Social Relationship Dynamics in a Remote Work Environment: the Psychological Impact of Long-Term Telecommuting

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	ABSTRACT
	Remote working or telecommuting has become an increasing trend, mainly driven by technological advancements and the global pandemic situation. The dynamics of social relationships in the work environment have greatly changed as a result of the transition from physical offices to virtual offices. Both workers and organizations must adjust to the dynamics of social relationships in a remote work environment, as telecommuting offers flexibility and autonomy. This study was conducted with the aim of understanding how remote work affects employees' mental health such as stress levels, anxiety, depression, and job satisfaction levels. As well as evaluating the changes that occur in the social interactions that take place among workers and how it impacts team dynamics, collaboration, and company culture. The method used by researchers in researching Social Relationship Dynamics in Remote Work Environments: The Psychological Impact of Long-Term Telecommuting is to use a quantitative method. The data obtained by researchers was obtained from the results of distributing questionnaires. The results of data acquisition will also be tested again using the SPSS application. From the research results, it can be seen that the Dynamics of Social Relations in a Remote Work Environment: The Psychological Impact of Long-Term Telecommuting, has positive and negative effects. On the other hand, it is mentioned as the main benefit of being independent and reducing the burden of travel, and on the other hand, the loss of face-to-face interactions and miscommunication through digital media are the main problems. From this study, we can conclude that the long-term use of telecommuting has a complex impact on social relationship dynamics and psychological well-being of employees. While independence and flexibility are key advantages, challenges in communication and social interaction also require special attention. **Keywords:** *Relationships, Psychological, Telecommuting*

INTRODUCTION

Telecommuting, also known as remote working, is the practice of working from a location outside the company's office, usually from home, using communication and information technology to interact with coworkers and complete tasks (Bamieh & Ziegler, 2022). Long-term telecommuting refers to a situation where a worker is telecommuting for an extended period, often for months or even years (Farcane et al., 2023). Due to technological advancements that enable effective communication and cooperation from a distance, long-term telecommuting has become more common (Yao et al., 2022). Therefore, there is a need for proper practice or use, as telecommuting can have a significant psychological impact in the long run (Ku et al., 2022).

Interactions between individuals or groups that impact each other are called social relationships (Künn et al., 2022). This type of interaction involves communication, information, emotions and actions that create bonds or connections between the individuals or groups involved (Waight et al., 2022). The dynamics of social relationships include how these relationships form, develop and change over time. Social relationships are usually divided into two main categories: primary relationships and secondary relationships (Grant et al., 2019). Primary relationships usually involve close and intimate bonds, such as friendship or family. Secondary relationships, on the other hand, are more formal and less personal, such as relationships between coworkers or bosses and subordinates (Byrd, 2022).

Social relationships in the work environment have special characteristics because they involve interactions in a professional context and are often based on common goals that team or organization members must achieve (Grisot et al., 2019). These social relationships are very important as they can affect employee productivity, job satisfaction, and well-being. Through strong social relationships in a remote work environment, employees can share knowledge, experiences, and resources that support their professional development (Orzeł & Wolniak, 2022). In fact, strong social connections help employees communicate seamlessly in a remote workplace. This allows teams to work better together, share important information, and undertake complex projects in different places (Chatterjee et al., 2022).

Social relationships in the remote workplace have some fundamental differences from those in the traditional workplace (Tleuken et al., 2022). Now a variety of digital platforms such as email, instant messaging, video conferencing, and other online collaboration tools enable interactions that would normally occur in person in a physical office (Anderson & Kelliher, 2020). Various aspects of social relationships in the workplace can be affected by these changes. One is the lack of face-to-face interaction, which can reduce opportunities to build more intimate and personalized relationships between coworkers (Lomas et al., 2023). In addition, communication through digital media is often more formal and structured, which can reduce spontaneity and intimacy.

Various theories and concepts on communication, team cohesion, and employee well-being can be used to look at the dynamics of social relationships in remote work environments from a psychological perspective (Zhang et al., 2021). Media Richness

Theory is a very relevant theory that states that a more "rich" communication medium, such as video conferencing, can convey more complex and in-depth messages than a more "less rich" communication medium, such as email (Van Zoonen et al., 2021). Additionally, we can use Social Engagement Theory to understand how employees engage in social relationships in their remote work environment (Yaroshenko et al., 2021). This theory emphasizes how important social interaction is for individual well-being and suggests that the sense of social support and connectedness felt by employees may diminish if there is no face-to-face interaction (Charalampous et al., 2023).

