

‘’ IMPACT OF VIRTUAL WORK ENVIRONMENT ON EMPLOYEE WELLBEING’’

UNDER THE GUIDANCE OF:

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ABSTRACT:

Recent research on the impact of working from home on mental health has been limited. Furthermore, it is questionable whether earlier literature was current prior to the recent pandemic. The rising popularity of remote work offers a unique opportunity to examine this subject in greater detail. Crawford et al. (2011) conducted a study to address the paucity of research relating remote employment to health. The main objective of this study is to fill this knowledge gap by collecting and analysing data from various sources on remote workers and the impacts of this trend on their wellbeing from three different perspectives: social, economic, and psychological.

The present paper focuses on assessing the impact of virtual work environment on employee wellbeing. The data collected from 112 employees who working virtually in various IT companies with structured questionnaire. The data is initially evaluated and interpreted using specific questionnaire questions. In virtual work environment, flexibility and work-life balance are prioritized. Communication occurs through email, messaging services, video conferencing, and project management applications. A reliable IT infrastructure and security measures are necessary, and employees use their own devices. Employees have their own workstations, and creating a separate workspace is important. Self-motivation, time management, and collaboration technologies are vital.

Key words: Virtual work environment, Employee well-being, Remote work, Mental health, Work-life balance, Job satisfaction.

Introduction

The COVID-19 epidemic and technical improvements have made virtual work, commonly referred to as remote work or telecommuting, more common in recent years. The flexibility and autonomy that come with virtual employment are positive, but it may also have a detrimental impact on an employee's welfare. Particularly in view of the expanding trend of virtual work, it is important to investigate the effect of such employment on employee welfare.

The purpose of this research is to evaluate how virtual work affects employee wellbeing by looking at several wellbeing-influencing aspects, including job expectations, job resources, work-family conflict, social support, and coping mechanisms. To provide light on the possible effects of virtual reality, the study consults current academic research and empirical data.

Increased workloads brought on by virtual work can result in stress, burnout, and a reduction in job satisfaction, all of which have a detrimental effect on an employee's wellness. But it may also improve employment opportunities by giving workers access to technology and a better work-life balance, both of which have a good effect on wellbeing.

The inability to distinguish between work and personal life can also exacerbate work-family conflict, resulting in more stress and poorer health. Feelings of isolation brought on by a lack of social support can have a detrimental effect on wellness. Employees need effective coping mechanisms to handle stress and hardship, especially while doing virtual work. The results of this study can assist businesses and governments in comprehending the possible effects of virtual work on staff wellbeing and in developing plans to lessen such effects and enhance staff wellbeing. In order to improve employee wellbeing in the context of virtual work, the study underlines the necessity for businesses to give employees access to tools and assistance, encourage work-life balance, and support appropriate coping mechanisms.

Work Environment in office

Depending on the particular job and sector, the working atmosphere when working from an office might vary significantly. Yet, working from an office often entails a formal, professional setting with an organised work atmosphere. The physical space is one of the most important components of the office work environment. The standard workstation for employees includes a desk, chair, computer, and other essential tools. Ergonomic furniture should be used in the workstation to reduce physical strain and injury and maximise comfort and productivity. Social contacts are a crucial component of the office work environment. Face-to-face encounters with coworkers and supervisors are possible while working from an office, which may be beneficial for cooperation and communication. These interactions can

occur in a variety of places, including as conference rooms and break areas, which give workers a place to take breaks, eat lunch, and mingle with coworkers. Effective communication between coworkers and supervisors is facilitated by the use of communication channels including email, phone, instant messaging, and video conferencing in addition to face-to-face contacts. A dependable IT infrastructure is also essential for the workplace environment in offices. This comprises current technology and software, as well as quick and

secure internet access. Employees can do their work successfully and efficiently if they have access to the required technology and equipment. To safeguard staff members, the workplace should also contain firesafety protocols, first aid supplies, and ergonomic workstations.

