

The Empirical Research on Professional Isolation During Remote Work in Context of COVID-19 and Organizational Citizenship Behavior: Sequential Mediation Effect of Psychological Empowerment and Affective Organizational Commitment*

EunKyung Noh

Ki-Hak Lee[†]

Department of Psychology, Yonsei University

While much has been studied about the positive and negative effects of discretionary remote work as an alternative work arrangement, little has been written about in the context of mandated remote work. The COVID-19 pandemic forced many organizations to impose remote work as a new mode of working arrangements. This abrupt change yielded positive and negative physical, social, and psychological outcomes. Drawing from the job demand and resource model and self-determination theory, this study examines the effects of professional isolation on organizational citizenship behavior, proposing the sequential mediation of psychological empowerment and affective organizational commitment as intrinsic motivators. An online survey was conducted. A total of 162 full-time remote workers (56 male (34.6%), 106 female (65.4%)) in Korea were analyzed. This study revealed that psychological empowerment and affective commitment fully mediate the relationship between professional isolation and organizational citizenship behavior. Contrary to expectation, however, the relationship between professional isolation and organization was found to be nonsignificant. Implications for practice, theory, and future research are discussed.

Key words : Remote work, professional isolation, organizational commitment, psychological empowerment, organizational citizenship behavior, sequential mediation

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† Correspondence concerning this article should be addressed to Ki-Hak Lee, Yonsei University 50 Yonsei-ro, Seodaemun-gu, Seoul 03722, Republic of Korea. E-mail: khlee2445@yonsei.ac.kr



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Introduction

With the recent advancement of Information and Communication Technology (ICT) and the wide availability of high-speed internet, remote working, also known as teleworking or telecommuting, has become one of the popular work environments adopted by many companies (Allen et al., 2015). It has become the new norm adopted by many companies only after the outbreak of Covid-19. Prior to the pandemic, such working arrangement was limited to specific occupations or not widely preferred (Kossek & Lautsch, 2018). However, in the effort to contain the spread of the pandemic and minimize face-to-face interaction, there has been a dramatic surge of remote work, effectively changing the nature of work for many workers across the board. According to the recent data provided by Statistics Korea on labor participation rate (2021), the number of teleworkers was 503,000 as of the second quarter of 2021, signifying a 530% year-over-year (YoY) increase. In addition, the proportion of remote workers in total wage workers (20.22million) also increased from 0.5% to 2.5% in a year (Statistics Korea, 2021).

The abrupt shift to remote work has changed the workplace environment of many workers (Buomprisco et al., 2021). Given that the concept of the workplace includes work in a particular environment, relationships with members of the organization, and employees'

personal lives (Solomon et al., 2006), the sudden transition to remote work has significantly impacted employees. As a result, corporations and their members sought to adapt to the new working environment, but concerns regarding the effectiveness of remote work still exist (Kwon, 2020; Bernstein et al., 2020).

Although numerous studies have examined the effects of remote work, only a limited number of studies on compulsory remote work exist (Lee, 2022; Lee & Jung, 2021). Specifically, existing research on remote work has been conducted in a situation where remote work is rarely practiced and has been limited to specific occupations (Wang et al., 2020). In other words, previous studies have limitations as they are not widely generalizable in that there may be significant differences in results due to various contextual factors such as differences in occupation, frequency of remote work, and voluntariness, resulting in selection bias (Lapierre et al., 2016). Thereby, it is necessary to shift the focus to the situation where remote work is no longer a free discretionary choice by a compulsory requirement.

Among the major challenges caused by remote work, the most frequent consequence is isolation or disconnection from the organization (Harrington & Santiago, 2006). Isolation in the workplace refers to a condition caused by physical separation from professional peers while lacking mentoring and opportunities for professional interaction, collaboration, and development (Kutoane et al., 2021; Diekema,

1992). Despite the existing literature indicate the negative outcomes of professional isolation (Golden et al., 2008; Bauer & Silver, 2018) and the high possibility of remote work becoming the new normal in the post-COVID era (Prescott et al., 2022; Best, 2021), comparatively little research has addressed the professional isolation in the context of compulsory remote work, particularly in the context of Korea. Consequently, the primary goal of the current research is to explore the effects of professional isolation during compulsory remote work on organizational performance.

The Job Demand-Resource (JD-R) model (Bakker & Demerouti, 2007) serves as a primary theoretical framework for the present study. JD-R model is a well-established and well-supported model in the field of occupational psychology to explain how working conditions affect employees' well-being and performances (Heckenberg et al., 2018; Lenthall et al., 2009). Specifically, it was designed to explain which combinations of job demands and resources influence job-related outcomes (i.e., burnout and work engagement) through motivation and exhaustion. Due to its characteristics, the JD-R model is evaluated as a universal concept that can be applied in various occupational situations (Jones & Fletcher, 1996); thus, professional isolation caused by mandated remote work as a consequence of COVID-19, too, can be explained using the JD-R model as creating relevant job demands that influence employees' organizational

performances.

Furthermore, Self-Determination Theory (SDT; Ryan & Deci, 2000) which demonstrates the relationship between the fulfillment of three needs - autonomy, competence, and relatedness - and its performance outcome through the mediating role of motivation, is integrated into the present study as another framework to explain why professional isolation caused by mandated remote work affects organizational performances.

In the midst of COVID era where employees are no longer in the sight of supervisors and organizations, employees' voluntary pro-organizational behaviors are essential. However, developing OCB in the organization requires arduous efforts as many employees overlook or are unaware of its importance; therefore, its research values are recognized to encourage such behaviors at the organizational level. Considering organizational citizenship behavior (OCB) is discretionary behavior that does not cost organizations' capital and promotes the effective functioning of the organization, OCB is the most favorable outcome from the organization's perspectives (Organ, 1988). For that reason, the academic interests on OCB and its mechanisms have surged.

Following the JD-R model and SDT, OCB is characterized as the motive-based behavior in which both extrinsic and intrinsic motivation develop and strengthen behavior directly and indirectly (Ariani, 2012; Dávila & Finkelstein,

2013). Previous studies have examined the effect of motivation on employees' OCB in various contexts, either directly (Ibrahim & Aslinda, 2015) or through mediating role of organizational commitment (Noor, 2009; Kim et al., 2020). Both psychological empowerment (Saleh et al., 2020; Hepkema, 2011) and affective organizational commitment (Purnama, 2013; Farzaneh et al., 2014) are well documented as intrinsic motivators that facilitate OCB. These findings call for further studies to scrutinize the effect of motivation and organizational commitment on OCB in various contexts. Therefore, the current study uses psychological empowerment and affective organizational commitment as mediating factors in the relationship between professional isolation and OCB.

To summarize, the research aims to investigate the relationship between professional isolation during remote work and OCB through the underlying motivational process mechanism of JD-R model and SDT using psychological empowerment and affective organizational commitment as mediating variables.

The present study contributes to extant research in at least three ways. First, this study helps to expand the literature on remote work. As the limitations mentioned above of existing remote work studies suffer from selection bias, this study provides a more accurate representation of remote work by using data collected from employees of diverse occupations

and backgrounds. Also, this study advances our understanding of how 'enforced' full-time remote work may elicit professional isolation and its effect on organizational performance.

Second, drawing from the job demand and resource model (JD-R; Bakker & Demerouti, 2007) and self-determination model (SDT; Deci & Ryan, 2000), it generates insights into the role of motivation by examining the mediating mechanisms through which professional isolation affects employees' OCB via psychological empowerment and affective organizational commitment. In this study, these mediators are viewed as intrinsic motivators that facilitate OCB in response to psychological demands and resource loss in response to miss opportunities for professional development from enforced remote work.

Lastly, it calls for HRD practitioners and scholars to recognize the pivotal role of psychological empowerment in managing human resources that ensure maximized organizational performance during a crisis. In the following sections, the theoretical arguments using existing empirical findings to develop this study's hypotheses are elaborated.

