


ARTICLES

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HOW HAS INTERPERSONAL COMMUNICATION SATISFACTION IMPACTED TELEWORKERS' JOB SATISFACTION? THE ROLE OF INFORMATION TECHNOLOGY AWARENESS AND CREATIVE PERFORMANCE

Como a satisfação com a comunicação interpessoal impacta a satisfação no trabalho no caso de teletrabalhadores? O papel da conscientização em tecnologia da informação e do desempenho criativo

¿Cómo impactó la satisfacción de la comunicación interpersonal en la satisfacción laboral de los teletrabajadores? El papel de la concienciación sobre la tecnología de la información y el desempeño creativo

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ABSTRACT

With COVID-19, a significant number of companies have started to work remotely, and communication has started to occur mainly through technological tools. This study investigates the relationship between teleworkers' interpersonal communication and job satisfaction through the mediating role of information technology (IT) awareness and creative performance. Data were collected from 683 teleworkers and analyzed using structural equation modeling (SEM) and PROCESS Macro. The findings indicated that (1) teleworkers' interpersonal communication satisfaction is positively associated with job satisfaction, and (2) IT awareness and creative performance mediate the relationship between interpersonal communication satisfaction and job satisfaction. Finally, the study's theoretical and managerial implications are discussed. The results emphasize the role of interpersonal communication satisfaction on job satisfaction and show that both employees and companies should receive the necessary training for a sufficient level of employee IT knowledge.

Keywords: telework, interpersonal communication satisfaction, information technologies, creative performance, job satisfaction.

RESUMO

A pandemia de Covid-19 levou uma parte significativa das empresas a adotar o trabalho remoto e a estabelecer comunicação por meio de ferramentas tecnológicas. Este estudo investiga a relação entre a satisfação na comunicação interpessoal dos teletrabalhadores e a satisfação no trabalho por meio do papel mediador da conscientização em tecnologias da informação (TI) e do desempenho criativo. Os dados foram coletados de 683 teletrabalhadores e analisados usando modelagem de equações estruturais (SEM) e a PROCESS Macro. Os resultados indicaram que (1) a satisfação na comunicação interpessoal dos teletrabalhadores está positivamente associada à satisfação no trabalho e (2) a conscientização em TI e o desempenho criativo são mediadores da relação entre a satisfação na comunicação interpessoal e a satisfação no trabalho. Finalmente, as implicações teóricas e gerenciais do estudo foram discutidas. Os resultados chamam a atenção para o papel da satisfação na comunicação interpessoal na satisfação no trabalho, apontando também que tanto os funcionários quanto as empresas devem receber o treinamento necessário de maneira que os colaboradores alcancem um nível adequado de conhecimento de TI.

Palavras-chave: teletrabalho, satisfação com a comunicação interpessoal, tecnologias da informação, desempenho criativo, satisfação no trabalho.

RESUMEN

Con la COVID-19, una parte importante de las empresas pasó a trabajar de forma remota, y a establecer comunicación a través de herramientas tecnológicas. Este estudio investiga la relación entre la satisfacción de la comunicación interpersonal de los teletrabajadores y la satisfacción laboral a través del papel mediador de la concienciación sobre las tecnologías de la información (TI) y el desempeño creativo. Se recopilaron datos de 683 teletrabajadores y se analizaron mediante modelos de ecuaciones estructurales (SEM) y PROCESS Macro. Los hallazgos indicaron que (1) la satisfacción de la comunicación interpersonal de los teletrabajadores se asocia positivamente con la satisfacción laboral (2) la concienciación sobre la TI y el desempeño creativo median la relación entre la satisfacción de la comunicación interpersonal y la satisfacción laboral. Finalmente, se discutieron las implicaciones teóricas y gerenciales. En los resultados de la investigación, además de enfatizar el papel de la satisfacción de la comunicación interpersonal en la satisfacción laboral, también se mencionó que tanto los empleados como las empresas deben recibir la capacitación necesaria para tener un nivel suficiente de conocimiento de TI.

Palabras clave: teletrabajo, satisfacción de la comunicación interpersonal, tecnologías de la información, desempeño creativo, satisfacción laboral.

INTRODUCTION

During the COVID-19 pandemic, there has been a dramatic increase in the use of technology in the workplace. With the development of communication technologies, employees can perform their duties within the team while outside the workplace (Franklin & Gkiouleka, 2021). One of the most common working models emerging in this context was teleworking (Moens et al., 2022), or the ability of employees to perform their workplace duties and responsibilities one or more days a week outside the office environment.

Compared to “traditional teleworking,” COVID-19 telework became a new norm, presenting differences that require adaptation to the context (Blahopoulos et al., 2022; Moens et al., 2022). Firstly, traditional telework was often a choice made by individuals seeking flexibility or work-life balance (Nakrošienė et al., 2019), whereas COVID-19 telework was imposed upon organizations and employees abruptly (Blahopoulou et al., 2022). This sudden shift resulted in many employees lacking preparation and time to adjust. Also, traditional telework often allows employees to choose their work location, whether at home or a coffee shop (Smith et al., 2018). In contrast, due to lockdown and social distancing measures, COVID-19 telework restricts employees to their homes (Franklin & Gkiouleka, 2021). These striking and sudden changes in organizational structures have also brought about radical changes in communication methods (Hill et al., 2023).

The COVID-19 pandemic was a critical period with many uncertainties (Blahopoulou et al., 2022), where effective interpersonal communication was vital for teleworkers (Tunk & Kumar, 2022). Based on social penetration theory, interpersonal communication is the interaction between two people who use verbal or nonverbal communication tools and can provide immediate feedback (Dainton & Zelle, 2022; Taylor et al., 1973). The theory explains how interpersonal communication improves over time as individuals gradually reveal their true selves, increasing understanding and satisfaction in a relationship. In traditional working methods, employees engage with their coworkers in face-to-face conversations that facilitate easier information exchange through non-verbal cues such as gestures, body language, and eye contact (Peng & Chen, 2022). However, with the increase in teleworking during the COVID-19 pandemic, interpersonal communication has become mediated and complex (Moens et al., 2022). Since teleworkers have limited face-to-face communication opportunities, they complete their work using technological tools and software (Ma, 2021).