The working environment when working from an office should be designed to promote productivity, collaboration, and effective communication while providing a safe and professional setting for employees. By providing a comfortable and efficient work environment, employers can promote employee satisfaction and productivity, which can ultimately lead to increased business success.

Virtual work environment

In the contemporary workplace, there is an increasing tendency towards the virtual work environment, commonly referred to as remote work or telecommuting. Virtual employment offers better flexibility and work-life balance since it enables people to work from any place with an internet connection. Following are some essential elements of the virtual workplace:

The communication methods employed are one of the key distinctions between a typical office setting and a virtual workplace. Email, messaging services, video conferencing, and project management applications can all be used as communication channels in a virtual workplace. In a virtual workplace, effective communication is essential to ensuring that everyone is on the same page. In a virtual workplace, a dependable and secure IT infrastructure is crucial. This comprises current technology and software as well as quick and reliable internet access. Employees working virtually frequently need to use their own devices, therefore security procedures should be in place to safeguard critical information.

Employees who work virtually frequently have access to a workstation at home or elsewhere. Ergonomic furniture should be used in the workstation to reduce physical strain and injury and maximise comfort and productivity. Employees should set up a distinct workplace where they can keep work and personal life apart. A virtual workplace needs self-motivation and self-discipline. Effective time management, work prioritisation, and distraction avoidance are required of employees. Employees that operate virtually must also be flexible and adaptive since they may need to work in several time zones or on various projects. Project management software, shared papers, and virtual whiteboards are examples of collaborative technologies that may help teams work together and make sure that everyone is pursuing the same objectives. Even though remote employees are geographically spread out across the globe, these technologies can help them feel a sense of community.

Generally, compared to a regular office setting, the virtual work environment involves a distinct set of skills and equipment. Success in a virtual work environment depends on excellent time management, strong technical infrastructure, and clear communication. But, with the proper equipment and outlook, virtual employment may provide numerous benefits for both employees and employers.

Objectives

To assess the level of employee well-being in virtual work environment.

To understand the factors that influence employee wellbeing in virtual work environment

Literature review

1. Factors affecting knowledge sharing in the virtual organisation: employees' sense of well-being as a mediating effect

(Loughborough's Research Repository)

Employees increasingly contributed, not only their tacit but also their explicit knowledge, when they experienced a greater sense of well-being.

2. What is the Impact of Remote Working on Employee Well-Being within a Telecommunications Organisation,

(Cecile Kizenga)

The first takeaway from this research is that remote workers face difficulties maintaining and fostering social relationships and engaging in meaningful interpersonal exchanges due to the isolation that comes with working from home. Problems were emphasised. Although telework can be efficient for teams whose members are already familiar with one another, new recruits often have difficulty forming meaningful relationships with their colleagues without frequent in-person meetings. Second, many people and the actual setting did not lend itself to remote work due to issues with noise, technology, and accessibility. More research and/or monitoring is required. Certain parts, such as training, rely on virtual platforms, including teams, which can be slow or have faults. It may also be worthwhile to learn more about the challenges of maintaining employee interest and productivity when working remotely.

3. The Effect of Remote Working on Employees Wellbeing and Work-Life (Bassant Adel

Mostafa)

The study found that remote work during the pandemic had both positive and negative impacts on employee wellbeing and work-life integration. On the positive side, remote work increased employees' perceived control over their work tasks and provided more opportunities for work-life balance. Additionally, remote work increased employees' use of technology and reduced commuting time, which was seen as a positive change. However, the study also found negative impacts, such as increased job demands, difficulty disconnecting from work, and decreased social support from colleagues and supervisors. The study also found that the negative impacts were greater for employees who were less comfortable with technology and those who had less control over their work gender.

4. The proving Employee Well-Being by Means of Virtual Reality (Pretsch, E.

Saretzki, J. Kraus, H. Grossmann, G.)

