014; Vega et al., 2015).

## **5.4 Future Research**

All the mentioned limitations can serve as a productive source upon which future research can further dwell. The first recommendation would be to integrate cultural differences, such as Hofstede's cultural dimensions, to the study to explore the generalizability of our findings. A previous study has incorporated a theoretical model that proposed how cultural dimensions such as individualism and uncertainty avoidance impact the acceptance of technological monitoring (Panina and Aiello, 2005). The second recommendation would be to introduce a control variable that assesses the technological readiness of an organization to shift to remote work or choose respondents who work at a specific level of organizations. Future research can also adopt control variables mentioned in the previous section such as existing relationships with colleagues or a remote worker's personality traits. In addition, future research can assess further consequences and dwell in details regarding positive and negative outcomes of remote work. Finally, future research can specify the scope of the study to a specific country, rather than gathering data globally, in order to increase the confidence level of the results.

## **5.5 Conclusion**

The primary purpose of the present study was to investigate the relationship between professional isolation experienced by remote workers and engagement levels where perceived supervisor support acts as a moderating variable between them. The researcher draws 2 main conclusions from this thesis. First, professional isolation does not necessarily impact employee engagement levels negatively. The mere fact that an employee is isolated during remote work does not influence his/her isolation levels. Second, PSS is essential in keeping isolated employees engaged. When remote workers have high feelings of professional isolation,

perceived supervisor support plays an important role in keeping their engagement levels high. Thus, the presence of a supportive supervisor was found to be essential in this relationship.

The researcher personally believes that, the “human touch” at work is extremely important. If the remote work practice is to stay, supervisors have to exert double the effort to keep their team members not only engaged, but also focused on attaining business outcomes. Finally, the researcher believes that no amount of e-communication and virtual activities can make up for informal interactions among colleagues with physical proximity!

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# Appendix 1 Survey Study



## The role of perceived supervisor support in moderating the influence of professional isolation experienced during COVID-19 remote work on employee engagement.

\* Required

I would like to invite you to participate in my research study for the MSHR Program at the Lebanese American University. The purpose of this research is to study the role of perceived supervisor support in moderating the influence of professional isolation experienced during COVID-19 remote work on employee engagement. Please note that it will take approximately 15 minutes to complete this survey. If you choose to participate, please complete the survey as truthfully as you can. Your assistance is greatly appreciated. \*

By continuing with the questionnaire, you agree with the following statements:

1. I have been given sufficient information about this research project.
2. I understand that my answers will not be released to anyone and my identity will remain anonymous.
3. I understand that all responses I provide for this study will remain confidential. When the results of the study are reported, I will not be identified by name or any other information that could be used to infer my identity. Only researchers will have access to view any data collected during this research however, data cannot be linked to me.
4. I understand that I may withdraw from this research any time I wish and that I have the right to skip any question I don't want to answer
5. I understand that my refusal to participate will not result in any penalty or loss of benefits to which I otherwise am entitled to.
6. I have been informed that the research abides by all commonly acknowledged ethical codes and that the research project has been reviewed and approved by the Institutional Review Board at the Lebanese American University
7. I understand that if I have any additional questions, I can ask the research team listed below.
8. I have read and understood all statements on this form.
9. I voluntarily agree to take part in this research project by completing the following questionnaire.

If you have any questions, you may contact:

Name (PI)	Email address
Lori Agopian	Lori.agopian@lau.edu

If you have any further questions about your rights as a participant in this study, or you want to talk to someone outside the research, please contact the:

**IRB Office**

Lebanese American University  
3<sup>rd</sup> floor, Dorm A, Byblos Campus  
Tel: 00 961 1 786456 ext. 2546  
irb@lau.edu

This study has been reviewed and approved by the LAU IRB  
**LAU.SOB.SK3.3/Mar/2021**

Yes

No

Next

## Demographics

This portion of the survey will help identify trends in the data for different groups of employees. Please remember that your responses are completely confidential

### Age \*

- 18-25
- 26-43
- 44-54
- 55-65
- 65+

### Gender \*

- Male
- Female
- Prefer not to disclose

Education Level \*

- High school or less
- University/BA/BS Degree
- Master's Degree
- Doctorate Degree
- Other

Current Job Level \*

- Entry-level position
- Non-managerial position
- Supervisory position
- Middle Level Manager
- Top Level Manager

Total years of experience \*

- None
- 1-5
- 6-10
- 11-20
- 20+

Current Industry \*

- Education/Higher education
- Retail
- Banking and finance
- Hospitality
- Information technology
- Health care
- Accounting and legal
- Manufacturing
- Media
- Other

This portion of the survey is related to your current remote work practice. Please remember that your responses are completely confidential.

Did your company practice remote work before the covid-19 pandemic? \*

- Yes
- No
- Only when necessary

On average, what percent of your total work time do you work in a physically isolated setting away from the organization, your supervisor and coworkers, and other members of the organization? \*

- 0
- 1-25%
- 26-50%
- 51-75%
- 76-100%

Back

Next

This portion of the survey is related to your remote work experience. Please remember that your responses are completely confidential.

Please indicate your level of agreement with each of the following:  
During my remote work experience...

I feel left out on activities and meetings that could enhance my career \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

I feel isolated \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

I miss out on opportunities to be mentored \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

I feel out of the loop \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

I miss face-to-face contact with coworkers \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

I miss the emotional support of coworkers \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

I miss informal interaction with others \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

Back

Next

Please indicate your level of agreement with each of the following:  
During my remote work experience...