Teleworking models have forced employees to use various technological tools, which means that IT awareness can affect employees' attitudes (Kucharska & Erickson, 2019). IT awareness refers to employees' recognition and understanding of a company's technical knowledge, especially in the field of computer-based systems. It is concerned with employees' perceptions of their company's competency and experience in utilizing and managing IT resources (Ukpabi & Karjaluoto, 2017). Employees with high levels of IT awareness may experience higher job satisfaction because they feel more confident and competent in their roles (Hill et al., 2023). In addition, communication with team members can positively affect their IT knowledge and enable them to do their jobs (Gubins et al., 2019). In studies on teleworking, where knowledge

of technology has become one of the most fundamental factors, IT awareness is a valuable research variable (Dainton & Zelle, 2022).

Creative performance includes many cognitive processes, such as employees' abilities to produce different and fast solutions (Dong et al., 2017; Serrat, 2017), and previous studies have comprehensively discussed it combined with personal experiences. As a variable, it refers to how much an employee's creative performance is affected by interpersonal communication and levels of IT awareness during the COVID-19 pandemic (Naotunna & Zhou, 2021). Furthermore, when employees are encouraged to be creative, and their ideas are valued, this can increase their sense of fulfillment and job satisfaction (VanLaar et al., 2020).

This study fills a gap in the literature by investigating the impacts of the COVID-19 pandemic transition to telework on employees' communication, creative performance, IT awareness, and job satisfaction. Previous research concentrating on traditional workplaces is no longer totally valid, as telework models have mainly supplanted traditional work environments during the pandemic (Mukhtar et al., 2020; Tunk & Kumar, 2022). Similarly, the literature on interpersonal communication suggests that a significant number of studies on job satisfaction examine employees in a traditional work environment (Ma, 2021; Smith et al., 2018).

Furthermore, unlike earlier studies, this one was conducted in architectural offices. This is because designers gain success in creative performance by addressing user needs and expectations in organizations through ongoing communication (Beefink et al., 2012; Meneely & Portillo, 2005). There have been few investigations on the effects of the COVID-19 pandemic in commercial areas where architectural creativity is expected to perform well (He et al., 2021; Mikalef & Gupta, 2021).

The research addresses the following research questions:

1. How has the shift from traditional to COVID-19 telework influenced creative performance, IT awareness, and job satisfaction in the context of interpersonal communication?
2. How can organizations increase job satisfaction by understanding the experiences of teleworkers during the pandemic, and what targeted interventions and policies can be implemented to achieve this?

As an emergency strategy in the COVID-19 pandemic, teleworking has deviated from the standard working model, revealing a new working group that academics must investigate (Tunk & Kumar, 2022). This study adds to our understanding of telework communication, creative performance, IT awareness, and job satisfaction, highlighting practical implications (Blahopoulou et al., 2022). It investigates the difficulties that shifting business models cause for employees' cognitive processes and problem-solving abilities, focusing on the critical role interpersonal communication plays in teleworking, particularly during the COVID-19 pandemic (Peng & Chen, 2022). Furthermore, the analysis focuses on increasing job satisfaction in order to create a

better working environment and promote employee well-being. The study also emphasizes the impact of IT awareness on job satisfaction and creative performance in cases where businesses are compelled to swiftly embrace new business models (He et al., 2021). Finally, it concentrates on teleworkers' creative talents in these exceptional circumstances caused by the COVID-19 pandemic.

LITERATURE REVIEW

Teleworking in the pandemic and non-pandemic contexts

Before the pandemic, several studies explored the relationship between telework and job satisfaction. For example, Smith et al. (2018) showed that teleworkers often experience increased job satisfaction due to flexible work arrangements and less time spent on commuting. Additionally, Vermeir et al. (2018) found that telework can have a positive effect on employee communication, which contributes to overall job satisfaction.

Although these studies did not focus explicitly on IT awareness or interpersonal communication satisfaction among teleworkers, they highlight how various aspects of telework can influence job satisfaction in different contexts (Kucharska & Erickson, 2019; Nakrošienė et al., 2019).

Telework gained relevance worldwide during the COVID-19 pandemic as organizations and employees had to adapt to new ways of working. Investigating the connection between teleworking and job satisfaction during this period, Ninaus et al. (2021) revealed that, despite the difficulties brought by the pandemic, employees who started to telework more frequently increased job satisfaction and reduced stress. Similarly, a study by Morilla-Luchena et al. (2021) reported that telework during the COVID-19 pandemic positively and negatively impacted job satisfaction and productivity.

In conclusion, both COVID-19-related studies and research conducted in non-pandemic environments reveal the importance of telework and its implications on job satisfaction (Ma, 2021; Moens et al., 2022; Morilla-Luchena et al., 2021). While similarities exist across these contexts, studies conducted during the pandemic emphasize the role of IT awareness, virtual communication, and adaptation mechanisms in enhancing job satisfaction among teleworkers.

The relationship between interpersonal communication satisfaction and IT awareness

This study asserts that interpersonal communication satisfaction positively influences IT awareness. IT awareness is grounded in information theory, first proposed by Claude Shannon in 1948. This seminal theory focuses on storing, processing, and transmitting digital information, playing

a pivotal role in shaping the modern IT ecosystem (Shannon, 1948). Specifically, IT knowledge is conceptualized as employees' beliefs that the firm has sufficient technical knowledge about objects such as computer-based systems (Ukpabi & Karjaluo, 2017). The correct use of IT by workers leads to effective work planning, decision tracking, and results prediction. Moreover, organizations rely on their IT competency to carry out many business processes, including planning, implementation, and control. Although the firm may have command over the software and hardware required for operations, employees' IT awareness is crucial to ensure the optimal use of these tools (Ravichandran, 2018).

The literature indicates three main elements to increase IT awareness: in-company training, support from colleagues, and information obtained during communication with external stakeholders. First, employees with high interpersonal communication satisfaction exhibit high performance during training on technological developments in their companies and are highly aware of these developments by establishing communication channels (Dainton & Zelle, 2022). Second, the quality of the employees' communication with their colleagues is critical. Employees with high interpersonal communication naturally share high-level information with their colleagues (Mitić et al., 2017). Employees will share their ways of doing business, and during this communication, information will also be shared in the field of IT.