Literature Review

Job Demands-Resources Model

Bakker and Demerouti's (2007) job

demands-resource model is a theoretical model that investigates the effect of job demands and resources on organizational performances through the mediating role of positive or negative psychological factors. JD-R model posits that all occupations have risk factors - job demand - which causes job-related stress and adverse psychological outcomes, whereas job resources strengthen employees' commitment and motivation (Guenzi & Nijssen, 2021). Job demands are defined as "physical, psychological, social, or organizational aspects of the job that require sustained physical and psychological (i.e., cognitive or emotional) efforts and therefore associated with certain physical and psychological costs (e.g., exhaustion)." Conversely, job resources refer to "those physical, psychological, social, or organizational aspects of the job that either/or (1) reduce job demands and the associated physiological and psychological costs; (2) are functional in achieving work goals; (3) stimulate personal growth and development."

Taken together, although not all job demands are negative, excessive levels of job demands require high effort to meet them and thereby elicit negative responses, which, in turn, negatively affect organizational performances (Schaufeli & Bakker, 2004). Furthermore, a lack of resources impedes job demand and the achieving of work goals which evokes withdrawal behavior or reduced motivation/disengagement to prevent further energy depletion (Schaufeli & Taris, 2014). Therefore, professional isolation

during compulsory remote work can be considered as job demands and/or lack of job resources that negatively affects the organizational performances, such as OCB.

Despite it being considered an open and heuristic model, the JD-R model suffers from its generalizability because all sorts of demands, resources, and outcomes can be included (Schaufeli & Taris, 2014). In other words, the interaction between job demands and resources does not imply that all demands and resources contribute equally to all of their outcomes. Thus, the JD-R model is not an explanatory model but rather a descriptive model. Therefore, an additional explanatory theoretical framework is needed to argue why particular demands interact with particular resources (Schaufeli & Taris, 2014).

Self-Determination Theory

Self-Determination Theory (SDT) posits that employees have three needs: a need for autonomy, a need for competence, and a need for relatedness (Ryan & Deci, 2000). The theory highlights the role of motivation and its outcomes that autonomous motivation leads to better work behaviors (Deci et al., 2017; Deci & Ryan, 2008). Employees who fulfill the intrinsic needs for autonomy and growth tend to exhibit higher intrinsic motivations and, thus, carry out work that reflects their core values and beliefs (Reis et al., 2016). It also proposes

that external regulations which involve employees being motivated to act solely by the presence of environmental incentives and consequences can be internalized by individuals becoming internal regulations (Deci & Ryan, 2017; Brunelle & Fortin, 2021). Thus, through this process, employees are motivated to engage in work-related activities because they find them inherently satisfying (Hardré & Reeve, 2009). In conclusion, individuals' behaviors and motivations are greatly affected by the degree to which their three needs - autonomy, competence, and relatedness - are fulfilled.

Prior to the COVID-19 crisis, remote work was often associated with these three components, mostly in positive ways. It was associated positively with autonomy and competence since remote workers were granted great flexibilities regarding location, time, and tasks resulting in increased autonomy (Campbell & McDonald, 2009; Gajendran & Harrison, 2007) and experience increased productivity due to fewer distractions than office workers and less commuting time ensuing higher self-competence (Kanellopoulos, 2011; Sherry & Salvador, 2002). However, in the COVID-19 context, the flexibilities of location and working time were no longer allowed as home confinement was imposed; therefore, employees often had to cope with exacerbated professional and personal time issues, leading to decreased autonomy (Carillo et al., 2020). Employees also were forced to respond to their employers' and organization's

demands jeopardizing their competencies (Ingusci et al., 2021).

Consequently, based on SDT which postulates that psychological needs are contingent on the contexts within which work is done (Gagne, 2003), the current study proposes that employees who are experiencing professional isolation are in the absence of autonomy, competence, and relatedness in times of COVID-19 where remote work is mandated. Therefore, we can predict that professional isolation incurred by the deficiency of these needs may yield a decrease in motivations which will, in turn, negatively affect employees' performances.

Remote Work

Remote work, also referred to as telework, telecommuting, or work from home, hereafter remote work, is a relatively new mode of alternative work arrangements (Baruch, 2000). From the organizational management perspective, remote work is perceived as a future-oriented working arrangement that elicits work efficiency regardless of time and space constraints, increases the efficiency of human resources utilization through hiring the top talent without geographic limits, and saves on operational expenses relating to office-based workers (Timsal & Awais, 2015; Korea National Information Society Agency, 2019). Furthermore, from employees' perspectives, remote work was linked to reduced commuting time and non-essential meetings, less

distraction and stress, increased productivity, and greater autonomy (Ozimek, 2020).

Despite its benefits, only 0.3% (95,000) of all workers in Korea engaged in remote work before the COVID-19 pandemic (Bank of Korea, 2022). It was not prevalent in most organizations due to communication difficulties and high risks for managing security issues. Moreover, remote work traditionally had been considered the prerogative of high-skilled, high-paid, white-collar occupations (Tavares, 2017). Nonetheless, the outbreak of the COVID-19 pandemic has dramatically changed the prevalence across many businesses and employers (OECD, 2021). It became a mandatory measure and was extended to various occupations, including information and communication services, professional, scientific and technical services, financial services, education services, and many mid- and low-skilled administrative and clerical occupations (OECD, 2021).

Many studies have revealed both positive and negative consequences of remote work (Chong, Yi & Chang, 2020; Nakrošienė et al., 2019; Tremblay & Thomsim, 2012). However, despite the positive outcomes of remote work, such as reduced work-family conflict (Gottlieb et al., 1998), increased productivity (Peters & Dulk, 2003), increased flexibility (Bailey & Kurland, 2002), and high possibility of continued remote work in the post-COVID era highlight the need for comprehensive research on the challenges of

remote work to initiate research in finding practical interventions. Although numerous factors such as work overload (Wu & Chen, 2020), technostress (Ayyagari et al., 2012), and work-family conflicts (Solís, 2016) have been discussed as hindrances for remote working, the experience of isolation is the most often cited challenges for remote work (Wang et al., 2020; Beauregard et al., 2019; Golden et al., 2008; Bailey & Kurland, 2002).

Professional Isolation

Professional isolation refers to a state of mind that occurs when one is physically separated from others in the workplace and perceives reduced developmental opportunities and executive compensation compared to onsite employees (Golden et al., 2008; Kurland & Bailey, 1999; Diekema, 1992). The relationship with members of the organizations, especially supervisors, plays a crucial role in attitudes and performance towards remote work (Gibson et al., 2002; Baruch, 2001). Allen et al.'s (2015) and Fonner & Roloff's (2010) study have proven that remote workers develop a poorer relationship with their peers and supervisors; hence, employees may fear that being off-site will provoke "out of sight, out of mind" phenomenon. Although not all remote workers may experience professional isolation, Mann, Varey & Button (2000) findings revealed that remote workers often lack "social barometers" to

compare themselves with others and are more apt to display a lack of confidence in their abilities, affecting their work performance.

Cooper and Kurland's (2002) study on professional isolation and employment development demonstrated that professional isolation is inextricably linked to employee development activities such as interpersonal networking, informal learning, and mentoring and the degree to which remote workers miss out on these opportunities. Employees establish informal networking connections, acquire various work-related information, and receive feedback on their tasks through face-to-face interaction with coworkers (Gajendran & Harrison, 2007). Studies discovered that remote workers become less involved in information exchange networks due to poorer relationships (Allen et al., 2015; Fonner & Roloff, 2010); thus, remote workers are more likely to believe that opportunities and benefits are limited because they are excluded from organizations' various network structures (Manochehri & Pinkerton, 2003). Consequently, these feelings may provoke professional isolation.

Logic would suggest that employees on compulsory remote work might be more apt to experience isolation than those on discretionary remote work. Although there is no study, to our knowledge, that compared professional isolation in voluntary and involuntary settings, there are studies that compared the outcomes of remote work mitigated by employees' willingness to work remotely or to work onsite. A longitudinal

study by Lapierre et al. (2016) demonstrated that employees who had been forced to work remotely reported more strain-based work-to-family conflict, an allied outcome of remote work. Similarly, Choi's (2018) study revealed that employees who did not work remotely due to their own choice reported lower turnover intentions than those who did not due to organizational restrictions. These findings suggest the idea that in current situations where employees are forced to work remotely, are more likely to experience professional isolation.