In a remote work environment, social relationship dynamics can also affect team cohesion, which is the extent to which team members feel connected and committed to a common goal (Walch et al., 2022). Familiarity and trust, which are essential for strong team cohesion, can be hindered if there is no direct interaction. Therefore, it is important for companies to implement approaches and resources that help people communicate and work well together in a remote work environment (Brueckner & Sayantani, 2023). During remote work, the safety of employees is also very important. Social isolation and lack of face-to-face interaction can jeopardize workers' mental health (Varma et al., 2022). Studies show that employees who work from home often feel isolated and lack social support. This can impact their motivation and job satisfaction (Takahashi et al., 2023).

These challenges can be overcome with the right methods. For example, companies can hold regular video conference sessions to get employees to interact and talk to each other more, as well as to provide psychological support and virtual social activities to maintain their mental health (Wu et al., 2021). This shows that while remote working presents its own challenges in social relationship dynamics, there are many ways to overcome them and ensure that employees stay connected and productive (Kuang & Zheng, 2023). By understanding the dynamics of social relationships in remote work environments from a psychological perspective, companies can develop effective strategies to support their employees and create a healthy and productive work environment even in unconventional situations (Bareket-Bojmel et al., 2023).

The type of method used in this research is quantitative method. This method is used so that the final results of data processing can be known clearly and precisely about the Dynamics of Social Relationships in the Remote Work Environment: The Psychological Impact of Long-Term Telecommuting (Morikawa, 2023). The data collection process is obtained by researchers from the results of respondents' answers that researchers have done. Researchers made a questionnaire of 10 questions, then distributed it through goggle from. After the data is collected, the data will be calculated into percentages and presented in tabular form. In processing research data, researchers use SPSS software which aims to make it easier for researchers to process data, and the data results are more relevant. Furthermore, the researcher really hopes that the next researcher will examine and study more deeply the Dynamics of Social Relationships in the Remote Work Environment: The Psychological Impact of Long-Term Telecommuting.

RESEARCH METHOD
Research Design

In investigating research on the Dynamics of Social Relationships in the Remote Work Environment: The Psychological Impact of Long-Term Telecommuting using quantitative methods (Dhanesh & Picherit-Duthler, 2021). The use of quantitative methods aims to collect research data and test hypotheses that have been formulated. Then the researcher made a questionnaire made in the Google From application which was distributed online to respondents via the WhatsApp application. The questionnaire contains 20 questions asked by the researcher. To fill out the questionnaire, the researcher has provided four options, namely strongly agree, agree, disagree, and disagree. So the respondents can respond to the questions asked by the researcher by choosing these four options.

Research Procedure

In this study, the researcher investigated the Dynamics of Social Relationships in a Remote Work Environment: The Psychological Impact of Long-Term Telecommuting. The purpose of the researcher is to investigate this so that the researcher can collect, analyze, and provide understanding of the data that has been collected. In making questions, researchers use language that is good and easy for respondents to understand when filling out the questionnaire distributed by researchers later. It is intended that respondents who give their responses to the questions asked by the researcher can be answered quickly. That way, researchers will find it easier to examine the data being investigated regarding the Dynamics of Social Relationships in the Remote Work Environment: The Psychological Impact of Long-Term Telecommuting(Yang et al., 2022).

Research Subject

In researching the Dynamics of Social Relationships in the Remote Work Environment: The Psychological Impact of Long-Term Telecommuting, researchers certainly determine the subjects for their research. In this study, the subjects in this study were employees who were randomly selected by the researcher. As for before the distribution of the questionnaire was carried out by the researcher, the researcher asked for the availability of the respondents in advance to be able to take the time to fill out the questionnaire that the researcher would distribute. The questionnaire contains 10 questions each about the Dynamics of Social Relationships in the Remote Work Environment: The Psychological Impact of Long-Term Telecommuting.