Finally, employees' communication with internal and external stakeholders significantly contributes to their awareness and knowledge of the company's IT systems. Employees can better understand the value of technology in the workplace through such encounters (Areed et al., 2020). Moreover, by supporting open communication channels, employees are more likely to feel comfortable asking for help or clarifying IT processes and systems (Yu & Wu, 2021). Employees can be comprehensively aware of using the organization's IT infrastructure to increase productivity by keeping information flowing. Employees gain sufficient awareness about the IT used by the company during this communication (Ukpabi & Karjaluo, 2017). Therefore, the following hypothesis is offered:

H1: There is a positive relationship between interpersonal communication satisfaction and IT awareness.

The relationship between IT awareness and job satisfaction

Increasing IT awareness significantly affects job satisfaction. As mentioned in information theory, every firm has a set of IT capabilities to gain a competitive advantage and manage resources in the most efficient way (Shannon, 1948). In recent years, many investments have been made in IT, especially in teleworking companies (Ninaus et al., 2021).

IT awareness in business life creates an environment that affects job satisfaction. First, employees with a high IT awareness have better knowledge of the company's possibilities. Thus, employees understand the problems experienced by companies and contribute to the solutions

(Ninaus et al., 2021), which positively affects the affirmative feelings of the employees toward the work and influences job satisfaction (Kucharska & Erickson, 2019). In addition, employees with high IT awareness manage market and customer relations in a more controlled way (Ravichandran, 2018). IT awareness helps to respond quickly to customers' expectations and requests, and positive feedback increases employees' job satisfaction (Ninaus et al., 2021).

Employees' IT awareness is helpful when making strategic or operational decisions (Kucharska & Erickson, 2019). Studies have shown that employees using their IT skills in decision-making have high job satisfaction levels (Baghdarnia et al., 2018). As a result, the high IT awareness of the employees enables them to easily control the technological devices they use. Many technical and environmental disruptions (unexpected conversations, phone calls, e-mails, and background noise) may cause the employee's positive feelings toward work life to decrease (Kucharska & Erickson, 2019). However, the development of the features of the technologies used has made it easier to overcome these problems. Teleworkers often have to use their own skills to overcome the setbacks they experience (Baghdarnia et al., 2018). Studies have emphasized that high IT awareness helps employees minimize the impact of these negative experiences. At the same time, there is an increase in positive feelings toward work (Rusdi et al., 2017). Therefore:

H2: There is a positive relationship between IT awareness and job satisfaction.

The relationship between interpersonal communication satisfaction and creative performance

This article contends that interpersonal communication satisfaction is related to creative performance. Based on the componential theory of creativity proposed by Amabile (1988), creative performance is the production of new products, ideas, or courses of action for organizations (Amabile, 1988; Beeftink et al., 2012). In other words, creativity in its simplest form can be defined as the ability to create original and valuable products or ideas for organizations. Recent studies emphasized the importance of the interaction between the individual and the environment, pointing out that environmental factors were crucial for individuals to show creative performance (Ahmad et al., 2022). Therefore, almost all employees exhibit adequate creative performance when the organization offers appropriate conditions and environment (Peng & Chen, 2022).

Interpersonal communication satisfaction is one of the essential factors in fulfilling duties and responsibilities in the organization and sharing formal and informal information (Marlow et al., 2018). Studies have found that increased interpersonal communication in organizations makes employees feel involved in internal communication and part of the team, leading to better performance (Naotunna & Zhou, 2021). In addition, research works have shown that providing and acquiring information in interpersonal communication positively affects employees' creative performance (Marlow et al., 2018). Having employees in a team where information sharing is

intense provides a sense of creativity that leads to exploring new and valuable ideas. Information shared during interpersonal communication increases employees' generation of new ideas (Naotunna & Zhou, 2021), enhancing their creative performance. Therefore:

H3: There is a positive relationship between interpersonal communication satisfaction and creative performance.

The relationship between creative performance and job satisfaction

This article supports that high creative performance levels of employees positively affect job satisfaction. Creative performance represents the flow of new and useful actions and thoughts (Goh et al., 2020). Employees offer some practical ideas for both the company and themselves (Ye, 2020). Creativity-related processes, one of the important components of the componential theory of creativity, indicate that employees are more productive in their jobs when completing the work quickly and eliminating time loss (Shannon, 1948). Naturally, employees with increased productivity are self-confident and have positive feelings toward their work (Marlow et al., 2018).

Fixed thought patterns negatively affect the employees' work relations and attitudes toward their jobs (Rusdi et al., 2017). These patterns and behaviors in the workplace cause them to resist changes that should happen over time. Creative employees will not feel this resistance and will adapt faster in situations involving innovation and change (Peng & Chen, 2022).

At the same time, when necessary, employees with high creative performance tend to look at problems from different perspectives, take risks, and bring their own thoughts to the fore (Ikhide et al., 2022). Creative performance increases employees' abilities to overcome problems and develop long-term solutions. Thus, the employee has the potential to reconsider the work environment and working order and advocate for new regulations to increase job satisfaction (Goh et al., 2020). Therefore, we emphasize that creative performance has an increasing effect on job and job satisfaction, which means that:

H4: There is a positive relationship between creative performance and job satisfaction.

The relationship between interpersonal communication satisfaction and job satisfaction

This work understands that interpersonal communication satisfaction is related to job satisfaction to influence individuals' beliefs about the organization. Based on motivation theory, job satisfaction was formally developed by Hoppock (1935) to explain employee-organization relationships. Job satisfaction is the individual's perception of satisfaction with the work environment (Vermeir et al., 2018).

As the three basic combinations of job satisfaction, we can point to satisfactory formal and informal friendships in the business environment, easy access to information within the company, and good relationships with managers. Interpersonal communication is generally defined as communication between people who know little about each other (Goh et al., 2020). It has been argued that employees with high interpersonal communication in the organization have successful formal and informal relationships with their colleagues. Organizations are places where people who know little about each other work toward common goals. However, thanks to the established formal/informal relationships, employees begin to learn about both the company and each other. Studies show that the relationships established in the work environment increase employees' positive emotions, especially the sense of belonging (Yıldırım et al., 2021).

Employees with high communication satisfaction have an open and transparent dialogue with their managers. These employees can express themselves more comfortably and voice their complaints. Thus, we suggest that similar results will be obtained in the sample of teleworkers:

H5: There is a positive relationship between interpersonal communication satisfaction and job satisfaction.