As the cultural background of Korea is considered a collectivist society, the 'work process' is central to the organizational culture as compared to that of western cultures that emphasize the 'work outcome' (Lee, 2020). Since the evaluations of employees tend to be determined by subjective evaluation of the supervisors, the notion that "being early at the office than others and frequently making face-to-face reports to the supervisors ensure promotions and increase in rewards" is prevalent (Lee, 2020). Due to this organizational culture, remote workers may perceive working from home negatively affecting the evaluation since they cannot display their efforts, loyalty, sincerity, and commitment to the organization (Lim, 2021).

Organizational Citizenship Behavior

Organizational Citizenship Behavior (OCB),

coined by Organ (1988), is defined as “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization.” OCB is an essential concept for an organization because it facilitates optimal organizational functioning and performances and contributes to an increase in organizational effectiveness without increase in labor cost (Organ, 1988; Van Dyne et al., 2000); hence, it plays a pivotal role during the COVID-19 pandemic as such a dire situation requires employees to improve organizational capabilities in coping with crisis (Braun et al., 2013).

Some behavioral examples of OCB include working extra hours to help coworkers, following novel rules and policies willingly, and helping the new employee “learn the ropes” (Kane, 2014). These actions indicate that employees are noble and capable of working beyond their work roles, job descriptions, and obligations (Romaiha et al., 2019). A notable characteristic of OCB is that managers do not directly compensate for the behavior; likewise, problematic OCB cannot be punished directly (Moorman & Blakely, 1995). Therefore, recognizing such behaviors is critical to both organization and employees as it may affect the overall performances. In general, the consensus on OCB is that it is a constructive, self-initiated, and voluntary behavior that aims to strengthen the organization's efficiency without expecting rewards in return

(Yadav & Rangnekar, 2015).

OCB is a multi-dimensional construct (Smith et al., 1983; Podsakoff et al., 2000). Early OCB was recognized as a two-dimensional construct that consisted of altruism and generalized compliance (Smith et al., 1983). Organ (1988) later reconstructed its dimensions into five factors: altruism, conscientiousness, courtesy, sportsmanship, and civic virtue. Altruism refers to selfless behaviors aimed at helping others solve problems and do their tasks. Conscientiousness demonstrates behavioral patterns of going beyond their formal job descriptions to improve individuals' and groups' efficiency. Courtesy reflects on considerate behavior towards others to reduce the impact of the problems, and sportsmanship behaviors include tolerating impositions and inconveniences without complaining. Lastly, civic virtue is defined as taking an active interest in the organizations (e.g., reading emails, keeping abreast with organizational issues).

Despite the abundance of literature espousing OCB's antecedents (Harper, 2015; Zeinabadi, 2010; Singh et al., 2019) and consequences (Emami et al., 2012; Podsakoff, 2014; Bergeron et al., 2013), only a few of studies have examined its relationship to remote work (Kane, 2014; Staller & Randler, 2021). However, this research has largely yielded inconsistent results. For example, while some studies which hypothesized the positive relationship between remote work and OCB due to its benefits (e.g.,

job satisfaction, commitment) had proven to be antecedents of OCB (Fonner & Roloff, 2010; Kelliher & Anderson, 2010). Another study found a negative relationship between team virtualness and group OCB (Ganesh & Gupta, 2010). In addition, the result of Redman et al. (2009) has shown that there is no relationship between remote work and OCB.

Moreover, little to no empirical research has investigated professional isolation during remote work and its relationship to OCB (Kane, 2014), especially in the context of compulsory remote work due to COVID-19. Regarding the relationship between remote work isolation and OCB, qualitative studies confirmed that physical separation and isolation are negatively related to discretionary-related behavior (Kurland & Cooper, 2002; Cooper & Kurland, 2002). Furthermore, Kane (2014) revealed that the relationship between remote work and OCB might not directly be mediated by professional isolation. However, professional isolation mediated the relationship between the frequency of remote work and OCB.

Although there are limited research that examined the direct relationship between professional isolation and OCB, related studies on professional isolation revealed its association performance outcomes such as job satisfaction (Bauer & Silver, 2018; Bauer & Brazer, 2013), work performance (Mulki et al., 2008; Golden et al., 2008), turnover intentions (Orhan et al., 2016; Ahuja et al., 2002), and job engagement

(Bentein et al., 2017). These findings indicate that OCB which is also a performance outcome can be negatively affected by professional isolation.

Consistent with these previous studies, this study proposes that professional isolation during compulsory full-time remote work is negatively associated with OCB.

Psychological Empowerment

Psychological empowerment refers to employees' intrinsic motivation to perform tasks reflecting a sense of self-control concerning one's work and an active engagement with one's work role (Spreitzer, 1995). The concept of psychological empowerment is rooted in empowerment theory (Rappaport, 1987) which highlights the importance of encouraging the contribution of individuals within a community to meet their needs and defend their rights (Lee, 2001; Farzaneh et al., 2014). Based on empowerment theory, Spreitzer (1995) applied empowerment into the work context and introduced a multifaceted construct: meaning, competence, self-determination, and impact.

Employees who view their tasks have meaningful purpose tend to be committed, involved, and focused, while those who do not tend to be apathetic and feel detached (Thomas & Velthouse, 1990; Farzaneh et al., 2014). Furthermore, competence refers to the degree of belief individuals have in their skills to perform

well on their tasks (Thomas & Velthouse, 1990), and self-determination is defined as the 'individual's independence in the initiation and continuation of tasks' (Spreitzer, 1995). Lastly, impact connotes individuals' perceived influence on their organization through their performances (Farzaneh et al., 2014). In other words, employees with high psychological empowerment tend to view themselves as independent, self-determined, and influential within the organization and in their tasks.

Although there is a dearth of research examining the relationship between professional isolation and psychological empowerment, previous literatures related to the psychological empowerment highlight the importance of employees' perceived work conditions. Existing literature suggests that remote work is inextricably linked to psychological empowerment (Colnaghi, 2021; Ollo-López et al., 2020; Naotunna & Zhou, 2016). Work settings where employees have development opportunities act as a job resource that increases motivation (e.g., empowerment) (Hackman & Oldham, 1976; Ryan & Deci, 2000). Intrinsic motivations attend to affective and cognitive components while performing the tasks and result from an individual's positive response to the workplace (Deci & Ryan, 2012).

Further, according to the meta-analysis by Seibert et al. (2011) that examined the antecedents of psychological empowerment, contextual factors such as high-performance

managerial practices, socio-political support, and work design characteristics are strongly linked to remote work settings and predict psychological empowerment. Since these contextual factors are vastly limited and manipulated by the organization in compulsory remote work setting, professionally isolated employees are most likely to be psychologically disempowered. From these studies, therefore, we can infer that the professional isolation may influence the development of psychological empowerment.

Past research on remote work has demonstrated that as remote workers view themselves as 'free workers' who are independent, autonomous, and flexible, breaking away from oppressive employment practices (Donnelly, 2006; Knell, 2000), they tend to exhibit higher psychological empowerment than onsite workers (Redman et al., 2009). Though considering these past studies were conducted when remote work was a discretionary option, employees experiencing professional isolation due to compulsory remote work are likely to experience the converse, disempowerment. Deducing from an earlier investigation, the nature of compulsory remote work and experience of professional isolation may jeopardize the development of psychological empowerment.

Given that remote work vastly alters the social and physical context of work and as mentioned above, work contexts contribute to the degree of employees' involvement in the organization (Farzaneh et al., 2014), professional

isolation will affect their work performances by mediating role of empowerment. Avey et al. (2012) proposed that a stable and safe working environment can empower employees with psychological ownership and commitment to the organization. While a satisfactory work environment may promote employees' intrinsic motivations to commit to and actively participate in the organization, a dissatisfactory work environment, contrarily, may demote their motivations; thus, employees in such a milieu may refrain from behaviors that may benefit themselves and the organizations; therefore, empowering situation and empowerment is essential in predicting employees' prosocial behaviors.

