



How Does Virtual Work Change Employee Engagement?

A Review of Employee Engagement During the COVID-19 Period

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ABSTRACT

Virtual work, as a new way of working, has been adopted by many organizations due to COVID-19 and is expected to have a prevalent footprint even after the pandemic. Many scholars in the fields of management, public relations, and technology raise interest in studying how virtual work impacts employee engagement, yet the literature is fragmented and inconsistent. This review paper captures key findings and synthesizes existing research topics into three categories: conventional factors, home-based factors, and technology-use factors. Given existing research gaps, suggestions for future research are addressed to construct a more comprehensive study. On the one hand, this paper may serve as a reference point for scholars interested in the relationship between employee engagement and virtual work. On the other hand, it helps human resources practitioners to understand the key factors that influence employee engagement in the virtual workplace.

Keywords: *employee engagement, virtual work, COVID-19, work-family conflict, technology-use.*

1. INTRODUCTION

Research on employee engagement has flourished for more than a decade. Most literature that works on remote engagement has found a common agreement on the definition and psychological conditions of employee engagement in the traditional workplace. However, the sudden impact of COVID-19 sparked interest among researchers and practitioners to study employee engagement in a virtual work context. As a result of the pandemic outbreak, employees are forced to convert their workplace to home and quickly adapt to the new ways of working without preparation. Even many services industries such as tourism, hospitality, and education, had to adopt the mode of virtual work. Consequently, organizations and employees were facing unprecedented challenges.

The shift from the traditional workplace to a virtual workplace alters time and space, which brings many physical, social, and psychological changes to work life, such as increased autonomy, reduced social support, blurred boundaries between work and personal life, and increased intensity use of ICT tools [1][2]. These changes brought by workplace transitions in turn influence the level of employee engagement in their work. For example,

in an early study, Sardeshmukh et al. found that remote working is negatively associated with employee engagement, which is mediated by job demands and resources like increased role ambiguity and reduced support and feedback due to a lack of use of ICT tools [3]. Therefore, this paper aims to focus on the changes driven by virtual work to explain the effect of virtual work on employee engagement. The significance and contributions of this study are that it draws on a holistic review of academic and practitioner literature that investigated the impact of virtual work on employee engagement during the COVID-19 period.

To address this objective in understanding, this paper consists of the following three parts. First, the concept of engagement and virtual work is introduced to construct a clear scope of review. Second, a summary of how the factors brought by virtual work affect employee engagement is presented. The final section suggests future research directions for employee engagement in virtual work.

2. DEFINITION

While little research separates the definition of remote engagement from employee engagement, most

literature proposed a consistent understanding of employee engagement in the traditional workplace and virtual workplace. Therefore, this section reviews the representative concepts and theories of employee engagement. Then follows a brief review of virtual work with the aim of identifying what virtual work is and how it has been used in studies of employee engagement.

2.1. Employee Engagement

The definition and theories have been shaped in important ways by the history of the research on employee engagement. The most representative ones were examined to understand the conceptual construct of engagement. Then, the Job Demands–Resources (JD–R) model is investigated to explain the factors that influence work engagement.

2.1.1. Conceptualization of Engagement

There are three main streams: the initial conceptualization and psychological conditions of engagement by Kahn [4], the views of burnout scholars, and the Social Exchange Theory (SET) [5].

The term “employee engagement” was first coined by Kahn to describe the “physical, cognitive, and emotional role involvement” in the workplace [4]. To examine the psychological conditions that shape employee behavior and personal engagement, Kahn built a conceptual framework that includes three main factors: “sense of return on investments of self in role performances” (meaningfulness), “sense of being able to show and employ self without fear of negative consequences to self-image, status, or career” (safety), and “sense of possessing the physical, emotional, and psychological resources necessary for investing self in role performances” (availability) [4]. Kahn’s study is the first step in employee engagement research, which also serves as a stepping stone for furthering research into the complexity and dynamics of employee engagement.

Later, burnout scholars, Maslach and Leiter expanded the scope of burnout by stating that engagement is the opposite of burnout from the perspective of positive psychology [6]. Conversely, Schaufeli et al. thus confirmed that burnout and engagement are two independent, interrelated constructs [7]. They considered that engagement is “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” [7]. Vigor involves high levels of energy and mental resilience while working; dedication refers to intense involvement in one’s work and experiencing a sense of significance, enthusiasm, and challenge; and absorption refers to full attention to one’s work. While vigor and dedication are opposed to exhaustion and cynicism of burnout, absorption represents a distinct dimension instead of the opposite of inefficacy [8].