Research Ethics

In writing the article entitled Social Relationship Dynamics in Remote Work Environments: The Psychological Impact of Long-Term Telecommuting, it is very important for researchers to exercise strong ethical considerations when writing this article (Ferreira et al., 2022). Where researchers maintain balance in conducting

research in order to remain consistent and careful. It aims to gain the trust and readiness of the respondents or the objects in this study. In addition, researchers also provide actual information about their research to maintain their commitment. The researchers did this in order to get maximum research results, and remain consistent in developing better research patterns with the research they conducted.

Data Collection and Analysis

This time, researchers used quantitative methods for research data collection. Researchers also use a T-test as previously mentioned by researchers. The purpose of this data collection is to find relationships and become a benchmark between the research object material regarding the title Social Relationship Dynamics in the Remote Work Environment: The Psychological Impact of Long-Term Telecommuting, by collecting the answers of 20 respondents. The researcher also conducted advance testing using SPSS software to ensure that the respondents' responses were highly accurate and reliable. Thus, researchers must be very careful when collecting processed data (Becker et al., 2022).

Tabel 1

Social Relationship Dynamics in Remote Work Environments: The Psychological Impact of Long-Term Telecommuting.

no	Gain category	Value interval
1	Strongly agree	>90%
2	Agree	40-80%
3	Disagree	25%-50%
4	Don't Disagree	0-30%%
Total		100%

Figure 1
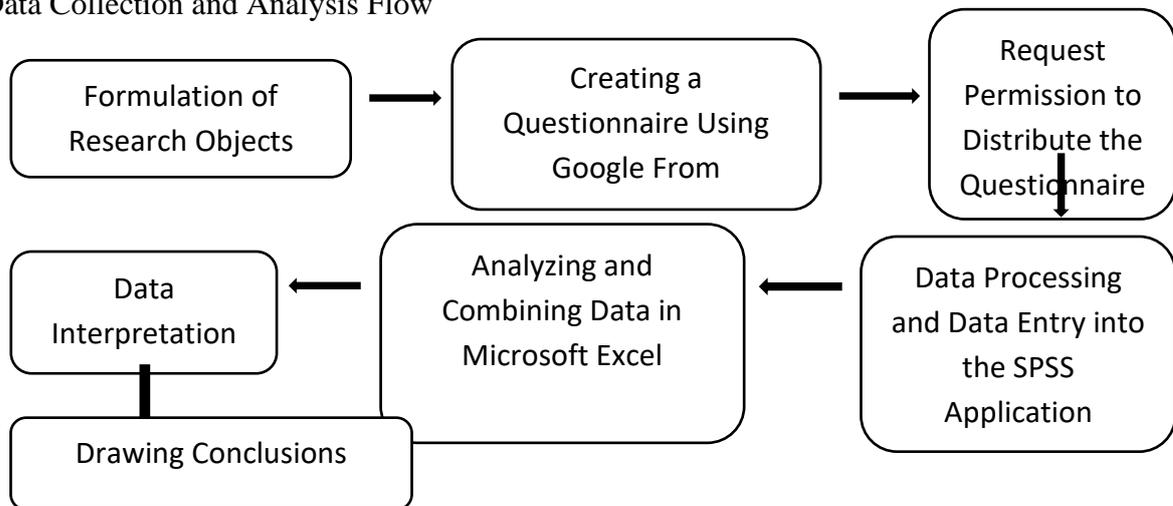
Data Collection and Analysis Flow

Figure 1 above shows how researchers collect and analyze research data. The results of data acquisition came from respondents' answers to the researcher's questions. Furthermore, in the quantitative research method, the researcher will also test again using the T-test which will be used to enter research data into the SPPS application. The number of questions asked by the researcher was 20 questions, where each question was divided into ten questions with different questions. Only after the questionnaire is distributed can researchers formulate and draw conclusions from the research object.

RESULTS

As more and more people choose to work from home or work remotely, social relationships in remote work environments are undergoing significant changes. The psychological impact of working from home for a long time is diverse, and there are many positive and negative effects. Employees who work from home can reduce the stress caused by traveling to the office, have more time flexibility, and improve their work-life balance. However, in the long run, telecommuting can lead to social isolation, less direct interaction with coworkers, and a lack of a sense of team togetherness. Employees who work from home often feel disconnected from the dynamics of the office and miss out on the opportunity to build informal relationships that usually occur in a physical work environment. This can lead to loneliness and poor mental health.