Role of IT awareness and creative performance

This article supports that employees' IT awareness positively affects creative performance. As the world becomes increasingly digital and interconnected, individuals with a strong understanding of IT have the potential to unlock their creative abilities and innovative thinking (Serrat, 2017). IT awareness allows individuals to access vast information and resources, which can greatly enhance their creative performance (Dong et al., 2017). This wealth of knowledge can inspire new ideas, fuel creativity, and lead to innovative solutions (Mikalef & Gupta, 2021).

IT awareness also facilitates seamless collaboration and communication among individuals, regardless of their geographical location. Through digital platforms, such as video conferencing, instant messaging, and project management tools, teams can work together in real-time, exchange ideas, provide feedback, and brainstorm creatively (VanLaar et al., 2020). Furthermore, IT awareness enables individuals to automate repetitive tasks through various software applications and tools. By automating mundane activities like data entry or file organization, individuals can free up valuable time and mental energy for more creative endeavors. As information theory states, this automation increases efficiency and allows individuals to focus on generating innovative ideas and solutions (Goh et al., 2020; Shannon, 1948). Also, IT awareness provides individuals with access to a wide range of creative software tools that can enhance their artistic abilities and creative performance (He et al., 2021).

Knowledge sharing within the organization is the transfer of information by employees to each other (Mukhtar et al., 2020). Having a high level of knowledge sharing within the business increases employees' productivity while positively affecting the success of the business.

With increased interpersonal communication satisfaction, employees find opportunities to learn new things. Knowledge and experiences that will be useful in their work are shared among employees (Ahmad et al., 2022). In an environment where information sharing is intense, a productive environment is created for the emergence of new ideas while employees learn about new developments in the business environment (Yıldırım et al., 2021).

On the other hand, high interpersonal communication satisfaction increases employee cooperation. Based on social penetration theory, interpersonal communication satisfaction supports the idea that trust and bonds between people increase as they provide more information about themselves (Taylor et al., 1973). Thus, employees help each other and find the opportunity to benefit from each other (Naotunna & Zhou, 2021). In addition, different opinions arise during the information sharing of the employees. The different opinions that emerge encourage employees to think and develop new things. Therefore, a positive contribution is made to the development of the employee (Vermeir et al., 2018).

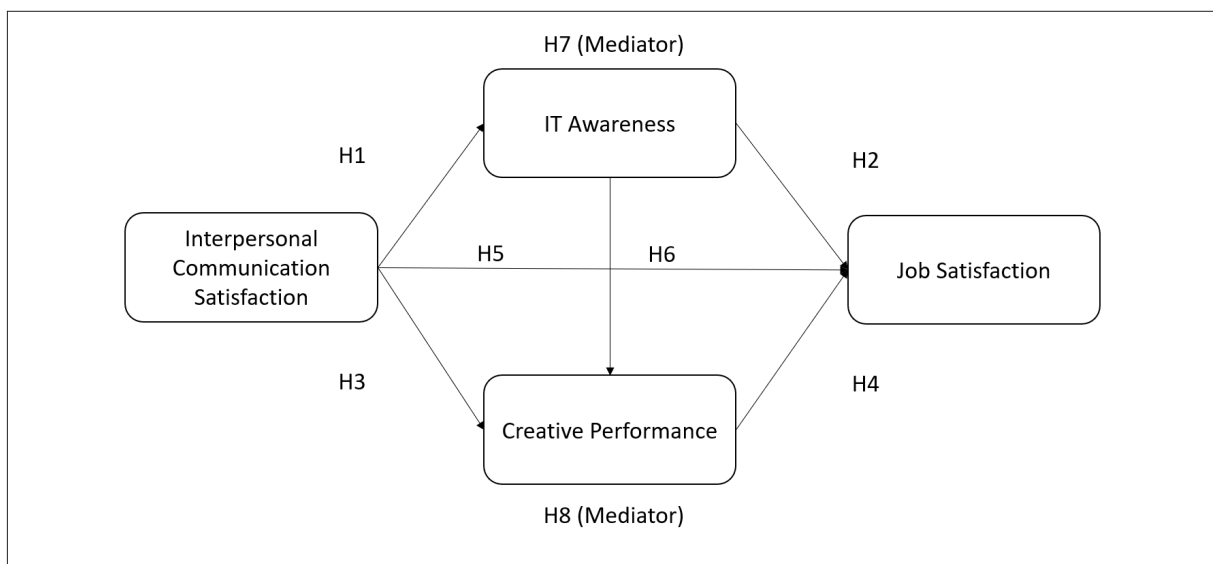
In light of the knowledge and experiences gained through interpersonal communication, there is an increase in both employee awareness and creative performance. This increase in employees' awareness and creative performance will naturally affect their positive attitudes toward work (Goh et al., 2020). Therefore, this study contends that IT awareness and creative performance mediate the relationship between interpersonal communication and job satisfaction.

H6: There is a positive relationship between IT awareness and creative performance.

H7: IT awareness mediates the relationship between interpersonal communication satisfaction and job satisfaction.

H8: Creative performance mediates the relationship between interpersonal communication satisfaction and job satisfaction.

Figure 1. Research model



RESEARCH DESIGN

Measures

Based on prior literature, multi-item scales were adopted to explore the proposed research model. All items were rated using a 5-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (5). The Likert scale was used to investigate interpersonal communication satisfaction, IT awareness, creative performance, and job satisfaction.

Interpersonal Communication Satisfaction was measured with the 5-item scale developed by Smith et al. (2018). The scale was developed to assess employees' job satisfaction concerning the use of communication channels. We measured overall communication channel satisfaction and adopted scale items in the study. Some items explored were “The conversation with coworkers flows smoothly via the communication channel” and “I am satisfied with conversations I have via the communication channel with coworkers.”

Creative performance was measured with the 13-item scale developed by Zhou (1998). This scale was adopted to measure respondents' perceptions of creative performance. Sample items are “Suggests new ways to achieve goals or objectives” and “Comes up with new and practical ideas to improve performance.”

IT awareness was measured with the 4-item scale developed by Tippins and Sohi (2003). Sample items are “Overall, our technical support staff is knowledgeable when it comes to computer-based systems” and “Our firm possesses a high degree of computer-based technical expertise.”