Building on Kahn’s foundations of engagement and Maslach et al.’s burnout research, Saks integrated the Social Exchange Model (SET) to understand employee engagement and defines employee engagement as a “unique concept” consisting of cognitive, affective, and behavioral components [5]. Saks argued that being more or less involved in work and organizations is a way for individuals to give back to their organizations, because “bringing oneself more fully into one’s work roles and devoting greater amounts of cognitive, emotional, and physical resources is a very profound way for individuals to respond to an organization’s actions” [5]. Additionally, Saks used SET to explain Kahn’s and Maslach et al.’s model by arguing that the extent to which employees are cognitively, emotionally, and physically engaged in their work is based on the economic and socioemotional resources provided by the organization [4] [6].

2.1.2. The Job Demands–Resources (JD–R)

Research that examines the antecedents of work engagement has commonly used JD–R that introduced by Bakker and Demerouti [8].

JD-R divided different risk factors associated with work stress into two categories: job demands and job resources [8]. Job demands refer to physical, psychological, social or organizational features of work that require sustained physical, mental and/or psychological effort and therefore cost the individual’s physical and/or psychological energy. Common examples are work overload, poor working environment, and high emotional demands in the role. Job resources represent physical, psychological, social, or organizational features of a job that can help an individual achieve their work goals, reduce job demands, and stimulate personal growth, learning, and development. Common examples are in the organization level (e.g., pay, career opportunities, job security), interpersonal and social relations level (supervisor and coworker support, team climate), the work level (e.g., role clarity, participation in decision making), and the task level (e.g., skill variety, task identity, task significance, autonomy, performance feedback) [8].

Recently, with many studies in the literature exploring the individual differences related to employee engagement, personal resources have also been incorporated into the JD-R model. Personal resources are those resources that individuals bring to the work environment as a function of achieving optimal outcomes or well-being [9][10].

2.2. Virtual Work

The concept of virtual work has its early form as teleworking. The original term appeared in 1977 by Nilles as telework or telecommuting, a new option for working outside the traditional workplace using

telecommunications or computer-based technology [11]. Thus, the context of virtual work includes two dimensions: remote workplace and technology use.

The outbreak of COVID-19 facilitated the spread of virtual work and, more importantly, clarified the conditions of virtual work. For example, while many studies prior to COVID-19 carry implicit and explicit assumptions about virtual or remote work as home-based and full-time remote, there is still research that examined the remote workplace as clients' office or satellite office. Yet in the past two years, employees perform their duties from home, as a remote work environment.

Furthermore, prior to COVID-19, literature mainly focuses on the organizations that adopt flexible work arrangements [3], enabling employees to decide the frequency of virtual work, but research under the context of COVID-19 explores the forced and 100% remote work.

Additionally, with the growing research interest of virtual work, researchers tend to use different terms interchangeably, such as telework, for example, "telework" (e.g., [3]), "remote work" (e.g., [1]), "work from home" (WFH) (e.g., [10][12][13]).

Thus, to clarify the scope of review, the term virtual work in this paper refers to:

- Home-based location
- 100% of frequency

3. FACTORS RESULTING FROM VIRTUAL WORK AFFECT EMPLOYEE ENGAGEMENT

This paper identifies three broad streams of research that demonstrate how virtual work affects employee engagement. The first stream primarily focuses on changes in traditional factors. The second stream hones on the impact of home-based factors on employee engagement both environmentally and mentally. The third stream is centered on how the adoption of ICT use shapes the way employees communicate and work, thereby influencing employee engagement.

3.1. Conventional Factors

The conventional factors in virtual work are mainly job resources that consist of organizational level, interpersonal and social relations level, and individual level, as previously illustrated in JD-R. This research stream mainly investigates the positive and negative relationship between the antecedents of employee engagement studied in the traditional face-to-face work mode and employee engagement in the virtual mode.

From the positive side, researchers in virtual work have found some job resources in organizational level and interpersonal and social relations level to be positively related to employee engagement in virtual

work, including autonomy, Perceived Organizational Support (POS), Leader-Member Exchange (LMX), and organizational compassion [12] [14] [2].

Furthermore, negative effects on employee engagement caused by virtual work were examined, e.g., work intensification, employment insecurity, poor work environment adaptation, and social and professional isolation [10] [12]. A recent study discovered that work intensification, employment insecurity, and poor work environment adaptation can cause a reduction in social and personal resources, which in turn further diminishes levels of employee engagement [10]. Another study found that virtual work causes social and professional isolation, which hinders employee engagement [12].

3.2. Home-based Factors

When working from home, employees usually don't have a private workplace, but rather share space with family members such as partners and children. Thus, some literature has also proved that family-specific variables can influence engagement in a home-based virtual work environment both positively and negatively.