Table 2

Recap of Percentage Results from Respondents' Answers

No.	Question	strongly agree	Agree	Disagree	Don't Agree
1	Long-term telecommuting can cause social isolation for employees	56%	24%	12%	8%
2	Reduced social interaction in telecommuting can reduce the sense of community within a team	20%	67%	13%	0%
3	Employees who work remotely often feel disconnected from the dynamics of the office	30%	35%	35%	0%
4	Telecommuting allows employees to achieve a better work-life balance	32%	39%	24%	5%
5	Stress from traveling to the office is reduced with telecommuting	45%	32%	23%	0%
6	Greater time flexibility is one of the advantages of telecommuting	56%	32%	14%	0%
7	Loneliness may increase in employees who work from home for long periods of time	45%	32%	23%	0%

8	Telecommuting may reduce opportunities to build informal relationships with coworkers	20%	67%	8%	5%
9	Limited digital communication can increase the potential for misunderstandings	23%	22%	45%	10%
10	Collaboration effectiveness may decrease due to long-term telecommuting	24%	21%	23%	32%

Table 2 above shows the distribution of the questionnaire that has been done by the researcher. This questionnaire contains ten questions about social relationship dynamics in a remote work environment: the psychological impact of long-term telecommuting. In addition, during the distribution of the questionnaire, the researcher has percented each response result from the respondents. Therefore, respondents can choose to answer the researcher's questions by providing options such as strongly agree, agree, disagree, or disagree. And it can also be seen from the first question asked by researchers regarding long-term telecommuting can cause social isolation for employees, getting the highest score of 56% on the option choice strongly agree.

The second question about Reduced social interaction in telecommuting can reduce the sense of togetherness in the team, gets a percentage result of 67% in the choice of option agree. The third question about Employees who work remotely often feel disconnected from the dynamics of the office, scored 35% in the agree and disagree options. The fourth question Telecommuting allows employees to achieve a better work-life balance, scored 39% in the agree option. The fifth question Stress due to traveling to the office is reduced by telecommuting, getting a percentage of 45% in the option choice strongly agree.

Furthermore, the sixth question Greater time flexibility is one of the advantages of telecommuting, getting a percentage of 56% who strongly agree. The seventh question Loneliness can increase in employees who work from home for a long period of time, getting a percentage of 45% who strongly agree. In the eighth question regarding Telecommuting can reduce the opportunity to build informal relationships with coworkers, there is a choice of agree options as much as 67%. The ninth question about Limited digital communication can increase the potential for misunderstanding, getting a percentage result of 45% in the choice of option less agree. For the last question regarding The effectiveness of collaboration can decrease due to long-term telecommuting, get a percentage of 32% in the choice of disagree option.

Table 3

Recap of Percentage Results from Respondents' Answers

No.	Question	strongly agree	Agree	Disagree	Don't Agree
1	Companies need to find innovative ways to maintain social connections among remote employees.				

2	Virtual coffee breaks can be a solution to maintain social interaction.				
3	Online team building can help build a sense of community in remote teams.				
4	Increasing the frequency of communication between teams is important to maintain social connection.				
5	Missing out on face-to-face interactions can lower employees' mental health.				
6	Telecommuting can reduce the opportunity to learn from coworkers directly.				
7	Feelings of isolation can lead to decreased motivation.				
8	Employees who feel lonely tend to experience decreased productivity.				
9	The opportunity to share ideas spontaneously is reduced in telecommuting.				
10	Social support from coworkers can be less effective in a remote work environment.				

In the table 3 statement above, the researcher has also made ten questions. And consists of a choice of options strongly agree, agree, disagree and disagree. Which can be seen from the first question regarding Companies need to find innovative ways to maintain social relationships of remote employees, getting a percentage result of 45% in the strongly agree option. Next question number two about Virtual coffee breaks can be a solution to maintain social interaction, getting a percentage score of 43% in the strongly agree option. The third question about online team building can help build a sense of togetherness in remote teams, getting a percentage score of 80% in the option choice strongly agree. The fourth question Increasing the frequency of communication between teams is important for maintaining social relationships, getting a percentage score of 77% on the option choice agree.