Likewise, a substantial body of research revealed that psychological empowerment is an essential determinant of positive organizational outcomes (Singh & Singh, 2018; Chiang & Hsieh, 2012; Kazlauskaitė et al., 2012). Psychologically empowered employees tend to exhibit more robust work engagement (Bhatnagar, 2012; De Villiers & Stander, 2011), job satisfaction (Beauregard, 2012; Wang & Lee, 2009), organizational commitment and organizational citizenship behavior (Li et al., 2017). Turnipseed and VandeWaa's (2020) study on psychological empowerment and OCB revealed that psychological empowerment is directly linked to OCB, which indicates that empowered employees voluntarily engage in OCB that benefit their colleagues and organization

without expensing organization's capital.

No known study has empirically assessed the mediating effect of psychological empowerment on the relationships between professional isolation and OCB. However, drawing from previous literature mentioned above that remote work environment that induces professional isolation negatively affects the psychological empowerment (Farzaneh et al., 2014; Ollo-López et al., 2020) and psychological empowerment positively affects the OCB (Bogler & Somech, 2004; Turnipseed & VandeWaa, 2020), the present study suggests that psychological empowerment mediates the relationship between the professional isolation and OCB.

Affective Organizational Commitment

Organizational commitment is generally conceptualized as a psychological state that characterizes an employee's relationship with the organization (Meyer & Allen, 1991). Specifically, it refers to an individual's tendency to actively participate in the organization's goals and values, identify oneself as a member of the organization, experience a sense of oneness within the organization, and incline to give efforts to the organization (Meyer et al., 1993). Thatcher et al. (2003) proposed that organizational commitment is formed and expressed by the interaction between the organization's values and the employees' expectations. It has been widely recognized as a predictor of desirable

organizational outcomes such as job satisfaction, motivation, and role performance (Meyer et al., 2002).

Organizational commitment is a multi-dimensional construct comprised of affective organizational commitment (AOC), normative organizational commitment (NOC), and continuous organizational commitment (COC) (Allen & Meyer, 1990; Meyer & Allen, 1991). Each of these can be categorized, respectively, as desire ('want to'), perceived obligation ('ought to'), and perceived cost of leaving ('need to') (Meyer et al., 2004). First, AOC to an organization represents emotional and psychological attachment to the organization and an individual's desire to remain with the organization. Second, NOC refers to a feeling of obligation to stay with the organization as a means of reciprocation for benefits received (Meyer & Herscovitch, 2001). Third, COC is associated with an individual's perceived judgment over the cost of leaving the organization compared to that of remaining (Huselid & Day, 1991; Allen & Meyer, 1990). In other words, it is the propensity to remain in the organization when financial, material, and psychological opportunities incurred by members leaving the organization are greater than when they remain in the organization (Allen & Meyer, 1990).

However, the three-component framework of organizational commitment proposed by Meyer and Allen (1991) has always been a topic of

controversy and dilemma in defining organizational commitment due to its confounding and fragmented results (Mercurio, 2015; Fischer & Mansell, 2009; Fornes, Rocco & Wollard, 2008; Stazyk et al., 2011). Thus, responding to Meyer and Herscovitch's (2001) call for finding a "core essence" of organizational commitment, Mercurio (2015) concluded that the core essence of organizational commitment is affective commitment, and future research should focus on its lens to affective organizational commitment only. Therefore, the current study focuses on affective organizational commitment as a distinct construct rather than distinguishing it as a three-component construct.

Affective organizational commitment (AOC), as mentioned above, is defined as "the employee's emotional attachment to, identification with, and involvement in the organization" (Meyer & Allen, 1991). Employees who exhibit high levels of AOC tend to be more productive and less likely to quit, while employees who are low in AOC are more likely to miss work and engage in counterproductive behaviors such as theft, sabotage, and aggression (Morrow, 2011; Meyer & Allen, 1997).

The study of the antecedents of AOC has surged due to the empirical links between AOC and organizational outcome variables (Meyer et al., 2002). Studies have shown that interpersonal relationship variables such as mentoring, social networking, training, and development can predict AOC (Kehoo & Wright, 2013; Sun et

al., 2007; Payne & Huffman, 2005; Saks & Ashforth, 1997). In the remote work context, due to reduced work-related social interactions, employees perceive reduced opportunities in establishing a network with others and, therefore, affect their career development (Maruyama & Tietze, 2012). As such factors are closely associated with remote work environments, remote workers who are experiencing are more likely to exhibit low AOC. Supporting the following argument, Wang et al.'s (2020) study that examined isolation and organizational commitment demonstrated that AOC is negatively related to professional isolation.

A majority of the research conducted on AOC investigating "linkages" between the employee and the organization found its association with organizational outcomes such as turnover (Albrecht & Andreetta, 2011; Morrow, 2011), absenteeism (Somers, 2009; Mowday et al., 2013; Solinger et al., 2008), organizational citizenship behaviors (Liu, 2009; Meyer et al., 2002; Williams & Anderson, 1991), and stress (Meyer et al., 2002; Schmidt, 2007). Studies have shown that affective commitment is positively correlated with and predictive of OCB (Paul et al., 2019; Soelton et al., 2020; Srivastava & Dhar, 2016). Since committed employees tend to engage in supportive behaviors toward the organization, a strong desire to be part of the organization will encourage individuals to perform better and

engage in the organizational activities willingly (Paul et al., 2019; Zehir, Muceldili & Zehir, 2012). Also, studies have shown that affective commitment was correlated with variables related to organizational behavior, such as assisting fellow employees, working longer hours, and information sharing, which are all components of OCB (Solinger et al., 2008; Mercurio, 2015). In addition, it has been proven to be a precursor factor that directly improves employee OCB (Jin et al., 2018; Khan et al., 2016).

Organizational commitment is an intervening attitudinal construct, mediating between the antecedents and consequences (Iverson, McLeod, Erwin, 1996; Wiener, 1982). Paul et al. (2016) have proven that commitment plays a mediating role in facilitating the antecedents of OCB. Ghosh et al. (2012) revealed the mediating role of AOC between mentoring and organizational behaviors. The mediating role of AOC in the professional isolation and OCB relationship appears plausible as prior research have confirmed a negative relationship between employee isolation and AOC (Ahuja et al, 2002; Even, 2020; Wang et al, 2020) and positive relationship between AOC and OCB (Allen et al., 2011; Gautam et al, 2005; Parnell, 2003). Given the strong rationale for the relationship between antecedents of AOC and its outcome, AOC is expected to act as a mediator between professional isolation and OCB.

Psychological empowerment and affective organizational behavior: JD-R model approach and sequential mediation

Previous studies examining the relationship between psychological empowerment and organizational commitment demonstrated that psychological empowerment positively affects the organizational commitment (Bhatnagar, 2005; Liden et al., 2000; Avolio et al., 2004). When employees are in an empowering condition that grants autonomy, responsibility, and a sense of accomplishments, they perceive greater competence and autonomy, meaning from their work, and impact of their act. Consequently, employees are likely to be motivated to reciprocate the given by being more committed to the organizations (Avolio et al., 2004; Joo & Shim, 2009). Contrarily, a sense of deficiency in four components of psychological empowerment alters the employees' cognition about how they are valued in the organization, which in turn causes them to be less likely to feel an attachment towards the organization and commit to the organization (Allen et al., 2011; Liu, 2009; Avolio et al., 2004).

In addition, according to Meyer and Allen (1997), employees are more committed if they are given “an opportunity to do important and challenging work, to meet and interact with interesting people, and to learn new skills and develop as a person.” Furthermore, since

psychologically empowered employees are apt to view themselves as self-governed, capable of performing their tasks, and influential within the organization, they are more inclined to respond by being more committed to their organizations (Spreitzer, 1996; Linden et al., 2000). Honold (1997) also suggested that “the more prominent the empowerment, the more involvement the employment self-governance, the more inclusion past the characterized occupation of the individual, the more prominent the affective commitment” (p.3).