The study found that engaging in a virtual reality experience that simulated a natural environment had a positive impact on employee well-being. Specifically, the study found that employees who engaged in the virtual reality experience reported lower stress levels and higher levels of positive mood and restorative experience than the control group. The study also found that the positive effects of the virtual reality experience persisted for at least two hours after the experience.

5. Virtual Work Meetings During the COVID-19 Pandemic (Navid

Aghakhani, Joy V. Peluchette, and Katherine A. Karl)

The Good, Bad, and Ugly Employees' sense of social support and closeness during the epidemic may be increased thanks to virtual work sessions. Employee stress might increase as a result of technology-related problems and the need to manage work and home obligations during virtual work sessions. The effectiveness of virtual meetings, including the amount of participation and engagement, can have a beneficial effect on employee wellbeing.

6. Employee Well-Being and Digital Work during the COVID-19 Pandemic (Marta

Juchnowicz Hanna Kinowska)

Relationship between employees' well-being and the level of digitalisation of their work, measured by the degree of telecommuting. The results were able to fill the research gap in terms of proving significant relationships between the studied constructs. They also provided information on the impact of remote working on factors making up employee well-being. The components of employee well-being by proposing a model including workplace relationships, physical and mental health, and work-life balance and their relationship with the intensity of remote working.

Research Gap

The literature on the effects of remote work on employee well-being is sparse, and it's possible that it doesn't take into consideration recent developments brought on by the pandemic. This study intends to close this gap by investigating the social, economic, and psychological implications of virtual employee on wellbeing. While working virtually has advantages like better work-life balance and easier access to technology, it can also result in increased workloads and stress, which lowers job satisfaction. Additionally, a lack of separation between work and personal life can lead to family conflicts at work and feelings of loneliness, both of which are detrimental to employee wellbeing. In contexts involving virtual labor, efficient coping techniques are essential. Organizations can use this information to build methods to improve employee wellbeing in remote work settings.

Research questions

1. What is the level of employee well-being in virtual work environments?
2. What factors influence employee well-being in virtual work environments?
3. How does virtual work impact employee job satisfaction and work-life balance?
4. What is the relationship between virtual work and employee stress levels and burnout?

Hypothesis made from the objectives:

H0: There is no relationship between virtual work environment and employee wellbeing

H1: There is a significant relationship between virtual work environment and employee wellbeing.

Research methodology

This research employs a quantitative research approach to investigate how the virtual work environment affects employee well-being. Data from 113 employees in different IT companies were gathered using a structured questionnaire. Specific questions in the questionnaire were used to analyse the collected data and assess the participants' viewpoints on remote work. The study focuses on essential aspects like work-life balance, job satisfaction, coping methods, and technology access to comprehend the impact of virtual work on employee well-being. The objective is to help organizations gain insights into the effects of remote work and develop strategies to enhance employee welfare.

Data collection

A collection of primary and secondary sources is used to gather the data.

Primary data

Based on the objectives, clear objectives-based questionnaire is used as the primary data sources.

Secondary data

The secondary data were gathered to from publications such as books, journals, websites and other printed materials

Sample size

The Sample size of the study is 113.

Sampling technique

Purposive sampling technique is used to choose the sample.

Tools for analysis

Graphs and chats have been a key tool in the analytical process for evaluating the datagathered

- Descriptive analysis in Jamovi
- Correlation analysis in Jamovi
- Decision tree in SPSS

Data Analysis and interpretation

Descriptives

	Satisfaction level at VE	Motivation and focus at VE	Interested on VE	Challenges at VE	Distractions at VE
N	113	113	112	113	113
Missing	0	0	1	0	0
Mean	3.36	3.19	3.44	3.16	3.17
Std. error	0.0881	0.0867	0.0790	0.0791	0.0814
95% CI mean lower bound	3.19	3.02	3.28	3.00	3.01
95% CI mean upper bound	3.54	3.36	3.59	3.31	3.33
Median	3	3	4.00	3	3
Mode	3.00	3.00	4.00	3.00	3.00
Sum	380	360	385	357	358
Standard deviation	0.936	0.921	0.836	0.841	0.865
Variance	0.876	0.849	0.699	0.707	0.748
IQR	1.00	1.00	1.00	1.00	1.00
Range	4	4	4	4	4
Minimum	1	1	1	1	1
Maximum	5	5	5	5	5
Skewness	0.00881	0.729	0.600	0.494	0.503
Std. error	0.227	0.227	0.228	0.227	0.227
Kurtosis	0.0338	0.286	0.669	0.436	0.565
Std. error	0.451	0.451	0.453	0.451	0.451