The fifth question Losing direct interaction opportunities can reduce employee mental health, gets as much as 36% in the choice of option less agree. The sixth question about Telecommuting can reduce the opportunity to learn from coworkers directly, getting a percentage gain of 45% on the choice of option agree. The seventh question about Feeling isolated can cause a decrease in work motivation, getting a percentage score of 38% on the option choice of less agree. Then in the eighth question about Employees who feel lonely tend to experience a decrease in productivity, get a percentage score of 49% on the choice of agree option. Furthermore, in the ninth

question about the opportunity to share ideas spontaneously is reduced in telecommuting, getting a percentage score of 88% on the option choice strongly agree. While in the last question about Social support from coworkers can be less effective in a remote work environment, get a percentage score of 85% on the option choice agree.
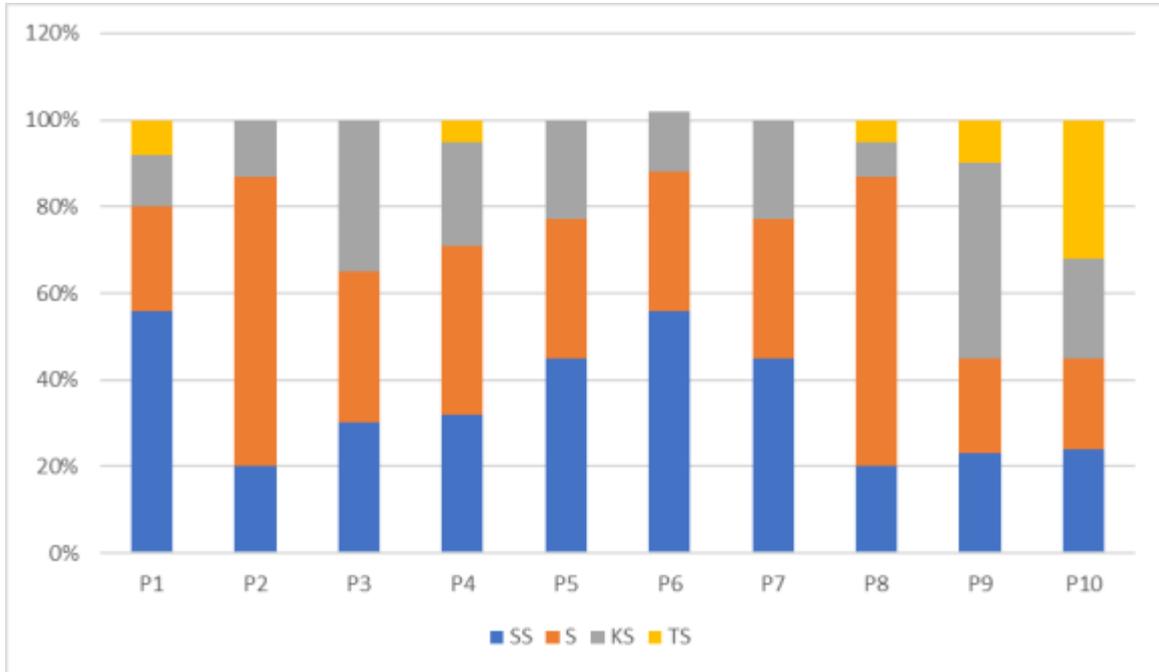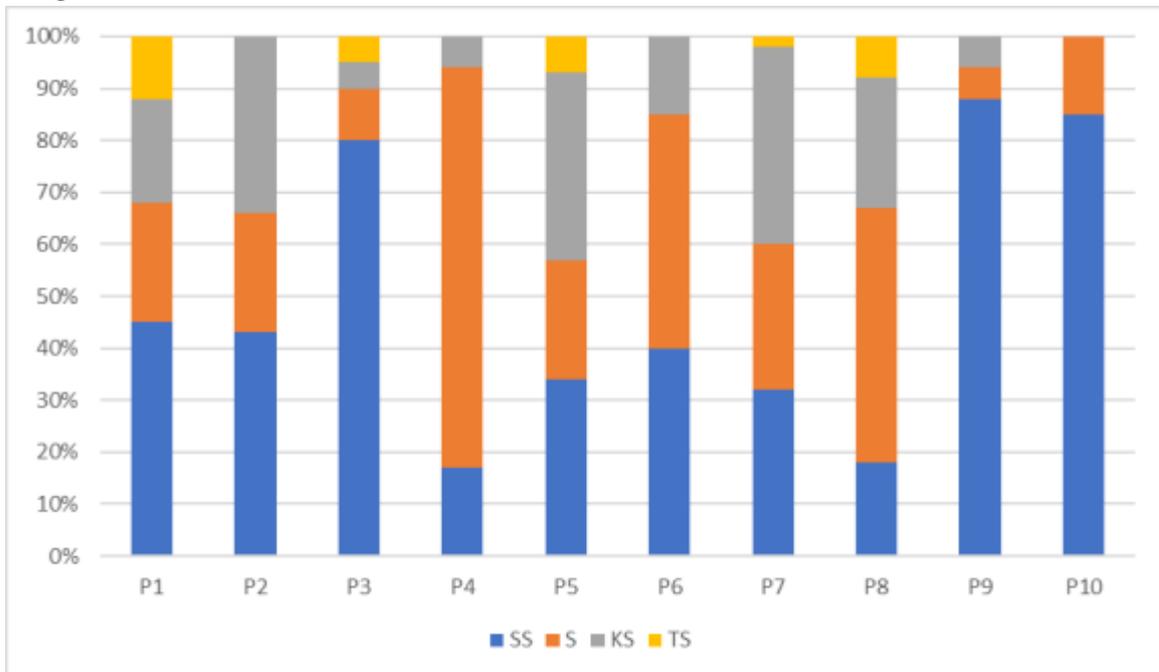
Diagram 1