Furthermore, in the professional isolation - OCB relationship, it is argued that psychological empowerment act as a motivator that helps an employee to elicit psychological attachment toward the organization (Allen et al., 2011; Liu, 2009) and supportive organizational behaviors (Li et al., 2017).

The sequential mediation effect of psychological empowerment and affective organizational commitment on the relationship between professional isolation and OCB can be explained through the JD-R model as it highlights the role of motivation. Based on the JD-R model, the relationship between job demands/resources and the organizational outcome is mediated by strains and motivations (Bakker & Demerouti, 2007). That is, a work environment that employees perceive as having high job demands and low job resources negatively affects organizational performance outcomes through the mediating effect of

psychological state.

The current study mainly focuses on the motivational process of the JD-R model rather than the health impairment model; thus, the job demand of remote work discussed in the current study is professional isolation due to lack of career development opportunities and organizational rewards, and augmentation of negative emotions. Second, psychological empowerment serves as not only a personal resource that enforces the motivational process but also a motivational factor itself. This is in line with the revised version of the JD-R model (Schaufeli & Bakker, 2004), which emphasizes the inherently extrinsic and intrinsic motivational qualities of job resources that initiate the willingness to spend compensatory effort to reduce job demands, foster goal attainment, and satisfy the basic human needs (Deci & Ryan, 2000). Lastly, the organizational outcomes in the present study are affective organizational commitment and OCB.

Surmising from previous literature, this study proposes that professional isolation and OCB are sequentially mediated by psychological empowerment and AOC.

Hypotheses

In conclusion, based on the premise of retaining the core assumption of these two theories, the present study assumes that

professional isolation, which is perceived as job demand and can be described as a state that lacks three basic needs, leads to decreased psychological empowerment, and, in turn, negatively affects AOC and OCB. We also argue that low psychological empowerment resulting from professional isolation affects OCB through AOC; thus, the sequential mediation.

Hence, the following hypotheses derived from the JD-R model in conjunction with the SDT framework and existing literature are proposed:

H1. Professional isolation directly and negatively affects organizational citizenship behavior.

H2. Professional isolation directly and negatively affects psychological empowerment.

H3. Professional isolation directly and negatively affects affective organizational commitment.

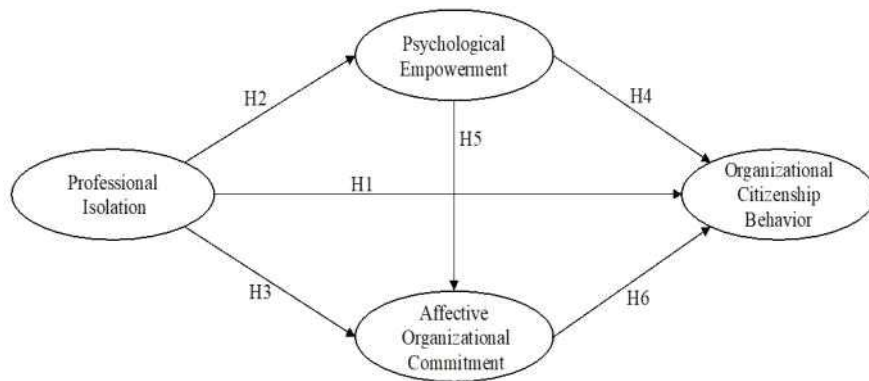
H4. Psychological empowerment directly and positively affects organizational citizenship behavior.

H5. Psychological empowerment directly and positively affects affective organizational commitment.

H6. Affective organizational commitment directly and positively affects organizational citizenship behavior.

H7a. The relationship between professional isolation and organizational citizenship behavior is mediated by psychological empowerment.

H7b. The relationship between professional isolation and organizational citizenship behavior is



H7a: Professional isolation → Psychological Empowerment → OCB
 H7b: Professional isolation → AOC → OCB
 H8: Professional isolation → Psychological Empowerment → AOC → OCB

Figure 1. Conceptual Model

mediated by affective organizational commitment.

H8. The relationship between professional isolation and organizational citizenship behavior is serially mediated by psychological empowerment and affective organizational commitment.

Method

Participants and Procedures

The data was collected from employees who are currently on remote work or have experience of remote work after the COVID-19 outbreak and mandated remote work was imposed, using a self-report questionnaire administered online from May 18 to May 23, 2022. Participants were recruited using an online data collection platform and were compensated 670 points (670 KRW) for participating in the survey.

Participating in the research was voluntary, anonymous, and respondents were assured that they were free to withdraw if they experienced any psychological or physical discomforts. Prior to filling out the questionnaire, the respondents signed informed consent. The research was conducted following the ethical standards of social research were followed. The study was approved by the Institutional Review Board (IRB) of Yonsei University.

A total of 400 people completed the questionnaire; three people were excluded prior to data analysis because they failed to answer correctly on the concentration questionnaires, which indicated that they were not fully paying attention to the survey. Also, Knight et al.'s (2022) study revealed that hybrid remote workers are less likely to experience isolation compared to full-time remote workers. Therefore, out of 397 respondents, 235 respondents who

Table 1. Demographic characteristics of the participants (N = 162)

Variable		Frequencies (percentage %)
Age	Mean	32.02 (SD=4.28)
Gender	Female	106 (65.43%)
	Male	56 (34.57%)
Position	Staff	47 (29.01%)
	Senior Staff	25 (15.43%)
	Assistant Manager	49 (30.24%)
	Manager	35 (21.60%)
	Deputy General Manager	6 (3.70%)
	Assistant Director or Above	3 (.08%)
	Management/Strategy	16 (9.88%)
	Sales/Marketing	14 (8.64%)
	Financial Management	9 (5.66%)
	Human Resource	14 (8.64%)
Field	IT	30 (18.52%)
	Production	11 (6.79%)
	Service	29 (17.90%)
	Research & Development	18 (11.11%)
	Other	27 (16.77%)
Remote Work after COVID-19 Outbreak	Mean (Period)	(SD=14.0)

reported that they were on a hybrid remote work were removed from data analysis to capture professional isolation accurately. Thus, a total of 162 full-time remote workers were included in the final sample. Table 1 shows the demographic characteristics of participants.

Measures

Professional Isolation

Professional isolation was measured using the 4-items scale developed by Harrington and Santiago (2006), which was established based on Teo et al.'s (1998) research. Because the data was collected from Korean employees, and there was no valid professional isolation scale translated into Korean, it went through a separate translating process based on Lee and Heo's (2021) study and Kim et al.'s (2015) the scale

validation study. First, a researcher who graduated from an English-speaking college and currently is enrolled in a master's program majoring in psychology translated Harrington and Santiago's (2006) scale. It was reviewed by two bilinguals fluent in both Korean and English and are experts in the field of psychology for its accuracy. All items were scored on a five-point Likert scale ranging from 1 ('strongly disagree') to 5 ('strongly agree'). A high score on this scale indicates that respondents have experienced professional isolation. An example of items is: 'Remote work adversely affects my career development due to reduced physical presence in the workplace.' Internal consistency (Cronbach's α) was 0.80.

Organizational Citizenship Behavior

OCB was assessed using Niehoff & Moorman's (1993) Organizational Citizenship Behavior scale, based on Organ's (1988) definition and dimensions of OCB. This scale was translated into the Korean version and was modified by Cho (2010) and Bang (2014). It consists of five dimensions: altruism (.78), conscientiousness (.63), courtesy (.76), sportsmanship (.70), and civic virtue (.69). A total of 20 items composed of four items each were scored on a five-point Likert scale ranging from 1 ('strongly disagree') to 5 ('strongly agree'). Examples of OCB items include: 'I help others who have been absent,' 'I do not take extra breaks,' and 'I do not consume a lot of

time complaining about trivial matters.'