This description analysis provides statistics for five variables "Satisfaction level at VE," "Motivation and focus at VE," "Interested on VE," "Challenges at VE," and "Distractions at VE."

Satisfaction level at VE: There are 113 observations for the satisfaction level at VE. There are no missing values in the data. The average satisfaction level at VE is approximately 3.36. The standard error of the mean is 0.0881. The 95% confidence interval for the mean satisfaction level at VE is between approximately 3.19 and 3.54. The median satisfaction level at VE is 3. The most frequent satisfaction level is 3.00. The sum of all satisfaction level values is 380. The standard deviation is approximately 0.936, which measures the spread of data points around the mean. The variance is approximately 0.876, which is the square of the standard deviation. The interquartile range is 1.00, representing the spread of the middle 50% of the data. The range of satisfaction levels is 4 (from 1 to 5). The minimum satisfaction level is 1. The maximum satisfaction level is 5. The distribution of satisfaction levels is nearly symmetrical with a very slight positive skewness

(0.00881). The standard error of skewness is 0.227. The distribution has negative kurtosis (0.0338), indicating it is slightly flatter than a normal distribution. The standard error of kurtosis is 0.451.

Motivation and focus at VE: The statistics are similar to "Satisfaction level at VE." Notable differences are the mean motivation and focus level at VE is approximately 3.19 and the skewness is negative (0.729), indicating a slight left skewed distribution.

Interested on VE: The statistics are similar to "Satisfaction level at VE." Notable differences are the mean interest level in VE is approximately 3.44 and the skewness is negative (0.600), indicating a slight left skewed distribution.

Challenges at VE: The statistics are similar to "Satisfaction level at VE." Notable differences are the mean challenges at VE is approximately 3.16 and the skewness is negative (0.494), indicating a slight left skewed distribution.

Distractions at VE: The statistics are similar to "Satisfaction level at VE." Notable differences are the mean distractions at VE is approximately 3.17 and the skewness is negative (0.503), indicating a slight left skewed distribution.

Overall, the interpretation of the statistics shows the central tendency, spread, and shape of the distributions for each variable. The skewness values indicate that the data for all variables is slightly left skewed, meaning there are more values on the left side of the distribution. The negative kurtosis values suggest that the distributions are slightly flatter than a normal distribution. The small differences in means and distributions could provide insights into how satisfaction, motivation, interest, challenges, and distractions are perceived at VE.

Reliability analysis

Scale Reliability Statistics

mean	sd	Cronbach's α scale
3.26	0.512	0.509

Scale Reliability Statistics

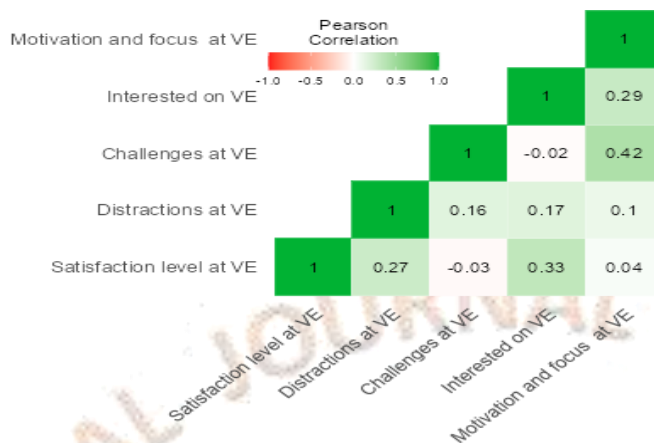
The mean score on the scale is 3.26. This represents the average response to all items on the scale.