Past studies have found that struggling to convert homes into a dedicated working space, distracting home environment, and family-work conflict caused by home-based work can hinder employee engagement [10] [12]. For example, a qualitative study of British workers found that struggling to convert homes into a dedicated working space causes a reduction in social and personal resources, which negatively affected employee engagement [10]. In a recent cross-sectional study in Italy, Galanti et al. found that a distracting home environment and family-work conflict negatively impacted employee engagement when working from home [12].

In contrast to the negative findings on family-related factors, Nguyen and Tran found Perceived Family Support (PFS) positively influenced employee engagement when working remotely [2]. This study also measured the indirect effect of spousal support and family members' support on employee engagement.

3.3. Technology-use Factors

Another research stream that has attracted attention is from the perspective of technology use. When working virtually, employees use a plethora of ICT tools to accomplish daily tasks and social communication. ICT tools used include emails, text-based chats, conference calls, video calls, virtual meetings, and smartphones [15]. Thus, both negative-side and positive-side effects brought by the use of ICT tools are reviewed in this section.

First, negative factors such as online presenteeism, technology distraction caused by the intensity of use of ICT tools were investigated. A recent study discovered

that online presenteeism, where employees should always be online, reduces employee engagement [10]. Furthermore, technology distraction is also considered an antecedent of employee engagement in the context of virtual work. Orhan et al. analyzed the impact of parallel communication when using communication technologies and found a negative correlation between parallel communication (as a proxy for technological distractions) and employee engagement [16].

Viewed as a positive factor, personal competence in using ICT tools was examined in employee engagement during remote work. For example, Lartey and Randall examined empathy, expressiveness, and motivation, three factors in Computer-Mediated Communication (CMC) competence model are found positively correlated with employee engagement in remote workplace [1].

4. FUTURE DIRECTIONS

This section discusses three main future directions.

First, this review proposes three main factors brought by virtual work in the Covid-19 period—conventional factors, home-based factors, and technology-use factors. However, there were inconsistent results regarding the impact on employee engagement in the past studies. For example, a study on public teleworkers noted that autonomy and collaboration are two main drivers that influence employee engagement, while finding no changes in the level of engagement before and during the virtual work period [17]. Similarly, a cross-lagged study failed to find over-time effects on employee engagement from digital communication and collaboration competencies during the Covid-19 period [9]. Thus, future research should investigate whether certain factors moderate the relationship between virtual work and employee engagement, such as the responsibility to take care of the young children, and previous experience of virtual work [18] [9]. It is also important to understand whether some of the factors need to be addressed more predominantly to certain types of workers. For example, gender difference was discovered by Chaudhary et al: female employees were more engaged than male employees while working from home [19]. Hence, research on diversity and different identities, such as colors, genders, and immigrants or specific demographic groups (e.g., people with disabilities, millennials, older workers), would construct a more comprehensive study of employee engagements in the context of virtual work.

Second, new studies should move beyond the special circumstances in the Covid-19 period, such as forced virtual work and purely home-based virtual work. With an emphasis on the post-pandemic issues related to “back to the office” options, future research on these topics

should explore the potential issues initiated by flexibility, such as the types of tasks completed via telework, missing colleagues, and interruptions. In addition, specific worker types that will be boomed in the new ways of working can also be included in future research, e.g., occasional teleworkers, self-employed teleworkers, and virtual workers across time zones.

Finally, researchers should expand the level of analysis from the individual level to the team and organizational levels. Most studies have examined employee engagement in the virtual workplace through the lens of the individual. One particular study that analyzed at the team level identified a positive relationship between cultural intelligence and employee engagement in global virtual teams, mediated by trust [20]. With this broader level of consideration, future research should answer more questions about how employee engagement in virtual work affects team performance (e.g., team collaboration, group communication work processes, use of tools) or organizational performance (e.g., organizational identity, organizational culture, organizational learning).

5. CONCLUSIONS

The Covid-19 pandemic and the development of ICT accelerate the remote work practices that offer employees a high level of work flexibility. It is essential for companies and employees to understand how this new way of working, which breaks the time and geographic constraints, impacts work engagement. This study draws from the changes resulting from virtual work and categorizes them into three streams (conventional factors, home-based factors, and technology-use factors) to explain the effect of virtual work on employee engagement. With these factors, the relationships between work engagement and virtual work seem to be both positive and negative. However, there were still inconsistent results regarding the changes in the level of engagement before and during the virtual work period. Thus, this review suggests that future research should explore the moderating factors between virtual work and employee engagement and understand the more predominant factors to certain types of workers. Additionally, further studies should incorporate a great variety of the virtual work contexts (e.g., satellite office, hybrid working) and a broader level of analysis (e.g., team level, organizational level).

This research contributes to a better understanding of the relationship between virtual work and employee engagement by focusing on the changes driven by virtual work practices and integrating them into three categories. In terms of practical contributions, organizations can manage virtual work policies and develop strategies to engage employees in a more effective manner.

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