Psychological Empowerment

Psychological empowerment was measured using Spreitzer's (1995) Psychological Empowerment in the workplace scale. Yoo (2019) translated the original scale into the Korean version and empirically verified the scale's validity. It consists of 12-items which are composed of four dimensions: meaning (.84), competence (.88), self-determination (.87), and influence (.88). Each subscale consists of three items and was scored on a five-point Likert scale ranging from 1 ('strongly disagree') to 5 ('strongly agree'). Examples of psychological empowerment include: 'I am confident about my ability to do my job' (meaning), 'I have a great deal of control over what happens in my department' (competence), 'my job is well within the scope of my abilities' (self-determination), 'I have significant influence over what happens in my department' (impact).

Affective Organizational Commitment

Affective organizational commitment was assessed using the translated and modified version (Kim, 2021) of the Organizational Commitment scale developed by Meyer & Allen (1993). The affective commitment was addressed with six items and was scored on a five-point Likert scale ranging from 1 ('strongly disagree') to 5 ('strongly agree'). Internal consistency (Cronbach's α) was 0.88. Examples of AOC

items include: 'I really feel as if this organization's problems are my own,' 'I do not feel 'emotionally attached' to this organization,' 'This organization has a great deal of personal meaning to me.'

Data Analysis

The data collected in this study were analyzed using SPSS 25.0 and Mplus 8.0. First, using SPSS 25.0, the demographic characteristics of the respondents were analyzed using frequency analysis and descriptive statistical analysis. Then, the internal consistencies of the measurement tools were confirmed through reliability analysis. Lastly, correlation analysis was conducted to identify the correlations between the variables.

Structural equation modeling (SEM) methods were used for the data analysis, using Mplus 8.0. Confirmatory Factor Analysis (CFA) on the four unobserved variables (latent variables) - professional isolation, organizational citizenship behavior, affective organizational commitment, and psychological empowerment - was conducted. SEM, which includes measurement and structural model, is a way to effectively reveal the cause and effect of the relationship between the latent variables; therefore, this research conducted the analysis through three steps: (1) confirming the goodness-of-fit of the measurement model (2) confirming and verifying the goodness-of-fit of the structural model (3) path analysis. The goodness-of-fits of the measurement model and

structural model were evaluated by Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Tucker-Lewis fit Index (TLI), and Standardized Root Mean Square Residual (SRMR). Lastly, the significance of the indirect effect between the path coefficients of the structural model was verified through the bootstrapping method.

Results

Preliminary analysis

Table 2 shows the means, standard deviations, correlation and skewness, and kurtosis of the variables used in this study. In order to conduct structural equation modeling, the normality criteria should be satisfied - the absolute value of skewness should be less than two, and the absolute value of kurtosis should be less than 7 (Kline, 2015). The results show that since the skewness and kurtosis of the variables do not exceed the criteria, the assumption of the normality for the structural equation analysis was satisfied.

The correlation analysis revealed that professional isolation is negatively correlated with OCB ($r = -.203, p < .01$), psychological empowerment ($r = -.19, p < .05$), and AOC ($r = -.29, p < .01$), psychological empowerment is positively correlated with OCB ($r = .63, p < .01$) and AOC ($r = .56, p < .01$)

Table 2. Means, standard deviations, correlations, skewness, and kurtosis of the study variables (N = 162)

	1	2	3	4
Professional Isolation	-			
Psychological Empowerment	-.19*	-		
AOC	-.29**	.56**	-	
OCB	-.20**	.63**	.51**	
M	2.41	3.42	2.74	3.60
SD	0.54	0.66	0.86	0.42
Skewness	-0.20	-0.46	0.15	-0.10
Kurtosis	-0.40	-0.42	-0.74	-0.46

*p < .05, **p < .01

.05), and AOC was positively correlated with OCB ($r = .51$, $p < .01$).

Measurement Model

A confirmatory factor analysis (CFA) was conducted to demonstrate the discriminant validity of latent constructs included in the theoretical model. The item parceling technique (Little et al., 2013) was applied to OCB and psychological empowerment because the use of parceling results in the estimation of fewer model parameters and therefore results in a more optimal variable to sample size ratio and more stable parameter estimates, particularly with small samples (Bandalos, 2009; Bagozzi & Edwards, 1998; Bagozzi & Heatherton, 1994).

CFA was performed with Maximum Likelihood (ML) estimation, and the measurement model's

goodness-of-fit index and factor loading were obtained. The fitness index was evaluated with root mean square error of approximation (RMSEA; Steiger, 1998), Comparative Fit Index (CFI; Bentler, 1990), Tucker-Lewis fit Index (TLI; Bentler & Bonett, 1980; Tucker & Lewis, 1973), and Standardized Root Mean Square Residual (SRMR; Bentler, 1995). An RMSEA value of $<.05$ indicates a "close fit," $<.08$ suggests a reasonable model-data fit, and $<.10$ indicates acceptable fit, and for CFI and TLI values of $>.90$ indicate adequate fit and $>.80$ indicates acceptable fit (Browne & Cudeck, 1992; Hu & Bentler, 1999). SRMR value of less than $.08$ suggests an acceptable fit, and less than $.05$ indicates a "close fit" (Bentler, 1995).

The models showed an acceptable fit, $\chi^2(146) = 217.74$, $p < .001$; CFI = .93; TLI = .92; RMSEA = .06; SRMR = .06.

Table 3. Measurement Model's Goodness-of-Fit

		CFI	TLI	RMSEA (95% CI)	SRMR
Measurement Model	217.74 (146)	0.93	0.92	.06 (.039 - .070)	0.06

Table 4 represents the standardized factor loading of latent variables. Standardized factor loading of professional isolation was .64-.84, of AOC was .62-.85, of OCB was .43-.83, and of psychological empowerment was .60-.77.

Table 4. Factor Loadings of the Measurement Model

Latent Variable	Observed Variable	Standardized Coefficients	S.E.	C.R.
Professional Isolation	P1	0.73	0.03	23.67***
	P2	0.84	0.03	31.71***
	P3	0.65	0.04	18.36***
	P4	0.64	0.04	17.40***
AOC	C1	0.76	0.04	19.79***
	C2	0.85	0.03	29.90***
	C3	0.70	0.05	15.58***
	C4	0.82	0.03	26.33***
	C5	0.62	0.05	11.80***
	C6	0.73	0.04	17.32***
OCB	Altruism	0.56	0.06	8.90***
	Conscientiousness	0.43	0.07	6.04***
	Courtesy	0.52	0.07	7.89***
	Sportsmanship	0.57	0.06	9.29***
	Civic Virtue	0.83	0.04	20.62***
Psychological Empowerment	Meaningfulness	0.72	0.05	15.24***
	Competence	0.60	0.06	10.25***
	Self-Determination	0.69	0.05	13.37***
	Influence	0.77	0.04	17.70***

*** $p < .001$

Structural Model

Goodness-of-Fit

The present study examines the mediation effects of psychological empowerment and AOC on the relationship between professional isolation and OCB. The goodness of fit of the structural model is presented in Table 5. The structural model based on the previous findings was found to be suitable for the data.

Direct effect between variables

The path coefficient according to the structural model of this study's model is shown in figure 2, and the path coefficient and significance level are presented in Table 6.

Specifically, professional isolation negatively affected psychological empowerment ($\beta = -.37$, $p < .001$) and AOC ($\beta = -.25$, $p = .016$) but did not significantly affect OCB ($\beta = -.031$, $p = .774$). These results provide support for Hypothesis 2 and 3, but not for Hypothesis 1. Results also showed that psychological empowerment positively affected AOC ($\beta = .59$, $p < .001$) and OCB ($\beta = .55$, $p < .001$), thus providing support for Hypothesis 4 and 5. In addition, AOC positively affected OCB ($\beta = .37$, $p = .013$), which fully supports Hypothesis 6.