The standard deviation of the scale scores is 0.512. It indicates the dispersion or spread of responses around the mean.

Cronbach's alpha is a measure of internal consistency or reliability of the scale. It assesses how well the items in the scale are correlated with each other. In this case, the Cronbach's alpha is 0.509, which is a value between 0 and 1. Higher values of Cronbach's alpha indicate better internal consistency. Generally, a value of 0.7 or higher is considered acceptable for research purposes, but values slightly below 0.7 can still

indicate some level of reliability.

Correlation Heat Map



1. When the correlation coefficient between two variables is close to +1, it indicates a strong positive correlation, implying that as one variable increases, the other variable tends to increase as well.
2. On the other hand, a correlation coefficient near -1 represents a strong negative correlation between two variables, suggesting that as one variable increases, the other variable tends to decrease.
3. When the correlation coefficient is close to 0, it implies a weak or no correlation between the variables, indicating that there is little to no linear relationship between them.

Decision tree

Risk

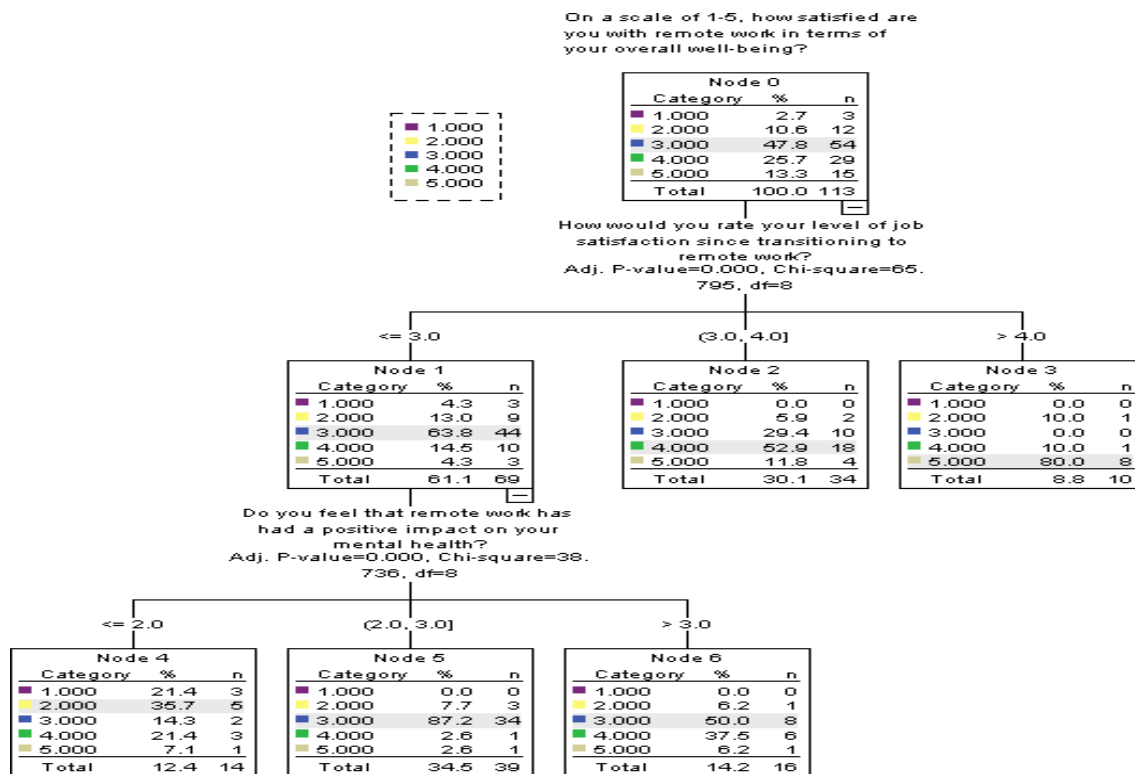
Estimate	Std. Error
.354	.045

Growing Method:
CHAID
Dependent Variable:
On a scale of 1-5,
how satisfied are you
with remote work in
terms of your overall
well-being?