Diagram 2

Table 3

T-test on social relationship dynamics in a remote work environment: the psychological impact of long-term telecommuting.

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	41.6500	20	21.87591	4.89160
	POST TEST	33.5000	20	19.11048	4.27323

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	PRE TEST & POST TEST	20	-.706	.001

Paired Samples Test

		Paired Differences			95% Confidence Interval Difference	
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper
Pair 1	PRE TEST - POST TEST	8.15000	37.86579	8.46705	-9.57174	25.8717…

Based on the results of table 3 above, it is a T-test using the SPSS application. From the results of the study, researchers can conclude that the T-test in the first output section explains Mean as an average. In the Pre Test, the resulting average amount is 41.6500, while in the Post Test it is 33.5000. Based on these results it can be formulated that there is a difference from the results of the respondents' answers. Furthermore, in the Paired Samples Correlations section, obtaining Correlations of -.076, as well as a large sig acquisition of .001. Furthermore, in the Paired Samples Test section, the results obtained were 37.86579 in the Std. Deviation section, while in the Std. Error Mean section obtained a result of 8.46705. Based on these results, there are social relationship dynamics in the remote work environment: on the psychological impact of long-term telecommuting.

Table 4

T-test regarding the dynamics of social relationships in a remote work environment: the psychological impact of long-term telecommuting.

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	20.2500	20	12.62360	2.82272
	POST TEST	4.7000	20	7.54705	1.68757

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	PRE TEST & POST TEST	20	.183	.440

Paired Samples Test

	Paired Differences				
				95% Confidence Interva	
			Std. Error	Difference	
	Mean	Std. Deviation	Mean	Lower	Upper
Pair 1 PRE TEST - POST TEST	15.55000	13.46917	3.01180	9.24624	21.8537

Furthermore, in the 4th table section, it is also the result of research using the T-test. It can be seen in the first output section from the acquisition of the Pre Test results of 20.2500, and the Post Test of 4.7000. In the Paired Samples Correlations section, obtaining Correlations of .183, with the acquisition of Sig results of .440. While in the Paired Samples Test section, obtained results of 13.46917 in the Std. Diviation, and Std. Based on the results of this study, it can be seen between each question asked by researchers regarding the dynamics of social relationships in a remote work environment: the psychological impact of long-term telecommuting.

DISCUSSION

The dynamics of social relationships in remote workplaces are different from traditional workplaces. When people work from home, their interactions often rely on communication technologies such as instant messaging, email, and video conferencing (Hayashi, 2024). Since there is no face-to-face interaction that usually helps strengthen social bonds, this can lead to difficulties in building close interpersonal relationships. To foster trust and teamwork, more structured and open communication should be used

to ensure that all team members still feel connected and involved (Morikawa, 2023b). But social connections in a remote workplace have some advantages. Employees can balance their personal and work lives with their flexibility to work from anywhere (Huml et al., 2023). In addition, employees have the opportunity to interact with coworkers who come from different places, which allows them to exchange ideas and views with each other.