Job Satisfaction was measured with the 5-item scale developed by Pond and Geyer (1991). Sample items are “If you had to decide all over again whether to take the job you now have, what would you decide?” and “If a friend asked if he/she should apply for a job like yours with your employer, what would you recommend?”

Translation and back-translation procedures (Brislin, 1980) were used after determining the scales. In this context, the questionnaire was translated into Turkish by one researcher and then retranslated into English by another researcher using the parallel translation method. The draft questionnaire took its final form as a result of the conciliation of translators on the differences. Academics in management and organizational behavior evaluated the draft questionnaire, which was revised in line with their suggestions and feedback. A pilot study was then conducted with 30 full-time employees. The respondents demonstrated the clarity of question items and the final version of the questionnaire was considered adequate.

Sampling

Designers are professionals who deliver high creative performance, creating products to meet the needs, expectations, and lifestyles of end users and customers (Beefink et al., 2012). These professionals must establish constant communication with other actors in order to generate new ideas to solve a problem that may arise during or after production. Architectural offices,

which are responsible for managing relations with customers inside and outside the company and adding creativity to their work, constitute one of the most appropriate occupational groups for this study (Meneely & Portillo, 2005).

Data collection was collected from April to May 2021, during the COVID-19 pandemic in Turkey. In this period, the dissemination of the virus had rapidly increased in the country, which was the 5th country with the highest number of cases in the world. The social distancing measures implemented restricted social and educational activities, whereas businesses operated by adopting teleworking and other solutions to increase employees' safety. Hence, respondents worked from home as teleworkers during the data collection period.

The non-probability-based convenience sampling technique (Krathwohl, 1993) was employed due to time, availability, convenience, and accessibility constraints posed by the COVID-19 pandemic. Data was collected from designers employed in different positions in various architectural offices in Ankara and Istanbul. This sampling procedure is consistent with previous studies (Feist, 1998; Kirton, 1994).

Also aligned with practices described in the literature, participants were approached online or via phone calls and office visits (Golden & Veiga, 2005). Potential participants were selected using the following criteria defined after the literature review: they were working in the architecture department of an organization (Beefink et al., 2012); working full-time (Smith et al., 2018); and teleworking after COVID-19 (Ma, 2021).

Following the explanation of the research's purpose, participants were asked to indicate that they agreed to participate in the study by ticking the phrase "I agree to participate in the research" at the beginning of the survey. Participants were informed that all information shared would be confidential and used only for academic purposes. A total of 750 participants responded to the online questionnaire. After eliminating incomplete and careless responses, the final sample comprised 683 respondents.

The survey also collected demographic data from respondents, identifying that 60.5% were male, 66.5% of respondents were married, and 33.5% were unmarried. The average age of the respondents was 36.88 years ($SD=9.27$), and the average tenure with the current organization was 2.99 years ($SD=1.04$). Respondents working in the public and private sectors were 24.2% and 75.8% respectively. The average time respondents were teleworking at the time of the survey due to social distancing measures was 8.1 weeks ($SD=2.43$).

ANALYSIS AND RESULTS

Measure validity and reliability

Following the data collection, the adequacy of the measurement model was assessed using confirmatory factor analysis (CFA) (Fornell & Larcker, 1981).

Table 1. Comparison of measurement models

CFA model	X ² /df	ΔX ² /Δdf	RMSEA	CFI	TLI	SRMR
4 factors: ICS, AIT, CP, JS	1265.12/314	-	.07	.94	.93	.037
3 factors: ICS+AIT, CP, JS	2109.54/317	844.42	.09	.88	.87	.061
2 factors: ICS+AIT+CP, JS	3737.13/319	2472.01	.13	.78	.76	.091
1 factor: ICS+AIT+CP+JS	5840.45/320	4575.33	.16	.64	.61	.115

Note: N = 683; ICS = interpersonal communication satisfaction; AIT = IT awareness; CP = creative performance; JS = job satisfaction

We compared the baseline four-factor model with alternative one, two, and three-factor nested models (see Table 1). The results showed that the four-factor model encompassing interpersonal communication satisfaction, IT awareness, creative performance, and job satisfaction demonstrated a superior fit to the data compared to the other nested models ($\chi^2(314)=1265.12$, CFI=.94 IFI=.94, TLI=.93, $\chi^2/df=4.03$, RMSEA=.067, PNFI=.82, SRMR=.037), supporting discriminant validity. Additionally, all indicators loaded onto their respective constructs, with factor loadings ranging between .63 and .90, thus supporting convergent validity.

Table 2. Confirmatory factor analysis

Constructs	Factor Loadings	CR	AVE	Cronbach's α
Interpersonal Communication Satisfaction		.93	.70	.92
ICS1	.84			
ICS2	.89			
ICS3	.86			
ICS4	.81			
ICS5	.78			
IT awareness		.89	.66	.88
ITA1	.82			
ITA2	.74			
ITA3	.86			
ITA4	.82			
Creative Performance		.95	.59	.95
CP1	.63			
CP2	.73			
CP3	.74			

Continue

Table 2. Confirmatory factor analysis

Concludes

Constructs	Factor Loadings	CR	AVE	Cronbach's α
CP4	.73			
CP5	.66			
CP6	.71			
CP7	.77			
CP8	.86			
CP9	.81			
CP10	.86			
CP11	.86			
CP12	.85			
CP13	.74			
Job Satisfaction		.94	.76	.94
JS1	.83			
JS2	.87			
JS3	.87			
JS4	.89			
JS5	.90			

Note: AVE = average variance extracted; CR = composite reliability.

Table 2 presents the reliability estimates for the study variables. Results show that Cronbach's alphas and composite reliability for each variable are well beyond the threshold value suggested by Fornell and Larcker (1981). Besides, the average variance extracted (AVE) for each variable is also greater than .50, demonstrating convergent validity as proposed by Fornell and Larcker (1981).