Mediation

The bootstrapping method was performed to

Table 5. Structural Model's Goodness-of-Fit

		CFI	TLI	RMSEA (95% CI)	SRMR
Structural Model	217.74 (146)	0.93	0.92	.06 (.039 - .070)	0.06

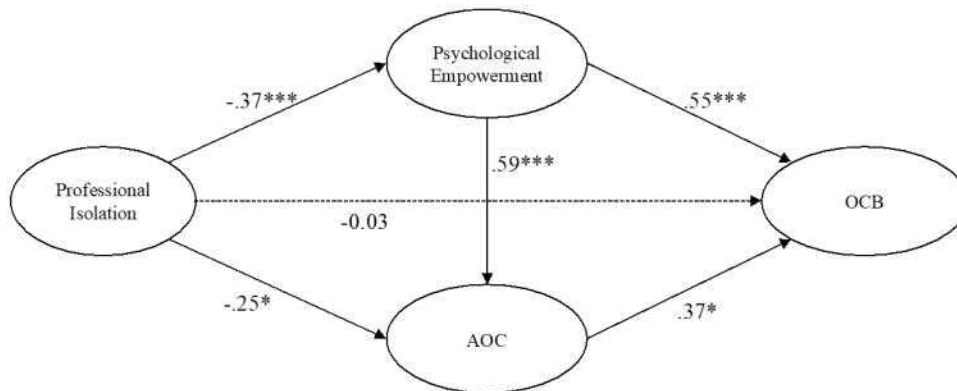


Figure 2. Path Coefficients

Table 6. Path coefficients between the variables

Independent Variable	Dependent Variable	Unstandardized Coefficients	Standardized Coefficients	S.E.	C.R.
Professional Isolation	Psychological Empowerment	-0.34	-0.37	0.11	-3.39***
	AOC	-0.31	-0.25	0.11	-2.40*
	OCB	-0.09	-0.03	0.11	-0.29
Psychological Empowerment	AOC	0.78	0.59	0.08	7.18***
	OCB	0.38	0.55	0.16	3.50***
AOC	OCB	0.19	0.37	0.15	2.48*

* $p < .05$, ** $p < .01$, *** $p < .001$

estimate a confidence interval for indirect effects between the variables (Lau & Cheung, 2012; Preacher & Hayes, 2008). If zero is not included in the range of the confidence intervals, the indirect effect is said to be significant at the $p = .05$ level (Shrout & Bolger, 2002). 5000 samples ($n=162$) were generated randomly in the 95% confidence interval.

The results showed significant indirect effects of professional isolation and OCB through the

mediating effects of psychological empowerment (95% CI = [-.34, -.04]) and AOC (95% CI = [-.20, -.01]). These indirect effects indicate that employees experiencing professional isolation are psychologically disempowered and have reduced affective organizational commitment, resulting in lower OCB. Also, there were significant sequential indirect effects of professional isolation and OCB through psychological empowerment and AOC (95% CI = [-.16, -.02]). Professional

Table 7. Indirect effects through bootstrapping method

Path	Indirect effects (95% C.I.)
Professional isolation - psychological empowerment - OCB	-.09** (-.34 - -.04)
Professional isolation - AOC - OCB	-.20* (-.20 - -.01)
Professional isolation - psychological empowerment - AOC - OCB	-.08* (-.16 - -.02)

* $p < .05$, ** $p < .01$

isolation decreases the psychological empowerment of employees and then leads to a decrease in affective organizational commitment, ensuing in lower OCB. These results support the proposed Hypotheses 7a, 7b, and 8. The mediating effects are presented in Table 7.

Discussion

Although many researchers have examined the experience of isolation during remote work and its deleterious consequences on organizational performances (Beauregard et al., 2019; Golden et al., 2008; Bailey & Kurland, 2002), only a few have scrutinized it concerning professional isolation, particularly in the context of mandated remote work (Wang et al., 2020). Confounding and inconsistent results investigating professional isolation yielded the need for extensive research on professional isolation in various contexts (Cooper & Kurland, 2002) and variables that can aid professional isolation. Therefore, responding to calls by Wang et al. (2020), Kane (2014), and Golden et al. (2008), the current study aimed to investigate how professional isolation in the compulsory remote work setting influences employees' organizational performances.

The purpose of the current study was achieved by investigating the relationship structure between the variables in terms of the relationship between professional isolation, OCB,

psychological empowerment, and AOC. Based on the JD-R model and SDT, an empirical analysis was conducted on the mediating role of psychological empowerment and AOC in the relationship between professional isolation and OCB. In particular, the results showed that professional isolation negatively influenced psychological empowerment and AOC but did not significantly predicted OCB. These findings imply that professionally isolated employees are less likely to be psychologically empowered and exhibit organizational commitment. Deci and Ryan (2012) support this finding and provide insights into this relationship by demonstrating the role of affective and cognitive components and an individual's response to the workplace on the inducement of psychological empowerment.

Additionally, the results indicated that in terms of antecedents of psychological empowerment and AOC, contextual variable plays a key role. As acknowledged by Seibert et al.'s (2011) study, contextual variables play a stronger influence on psychological empowerment than individual characteristics have on psychological empowerment. Further, the direct and negative relationship between professional isolation and AOC supports Maruyama and Tietze's (2012) and Wang et al.'s (2020) studies in that **remotely working** employee perceives reduced opportunities and rewards and, therefore, exhibit low AOC.

Regarding the nonsignificant relationship between professional isolation and OCB, as

stated previously, there have been mixed results regarding the relationship between OCB and variables related to remote work. However, the result of the current study is in line with Redman et al.'s (2009), which showed that there was no relationship between remote work and OCB, indicating that there is a full mediation between the variables rather than a partial mediation. Perhaps, this may be because professional isolation solely does not prompt a decrease in OCB, but rather a combination of professional isolation with reduced motivators such as psychological empowerment and AOC may result in OCB. This finding is supported by our results, which have shown a significant indirect effect between professional isolation and OCB mediated by psychological empowerment and AOC.

It is also important to note the negative and positive correlation between the variables and the serial mediation effects of psychological empowerment and AOC because these results indicate that psychological empowerment and AOC have offsetting effects on OCB. In other words, although professional isolation is negatively correlated with other variables, the positive correlation between psychological empowerment, AOC and OCB, and the serial mediation counterbalance the negative influence of professional isolation on OCB. These results underline the crucial role of psychological empowerment and AOC in exhibiting OCB; hence, if the organizations could promote

employees' psychological empowerment and AOC, they can expect more pro-organization voluntary behaviors from their employees even when employees are in unfavorable conditions.

Furthermore, our result is also well-supported by the revised JD-R model (Schaufeli & Bakker, 2004), which highlights the role of the work engagement variable as a mediating variable between the job demand and its outcome. Specifically, our result is in accordance with the motivational process model proposed in the revised version of the JD-R model since a work environment that lacks job resources suppress workers' willingness to dedicate their efforts and abilities to the work task.

In terms of consequences of psychological empowerment, consistent with Singh and Singh (2018), our results also show that psychological empowerment is strongly related to employees' performances, such as AOC and OCB. Since psychologically empowered employees view themselves as self-governed, capable, and influential individuals within the organization, even in unfavorable situations, they may still exhibit pro-organizational behaviors. Together, these results show that various contextual variables can influence psychological empowerment and, in turn, are associated with employees' performances. Consequently, this finding contributes significantly by demonstrating the significance of psychological empowerment as an intrinsic motivator. Therefore, for organizations to improve on employees' OCB,

they should consider contextual factors that would enhance their intrinsic motivations.

Another notable finding should be outlined. As specified in the hypotheses above, this study supposed that professional isolation will predict low psychological empowerment and that low psychological empowerment will lead to low organizational commitment, which will, in turn, affect OCB. Consistent with the JD-R model and SDT, the results demonstrated the sequential mediation of psychological empowerment and AOC. Employees who are experiencing professional isolation are in the absence of three basic needs and would perceive job demands as higher than the job resources they possess. Consequently, there is a decrease in intrinsic motivation - psychological empowerment - leading to negative consequences such as a decrease in AOC and OCB.