However, companies should implement appropriate strategies to maintain healthy social relationships in remote workplaces. For example, gathering regularly virtually to talk about work and participating in social activities such as virtual "coffee breaks" or team games (Bastian et al., 2022). Activities like these can strengthen employees' relationships and keep them connected to each other outside the workplace. Training in time management and effective communication can also help employees overcome the difficulties of working remotely. Management is also crucial to maintaining the dynamics of social relationships in a remote workplace (Spagnoli et al., 2021). Managers should have the ability to provide necessary assistance and make the work environment a friendly and welcoming place. Responding to employees' concerns and needs, providing constructive feedback, and celebrating shared achievements can boost team spirit (Chandan, 2024).

Long-term working from home or working remotely can have a negative impact on employees' mental health (Qin, 2024). Improved work-life balance is one of the positive outcomes. Employees who work from home usually have more time to be with their families, exercise, or pursue their personal hobbies (Van Nieuwerburgh, 2023). This can lower their stress levels and improve their overall well-being. In addition, employees have the ability to organize their own work environment, which allows the work environment to be a more comfortable and productive place (Cavallari et al., 2023). However, working from home for long periods of time can also cause significant psychological problems. Many employees face social isolation issues. Feelings of loneliness and isolation may occur due to the lack of face-to-face interaction with coworkers (El Khatib et al., 2023). Employees may feel disconnected from their team and miss the opportunity to build strong professional relationships. In addition, the unclear distance between personal and work life can lead to burnout and stress.

The potential to be more anxious and stressed at work also has a psychological impact. Employees who work from home often feel the need to always be "connected" and responsive to work communications, which can lead to a feeling that they have to work more to show how productive they are (Van Zoonen & Sivunen, 2022). This can lead to mental and emotional exhaustion, as well as a reduced quality of life. Lack of direct supervision can make employees feel uncertain about what is expected of them and how they work, which can increase anxiety (Paterson et al., 2014). Companies should provide adequate support for their employees to cope with the negative psychological impact of working from home for extended periods of time. This may include mental well-being programs, counseling services, or instructions on stress and time management. Companies should also support open communication and frequent

social interactions, whether through virtual meetings or online social events (Clark, 2018). Therefore, while telecommuting may be difficult, adverse psychological effects can be mitigated with the right methods and sufficient support.

The dynamics of social relationships in remote workplaces are different from office workplaces (Uru et al., 2022). It can be difficult to build close interpersonal relationships if you rely on communication technologies such as video conferencing, email and instant messaging in place of face-to-face interactions (Jin et al., 2024). In the long run, this lack of face-to-face interaction may cause employees to feel alienated and lonely. They may feel less connected to their coworkers, which can impact teamwork and trust in each other (McDonald et al., 2012). Over an extended period of time, working remotely can also have a significant psychological impact. On the one hand, employees may feel better if they can manage their working time more flexibly and balance their personal and work life (Maden-Eyiusta & Alparslan, 2022). On the other hand, making the boundaries between work and personal life unclear can lead to burnout and stress. Employees may experience mental and emotional exhaustion due to the pressure to always be engaged and responsive to their work.

CONCLUSIONS

The dynamics of social relationships in remote workplaces create different challenges and opportunities. When employees rely on communication technologies, they change the way they interact with each other. This can reduce opportunities to build close relationships and increase the risk of isolation and loneliness. While telecommuting in the long run can offer some advantages, such as time flexibility and a better balance between personal and work life, it can also lead to unclear boundaries between the two, which in turn can lead to physical and mental fatigue. Businesses should be mindful of the psychological impact of working from home for extended periods of time. Companies should provide support such as mental well-being programs, counseling, and stress and time management training. In addition, encouraging open communication and regular social interaction through virtual meetings or online social events can help strengthen relationships between employees and create a friendly and supportive work environment. The right methods can minimize the adverse effects of working from home in the long run and maximize the benefits, which will result in a productive and balanced workplace.

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