Table 3. Discriminant validity

Dimensions	1	2	3	4
Interpersonal Communication Satisfaction	(.84)			
Creative Performance	.54*	(.77)		
IT awareness	.58**	.57**	(.81)	
Job Satisfaction	.50**	.47**	.48**	(.87)
Mean	4.02	3.70	3.71	3.86
S. dev.	.96	.92	.97	1.17

** $p < .01$; Values along the diagonal are the square root of AVE.

Table 3 shows the descriptive statistics and correlations among interpersonal communication satisfaction, IT awareness, creative performance, and job satisfaction. Interpersonal communication satisfaction was significantly correlated with creative performance ($r=.54, p<.01$), IT awareness ($r=.58, p<.01$), and job satisfaction ($r=.50, p<.01$). Creative performance was significantly correlated with IT awareness ($r=.57, p<.01$), job satisfaction ($r=.47, p<.01$), and IT awareness was significantly correlated with job satisfaction ($r=.48, p<.01$). As a result, moderate correlations among each variable also confirmed the discriminant validity. Also, the square root of AVE for each variable is greater than the correlations between the pairs of variables, confirming discriminant validity.

Common method variance assessment

We tested common method bias due to collecting self-reported data. Hence, we performed a common latent factor method and compared models with and without a common latent factor. Results showed that the change in the fit index was not significant (model with common latent factor CFI=.94, IFI=.94, TLI=.93, $\chi^2/df=3.90$, RMSEA=.065, SRMR=.041; model without common latent factor CFI=.94 IFI=.94, TLI=.93, $\chi^2/df=4.03$, RMSEA=.067, SRMR=.037), confirming that common method bias is a non-issue in the study.

Hypotheses testing

The evaluation of a model's overall fit with a saturated structural model, or confirmatory factor/composite analysis, should be the initial step in a comprehensive assessment (Benitez et al., 2020). According to Henseler et al. (2013), an SRMR value less than 0.080 denotes a good model fit. The goodness of fit indicated that our model was acceptable: $\chi^2(351)=1265,118$, CFI=.94, IFI=.94, TLI=.93, $\chi^2/df=4.03$, RMSEA=.067, PNFI=.82, SRMR=.037) (Benitez et al., 2020; Hu & Bentler, 1999).

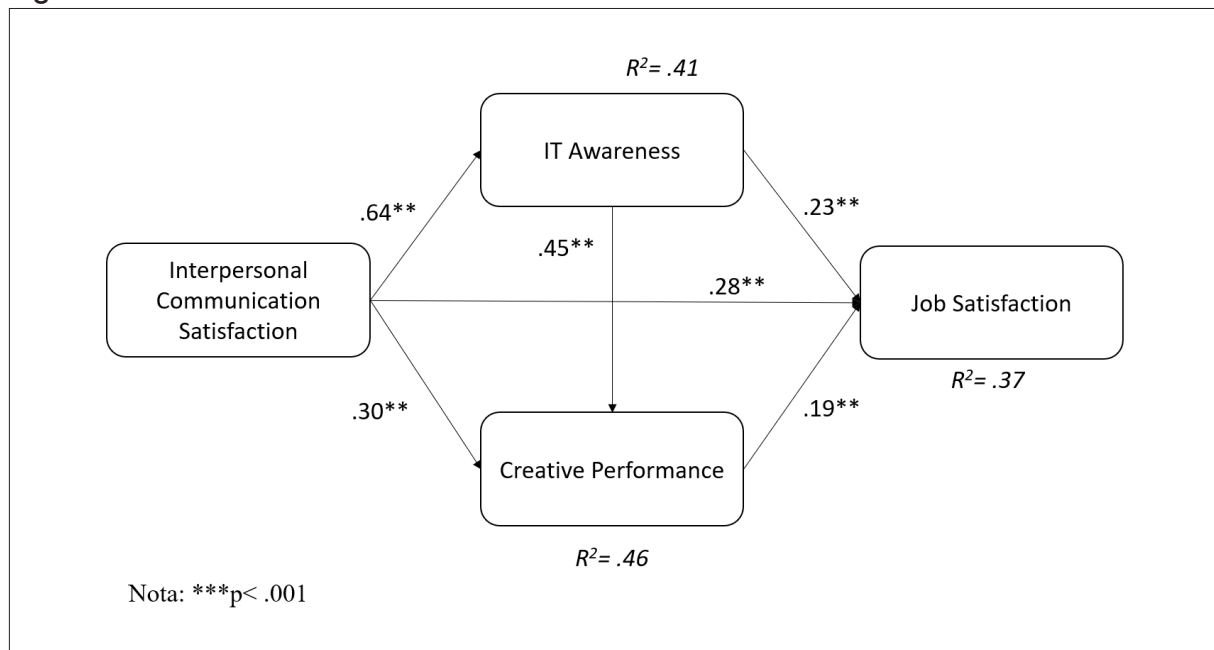
As shown in Table 4, interpersonal communication satisfaction was positively related to IT awareness ($\beta=.64, p<.001$), thus supporting H1. IT awareness was positively related to job satisfaction ($\beta=.23, p<.001$), supporting H2. Also, interpersonal communication satisfaction was positively related to creative performance ($\beta=.30, p<.001$), thereby supporting H3. Creative performance was positively related to job satisfaction ($\beta=.19, p<.001$), thus supporting H4. Interpersonal communication satisfaction was positively related to job satisfaction, hence supporting H5. Finally, IT awareness was positively related to creative performance ($\beta=.45, p<.001$), hence supporting H6. Additionally, results show that interpersonal communication satisfaction explains 41% of the variance in IT awareness and 46% of the variance in creative performance. Finally, interpersonal communication satisfaction, IT awareness, and creative performance explain 37% of the variance in job satisfaction. Structural equation modeling (SEM) was used to test the proposed research model. Important pathways are shown in Figure 2.

Table 4. Model results

	Hypothesized path	Beta	Results
H1	Interpersonal Communication Satisfaction → IT Awareness	.64**	Supported
H2	IT Awareness → Job Satisfaction	.23**	Supported
H3	Interpersonal Communication Satisfaction → Creative Performance	.30**	Supported
H4	Creative Performance → Job Satisfaction	.19**	Supported
H5	Interpersonal Communication Satisfaction → Job Satisfaction	.28**	Supported
H6	IT Awareness → Creative Performance	.45**	Supported
$\chi^2(351)=1265,118$, CFI=.94, IFI=.94, TLI=.93, $\chi^2/df=4.03$, RMSEA=.067, PNFI=.82 SRMR=.037			

**p<.001.

Figure 2. SEM model



Mediating effects were further examined using the procedure of Preacher and Hayes (2008) and using PROCESS macro for SPSS (Model 4 with 5000 bootstrap resamples). The bootstrapping method is a statistical resampling technique used to estimate the accuracy and stability of sample estimates by taking a large number of subsamples with replacement from the original sample (Benitez et al., 2020; Preacher & Hayes, 2008).