My supervisor supports my need to balance work and other life issues \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

My supervisor provides me with opportunities to demonstrate my leadership skills \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

Discussions with my supervisor about my performance are worthwhile \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

The leadership I am working for takes pride in my accomplishments at work \*

1 2 3 4 5

Strongly Disagree      Strongly Agree

My supervisor provides me with constructive suggestions to improve my job performance \*

1 2 3 4 5

Strongly Disagree      Strongly Agree

My supervisor listens to what I have to say \*

1 2 3 4 5

Strongly Disagree      Strongly Agree

My supervisor treats me with respect \*

1 2 3 4 5

Strongly Disagree      Strongly Agree

In the last six months, my supervisor has talked with me about my performance \*

1 2 3 4 5

Strongly Disagree      Strongly Agree

I have trust and confidence in my supervisor \*

1 2 3 4 5

Strongly Disagree      Strongly Agree

Back

Next

Please indicate your level of agreement with each of the following:  
During my remote work experience...

At my work, I feel bursting with energy \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

I find the work that I do full of meaning and purpose \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

Time flies when I am working \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

At my job, I feel strong and vigorous \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

I am enthusiastic about my job \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

When I am working, I forget everything else around me \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

My job inspires me \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

I feel happy when I am working intensely \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

I am proud of the work that I do \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

I am immersed in my work \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

I can continue working for very long periods at a time \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

To me, my job is challenging \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

I get carried away when I am working \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

At my work I always persevere, even when things do not go well \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	Strongly Agree				

Back

Submit

## Appendix 2 IRB Approval of Research

 المعهد اللبناني للدراسات الأمريكية Lebanese American University Institutional Review Board (IRB)	مجلس الاستشارات
<b>NOTICE OF IRB EXEMPTION DETERMINATION</b>	
<b>To:</b> Ms. Lori Agopian Dr. Silva Karkoulian Assistant Professor School of Business	<b>APPROVAL ISSUED:</b> 3 March 2021 <b>EXPIRATION DATE:</b> 3 March 2023 <b>REVIEW TYPE:</b> EXEMPT CATEGORY B
<b>Date:</b> March 3, 2021	
<b>RE:</b> <b>IRB #:</b> LAU.SOB.SK3.3/Mar/2021 <b>Protocol Title:</b> <i>The Role of Perceived Supervisor Support in Moderating the Influence of Professional Isolation Experienced during Covid-19 Remote Work on Employee Engagement</i>	
<p>Your application for the above referenced research project has been reviewed by the Lebanese American University, Institutional Review Board (LAU IRB). This research project qualifies as exempt under the category noted in the Review Type</p> <p>This notice is limited to the activities described in the Protocol Exempt Application and all submitted documents listed on page 2 of this letter. <b>Final reviewed consent documents or recruitment materials and data collection tools released with this notice are part of this determination and must be used in this research project.</b></p>	
<b>CONDITIONS FOR ALL LAU NOTICE OF IRB EXEMPTION DETERMINATION</b>	
<p><b>LAU RESEARCH POLICIES:</b> All individuals engaged in the research project must adhere to the approved protocol and all applicable LAU IRB Research Policies. PARTICIPANTS must NOT be involved in any research related activity prior to IRB notice date or after the expiration date.</p> <p><b>EXEMPT CATEGORIES:</b> Activities that are exempt from IRB review are not exempt from IRB ethical review and the necessity for ethical conduct.</p> <p><b>PROTOCOL EXPIRATION:</b> <b>PROTOCOL EXPIRATION:</b> The LAU IRB notice expiry date for studies that fall under Exemption is 2 years after this notice, as noted above. If the study will continue beyond this date, a request for an extension must be submitted at least 2 weeks prior to the Expiry date.</p> <p><b>MODIFICATIONS AND AMENDMENTS:</b> Certain changes may change the review criteria and disqualify the research from exemption status; therefore, any proposed changes to the previously IRB reviewed exempt study must be reviewed and cleared by the IRB before implementation.</p> <p><b>RETENTION:</b> Study files must be retained for a period of 3 years from the date of project completion.</p> <p><b>IN THE EVENT OF NON-COMPLIANCE WITH ABOVE CONDITIONS, THE PRINCIPAL INVESTIGATOR SHOULD MEET WITH THE REPRESENTATIVES OF THE IRB OFFICE IN ORDER TO RESOLVE SUCH CONDITIONS. IRB CLEARANCE CANNOT BE GRANTED UNTIL NON-COMPLIANT ISSUES HAVE BEEN RESOLVED.</b></p>	
<p>If you have any questions concerning this information, please contact the IRB office by email at <a href="mailto:irb@lau.edu.lb">irb@lau.edu.lb</a></p>	
<b>BEIRUT CAMPUS</b>	
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The IRB operates in compliance with the national regulations pertaining to research under the Lebanese Minister of Public Health's Decision No.141 dated 27/1/2016 under LAU IRB Authorization reference 2016/3708, the international guidelines for Good Clinical Practice, the US Office of Human Research Protection (45CFR46) and the Food and Drug Administration (21CFR56). LAU IRB U.S. Identifier as an international institution: FWA00014723 and IRB Registration # IRB00006954 LAUIRB#1

**Dr. Joseph Stephan**  
Chair, Institutional Review Board

**DOCUMENTS SUBMITTED:**

LAU IRB Exempt Protocol Application	Received 15 February 2021
Research Proposal	Received 15 February 2021
Informed Consent Form	Received 15 February 2021
Questionnaire	Received 15 February 2021
Link to Online Survey	Received 15 February 2021, amended 2 March 2021
<b>IRB Comments sent:</b>	<b>PI response dated:</b>
22 February 2021	1 March 2021
1 March 2021	2 March 2021
3 March 2021	3 March 2021
NIH Training – Silva Karkoulian	Cert. # 2059914 (Dated 20 April 2016)
CITI Training – Lori Agopian	Cert.# 41232890 Dated (1 March 2021)