As the results of the presents study highlight the role of psychological empowerment in predicting favorable organizational outcomes, HRD practitioners should implement measures to strengthen psychological empowerment in employees. Through such measures, employees can gain confidence about their ability to perform their work (Diener & Biswas-Diener, 2005), increased perceived control (Menon, 2001), less stress and burnout (Oyeleye et al., 2013; Schermuly et al., 2011). From the organization's perspective, they can expect lower absenteeism and turnover intentions (Bester et al., 2015; De Villiers & Stander, 2011; Peachey,

2002), increased work engagements (Bhatnagar, 2012; Gong et al., 2020), commitment (Aggarwal et al., 2018; Avolio et al., 2004) and heightened job performance and therefore increased organizational citizenship behavior (Sajjad et al., 2011; Singh & Singh, 2018).

Overall, the result of current research extended the literature on the JD-R model and SDT by examining how professional isolation driven by the employee's perception of the scarcity of resources influences the employee's OCB through the role of both intrinsic and extrinsic motivators. Furthermore, we addressed two issues of the JD-R model suggested by Schaufeli and Taris (2014) about the unresolved issues regarding the JD-R model and existing literature, which are the nature of job demand and job resources and the distinction between the health impairment and the motivational process.

Schaufeli and Taris pointed out that the conceptual differences between job demand and job resources are not distinctive enough to draw a clear-cut line and, therefore, raise a fundamental question of whether job demands and job resources are two separate factors apart from the consensus that positive aspects and negative aspect cannot coexist. Similarly, they doubt whether the motivational and health impairment processes are independent of each other. The current study helps answer these questions by integrating the concept of job demands and job resources by defining

professional isolation as both a job demand and job resources, specifically, a lack of resources. Although this approach may seem superfluous, considering the conventional JD-R model posits that job demand and job resources provoke two separate processes, redefining the term was inevitable to explain how job demand leads to a decrease in motivation - rather than a strain - and thereby results in a negative outcome. This study contributes to the JD-R model in that it jointly studied two seemingly separate processes.

Additionally, since SDT postulates that psychological needs are contingent on the context within which work is done (Gagne, 2003), this study accentuates professional isolation provoked by mandated remote work may endanger employee's autonomy, competencies, and related needs, leading to decrease in motivations and employee's performances. Thereby, the result of current study informs that organizations should create such environment where employees could fulfill their intrinsic needs.

It seems to be essential to emphasize that the result of this study suggests some practical implications for organizations, especially for those working in human resource management. Taking account of the results mentioned earlier, it would be necessary for organizations to devise the potential challenges and drawbacks of remote work. Specifically, organizations should address factors that cause professional isolation during remote work. Since in the post-COVID-19 era,

many organizations expect to adopt hybrid working arrangements, this study aids in that regard by examining the psychological and behavioral aspects of remote workers. Research on remote work has previously discovered that the frequency of remote work plays a crucial role in experiencing isolation (Baily & Kurland, 2002); thus, organizations should find a reasonable balance between remote work and office work to minimize professional isolation among employees. Furthermore, since many remote workers fear being 'out of sight, out of mind' phenomena, organizations should encourage networking behaviors by planning various social events where employees could exchange work-related information, establish companionship with coworkers, and offer well-being programs to help employees in need of assistance.

Second, the results revealed that employees who experience psychological isolation feel less emotionally connected to the organizations and less psychologically empowered. Since both factors are precursors to desirable behavioral outcomes, organizations should consider ways to enhance these measures. Considering professionally isolated individuals experience these emotions as they perceive a decrease in opportunities and rewards, organizations, for example, should establish an environment conducive to airing complaints and concerns about policy, procedures, and strategies, provide visible support, and implement reward and

recognition systems. In doing so, employees may feel appreciated and valued at work, increasing job satisfaction, organizational commitment, and work performance.

With respect to our study's limitations, the causal relationship between the variables cannot be inferred due to the characteristics of the cross-sectional design. Although the cross-sectional design allows us to trace the association between the variables because all factors are measured simultaneously, it does not allow us to accurately capture the cause-and-effect relationship or the behavior over a period; therefore, it would be desirable for future research to conduct experimental longitudinal design to examine the proposed effects of remote work. Furthermore, the current study suffers from generalizability since it was conducted in a period when mandated remote work was imposed due to COVID-19. Therefore, even though the current study uniquely captures remote work during a crisis, future studies should scrutinize remote work after COVID-19 is terminated since the experience of professional isolation may differ.

Another limitation of the present study is the small sample size. Although initially 400 remotely working employees were recruited, the significant flaws in the structure of the survey, which failed to determine the different experiences of hybrid and full-time remote works, led to the elimination of data from hybrid remote workers during the data analysis

procedure; hence, our study used data from 162 full-time remote worker only in order to accurately capture the remote work experience. It would also be helpful to gather data comparing hybrid workers and full-time remote workers to determine to what extent the experience of professional isolation may vary.

Furthermore, it remains questionable whether the remote worker in this study genuinely experienced professional isolation during compulsory remote work. Referring to the preliminary analysis (p.47), this study's mean of professional isolation was only 2.41 on a five-point Likert scale, indicating that respondents experienced professional isolation to some degree but not extensively. Considering contemporary remote workers communicate through various channels such as video conference, email, chat, and intranet, remote workers, might have had enough interactions to exchange work-related information, receive feedback on their tasks, and establish strong relationships with their colleagues and supervisors. Also, remote workers may not feel as professionally isolated during COVID-19 since their colleagues, too, are remotely working and therefore in the same condition. Another possible explanation for considerably low professional isolation might be the measure. Unfortunately, the four-item measure for professional isolation used in the present research is quite outdated and thus might have failed to capture professional isolation in the current context.

Consequently, future research should measure professional isolation using the most up-to-date scale that accurately assesses the situation of that time and examine if remote workers truly experience professional isolation.

Finally, future research may also investigate variables that would alleviate the drawbacks of remote work. Although current research gains its value by integrating the health impairment process and motivational process of JD-R, the conventional JD-R model (Bakker & Demerouti, 2007) is based on the premise that two processes work independently of each other and that job resources mitigate the adverse effects of job demands and exhaustion. Therefore, future studies should investigate the moderating variables, perhaps from job resources, that would alleviate the negative effect of job demands of remote work.

To conclude, COVID-19 has dramatically changed the work environments for many employees and organizations globally. However, there has been limited research on the effect full-time remote has on employees' organizational performances. The present study provides insights into the influence of professional isolation during compulsory remote work on employees' OCB incorporating the JD-R model and SDT as a theoretical framework. Although our findings are not generalizable to remote work since the COVID-19 crisis is an unprecedented and exceptional situation, we anticipate that our findings laid out the basis for organizations and

further research.

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코로나19로 인한 재택근무 환경에서의 조직적 고립이 조직시민행동에 미치는 영향: 심리적 임파워먼트와 정서적 조직몰입의 순차적 매개효과

노 은 경 이 기 학

연세대학교 심리학과

재량적 재택근무제의 긍정적부정적 효과에 대한 많은 연구가 이루어져왔지만, 의무적 재택근무제에 대한 연구는 미비한 실정이다. COVID-19 감염병 확산으로 인해 대부분의 조직은 재택근무를 주요 근무방식으로 전환하였고, 이러한 급작스러운 변화는 긍정 및 부정적인 신체적, 사회적, 심리적 결과를 불러왔다. 따라서 본 연구는 직무 요구-자원 모형과 자기결정이론에 기반하여 조직적 고립과 조직시민행동의 관계에서 내재적 동기부여 요소인 심리적 임파워먼트와 정서적 조직몰입의 순차적 매개효과를 검증하였다. 본 연구에서는 총 162명(남56명(34.6%), 여106명(65.4%))의 풀타임 재택근무자를 대상으로 온라인 설문을 실시하였다. 분석 결과, 조직적 고립과 조직시민행동의 관계에서 심리적 임파워먼트와 정서적 조직몰입의 순차적 매개효과가 존재하는 것으로 나타났다. 반면에, 조직적 고립과 조직시민행동 간의 직접 경로는 유의하지 않은 것으로 나타났다. 이러한 연구결과를 바탕으로 본 연구의 이론적 및 실증적 시사점을 논의하였고, 본 연구의 한계점 및 향후 연구방향을 제안하였다.

주요어 : 재택근무, 조직적 고립, 조직시민행동, 심리적 임파워먼트, 조직몰입, 순차적 매개