Table 5. Results of mediating analysis

	Direct and Indirect effects	95% CI		
		β	LL	UL
	Direct effects			
	Interpersonal Communication Satisfaction→ IT Awareness	.58**	.52	.64
	IT Awareness → Job Satisfaction	.58**	.50	.66
	Interpersonal Communication Satisfaction→Job Satisfaction	.61**	.53	.69
	Indirect effect			
H7	Interpersonal Communication Satisfaction→ IT Awareness → Job Satisfaction			.28
	.20**			
	.14			

**p<.001; CI=Confidence interval

When calculating the mediating effect, the importance of indirect, direct, and total effects lies in their ability to explain how one variable influences another through a mediator variable. The indirect effect measures the relationship between the independent and dependent variables through the mediator variable. The direct effect reflects the influence of the independent variable on the dependent variable without considering the mediator. Finally, the total effect is the combined influence of both direct and indirect effects on the dependent variable (Benitez et al., 2020; Preacher & Hayes, 2008). As shown in Table 5, interpersonal communication satisfaction is positively associated with IT awareness ($\beta=.58$, $p<.001$; 95% CI: .52– .64) and job satisfaction ($\beta=.61$, $p<.001$; 95% CI: .53–.69). IT awareness is also positively associated with job satisfaction ($\beta=.58$, $p<.001$; 95% CI: .50–.66). Also, IT awareness mediates the relationship between interpersonal communication satisfaction and job satisfaction ($\beta=.20$, $p<.001$; 95% CI: .14–.28), thus supporting H7.

Table 6. Results of mediating analysis

	Direct and Indirect effects	95% CI		
		β	LL	UL
	Direct effects			
	Interpersonal Communication Satisfaction→ Creative Performance	.52**	.46	.58
	Creative Performance→ Job Satisfaction	.59**	.51	.67
	Interpersonal Communication Satisfaction→ Job Satisfaction	.61**	.53	.69
	Indirect effect			
H8	Interpersonal Communication Satisfaction→ Creative Performance→ Job Satisfaction	.18**	.12	.25

**p<.001; CI=Confidence interval

As shown in Table 6, interpersonal communication satisfaction is positively associated with creative performance ($\beta=.52$, $p<.001$; 95% CI:.46–.58) and job satisfaction ($\beta=.61$, $p<.001$; 95% CI:.53–.69). Creative performance is also positively associated with job satisfaction ($\beta=.59$, $p<.001$; 95% CI:.51–.67). Also, creative performance mediates the relationship between interpersonal communication satisfaction and job satisfaction ($\beta=.18$, $p<.001$; 95% CI:.12–.25), thus supporting H8.

DISCUSSION & IMPLICATIONS

This study contributes to the teleworking literature by investigating the interrelations among interpersonal communication satisfaction, IT awareness, creative performance, and job satisfaction during COVID-19. Firstly, this study demonstrates that interpersonal communication satisfaction is positively related to IT awareness. Specifically, we observe that interpersonal communication is vital for creating IT awareness through the high flow of information in these communication activities. In addition, employees share and transfer information and ideas about work life in the communication process. As supported by social penetration theory, in this mutual interaction and communication process, new information is learned, and employees are satisfied with this communication process (Taylor et al., 1973). Considering that there is a variety of IT knowledge in this shared information, it is undeniable that employees improve each other's IT competencies and awareness. This finding is in line with the study conducted by Ukpabi and Karjaluo (2017).

This study empirically shows that creative performance is positively associated with job satisfaction. Specifically, consistent with the study of Goh et al. (2020), it seems that jobs improving the creative performance of employees enhance their job satisfaction. In addition, as supported by motivation theory, employees feel higher satisfaction when they use their creativity (Hoppock, 1935). This study also demonstrates that interpersonal communication satisfaction is associated with job satisfaction, which aligns with the extant literature. Specifically, teleworkers' interpersonal communication differs from traditional channels (Smith et al., 2018). Within interpersonal communications, people share their knowledge, learn new information, create meaning, and develop relations (Marlow et al., 2018). Hence, satisfaction with interpersonal communication enhances positive attitudes towards work as job satisfaction.

This study reveals that IT awareness is positively related to job satisfaction, supporting information theory (Shannon, 1948). Similarly, Pérez-López and Alegre (2012) demonstrated that employees with high IT competency have a broad IT knowledge and the ability to use IT-related methods and techniques. Similarly, Kucharska and Erickson (2019) demonstrated that high IT competency leads employees to perform their tasks better and successfully, increasing their job satisfaction. Here, we specifically showed that employees' IT awareness heightens their job satisfaction by improving their work performance and contributing to the competencies required in their jobs.

This study also shows that interpersonal communication satisfaction influences creative performance. As stated in the componential theory of creativity, the creative performance of

employees depends on the communication style in the work environment (Amabile, 1988). For example, previous studies examined the effect of psychological capital (Peng and Chen, 2022), creative process engagement and psychological safety (Ahmad et al., 2022) on creative performance. Here, we demonstrated that acquiring and sharing information in interpersonal communication enhance employees' creative performance by facilitating the generation of new and valuable ideas (Naotunna & Zhou, 2021).

This study empirically shows that awareness of IT is positively associated with creative performance. Similarly, VanLaar, et al. (2020) found that individuals who possessed a higher level of IT knowledge were more likely to engage in creative thinking processes, such as idea generation and idea evaluation. Additionally, He, et al. (2021) found in their study on the COVID-19 pandemic that IT knowledge facilitates the integration of various information sources, allowing individuals to develop unique and innovative solutions to complex problems. Here we show that awareness of IT enhances employees' creative performance by increasing access to information resources and encouraging creative thinking.

Finally, we observed that IT awareness and creative performance mediate the relationship between interpersonal communication satisfaction and job satisfaction. Specifically, this finding demonstrates that information sharing, learning, and developing relationships through interpersonal communication enhances employees' IT awareness by providing necessary information for creating IT awareness. Besides, interpersonal communication satisfaction also increases creative performance by facilitating the generation of novel and unique ideas. Hence, employees tend to feel high job satisfaction.

Practical implications

This study has several practical implications. First, the results indicate that interpersonal communication satisfaction might be described as a critical factor for teleworkers. In this context, managers should enhance interpersonal communication among the organization's members through different communication channels (Okoro et al., 2017). Specifically, considering that teleworkers are far from face-to-face communication, using video-based communication channels will increase communication satisfaction because of being closer to face-to-face communication.

Besides, teleworkers work in a virtual environment socially isolated from their organizations. Informal communication within the organizations also contributes to information sharing and allows interaction among members (Ma, 2021). In this regard, managers should spread the use of informal communication channels and consider developing social networks within the organization to increase employee communication satisfaction.

Management should recognize the importance of jobs that foster creative performance, as it directly relates to employee job satisfaction. Implementing policies and offering resources to support creative development could lead to a more satisfied and motivated workforce.

To further support the teleworking experience, organizations may consider integrating tools in their telework policies that facilitate team collaboration and knowledge sharing. Such

tools can help bridge the gap between traditional communication channels and the virtual environment (Smith et al., 2018).

Managerial implications

Managers should focus on fostering interpersonal communication satisfaction among teleworkers, as it is a critical factor for their job satisfaction and IT awareness (Kucharska & Erickson, 2019). Effective communication can support information sharing, learning, and relationship development, which ultimately enhances employees' overall work performance.

Also, managers should develop strategies to stimulate creative performance among teleworkers, such as providing opportunities for brainstorming, collaboration, knowledge sharing, and supportive feedback (Goh et al., 2020). They should also consider offering IT-related workshops or courses to equip employees with the necessary skills and knowledge. Implementing training and development programs aimed at increasing employees' IT awareness can lead to higher job satisfaction and improved task performance (Kucharska & Erickson, 2019; Pérez-López & Alegre, 2012).

These recommendations can be carried out by creating an open and inclusive virtual work culture where employees feel comfortable expressing their ideas without fear of judgment or retaliation. Promoting psychological safety, creative process engagement, and psychological capital among teleworkers can positively impact their creative performance (Peng & Chen, 2022).

In summary, managers play an essential role in enhancing teleworkers' job satisfaction by promoting effective interpersonal communication, nurturing creativity, increasing IT awareness, supporting psychological well-being in the virtual environment, and cultivating informal communication channels in the organization.

Theoretical implications

This study extends the existing teleworking literature by examining the interrelated variables of interpersonal communication satisfaction, IT awareness, creative performance, and job satisfaction during the COVID-19 pandemic. It supports the idea that effective interpersonal communication plays a crucial role in shaping teleworkers' experiences (Smith et al., 2018).

By demonstrating a positive relationship between interpersonal communication satisfaction and IT awareness, the importance of technological competencies in telework is highlighted, corroborating the findings by Pérez-López and Alegre (2012) regarding IT competency and job satisfaction.

The positive association between creative performance and job satisfaction discovered in this study adds to previous research by Goh et al. (2020), suggesting that promoting creativity among teleworkers can lead to heightened job satisfaction.

The study's finding that interpersonal communication satisfaction influences creative performance contributes to the growing literature on factors affecting creativity in the workplace,

such as psychological capital (Peng & Chen, 2022; Ma, 2021), creative process engagement, and psychological safety (Ahmad et al., 2022).

By empirically establishing that IT awareness and creative performance mediate the relationship between interpersonal communication satisfaction and job satisfaction, this study further emphasizes the need for effective communication and IT proficiency in teleworking (Kucharska & Erickson, 2019; Ninaus et al., 2021).

Limitations and direction for future studies

Among the study's limitations, it is worth highlighting that its cross-sectional design does not allow for attribute causality. In this vein, the longitudinal approach can be beneficial for future research. Using self-report data is another limitation of the study due to creating the potential for common method bias. Besides, the study sample consisted of a specific national context, teleworkers in Turkey. Considering that communication styles and processes differ according to cultures (Ma, 2021), future research could investigate the proposed research model in different cultural contexts for the generalizability of the results.

In this study, we investigated job satisfaction as a consequence of employees' interpersonal communication satisfaction. In this context, future studies can investigate potential consequences such as employee engagement, organizational identification, and employee well-being. Additionally, we did not focus on the antecedents of interpersonal communication satisfaction of teleworkers. In this vein, future studies can also investigate the impact of organizational trust, leadership styles, personality, and communication channels on interpersonal communication satisfaction.

The study also focused on IT awareness and creative performance as mediating mechanisms in the relationship between interpersonal communication satisfaction and job satisfaction. The mediating role of job performance, organizational citizenship behavior, and job involvement should be considered in future studies.

Finally, the study did not focus on the moderating mechanism in the relationship between interpersonal communication satisfaction and job satisfaction. Future studies can consider leader-member exchange, perceived insider status, psychological capital, and telecommuting intensity as moderating variables.

CONCLUSION

In conclusion, this study highlights the significance of interpersonal communication satisfaction, creative performance, job satisfaction, and IT awareness within the teleworking environment during the COVID-19 pandemic. The ability to communicate efficiently with colleagues and achieve a sound understanding of information technology have been crucial elements that influence job satisfaction in teleworking.

Furthermore, the research shows that IT awareness and creative performance both mediate the association between interpersonal communication satisfaction and job satisfaction. This demonstrates that job satisfaction does not depend on communicating well with coworkers. Rather, it depends on the capacity to comprehend and effectively apply IT, as well as inventiveness.

By emphasizing the importance of interpersonal communication and IT awareness, it is possible to create an environment and workforce suitable for encouraging creativity and productivity. Focusing on these areas helps companies cultivate a productive and creative workforce with high job satisfaction and contentment with the working environment.

Finally, managers should prioritize developing their employees' IT capabilities. This is because a direct relationship has been observed between IT skills, work outcomes, and job satisfaction in the remote work environment. Implementing these strategic measures may significantly increase job satisfaction among teleworkers.

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CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

AUTHORS' CONTRIBUTION

Melike Artar: Conceptualization, data curation, formal analysis, Research; Methodology; Validation; Writing-original draft; Writing-review and editing.

Oya Erdil: Conceptualization, data curation, formal analysis; Methodology; Validation; Visualization; Supervision; Writing-original draft; Writing-revision and editing.