Classification

Observed	Predicted					Percent Correct
	1	2	3	4	5	
1	0	3	0	0	0	0.0%
2	0	5	4	2	1	41.7%
3	0	2	42	10	0	77.8%
4	0	3	7	18	1	62.1%
5	0	1	2	4	8	53.3%
Overall Percentage	0.0%	12.4%	48.7%	30.1%	8.8%	64.6%

Growing Method: CHAID
Dependent Variable: On a scale of 1-5, how satisfied are you with remote work in terms of your overall well-being?



Interpretation

Node 0: Approximately 47.8% of the participants expressed a neutral stance when asked about their overall satisfaction with remote work concerning their well-being. This suggests that a significant proportion of employees have no strong opinions either way, indicating that the virtual work environment's impact on their well-being is not distinctly positive or negative.

Node 1: About 63.8% of the respondents voted neutrally regarding the positive impact of remote work on their mental health. This indicates that a majority of employees do not perceive remote work as having a significantly positive effect on their mental well-being. It is crucial to explore the underlying reasons for this neutral sentiment to identify potential areas for improvement.

Node 2: Approximately 52.9% of the participants expressed satisfaction when asked about their overall well-being in the remote work environment. This suggests that a considerable percentage of employees feel content with their well-being while working remotely. Factors contributing to this satisfaction may include work-life balance, flexibility, and reduced stress from commuting.

Node 3: Roughly 80% of the respondents reported being highly satisfied when asked about their overall well-being in the remote work environment. This indicates that a notable proportion of employees experienced a notably positive impact on their well-being while working remotely. Factors contributing to this high level of satisfaction may include increased autonomy, fewer distractions from the office, and improved work-life integration.

Node 4: About 37.5% of the participants expressed negative sentiments regarding the impact of remote work on their mental health. This suggests that a significant percentage of employees have faced adverse effects on their mental well-being in the virtual work environment. Factors contributing to this sentiment may include

feelings of isolation, limited social interactions, and increased work-related stress.

Node 5: Around 87.2% of the respondents expressed a neutral viewpoint when asked about the positive impact of remote work on their mental health. This further reinforces the idea that a considerable proportion of employees do not perceive remote work as having a clear positive impact on their mental well-being. This highlights the need to address mental health concerns in virtual work environments.

Node 6: Approximately 50% of the participants expressed a neutral stance when asked about the positive impact of remote work on their mental health. Similar to Node 5, this indicates that a notable number of employees neither strongly favor nor oppose the impact of remote work on their mental health. Understanding the reasons behind this neutrality can provide valuable insights into areas where well-being initiatives can be enhanced.

Key findings from the study:

- Many employees expressed neutral feelings about the impact of virtual work on their well-being, suggesting a mixed sentiment.
- Virtual work can lead to increased workloads, stress, and reduced job satisfaction, but it also offers benefits like improved technology access and work-life balance.
- Blurring boundaries between work and personal life in the virtual work environment can exacerbate work-family conflict and feelings of isolation, negatively affecting well-being.
- Effective coping mechanisms are crucial for managing stress in virtual work settings.
- Organizations should consider these findings to develop strategies that enhance employee well-being in remote work environments.

Suggestions

- Offer comprehensive resources and support to employees, enabling them to manage stress and cope effectively with the demands of virtual work.
- Implement well-designed approaches to foster work-life balance, establish distinct work-personal boundaries, and minimize work-family conflicts and feelings of isolation.
- Organize training sessions and workshops on proficient communication and collaborative technologies to enhance virtual team interactions and social support.
- Regularly seek employee feedback through surveys and discussions to better comprehend their well-being concerns and tailor suitable initiatives.
- Invest in a reliable IT infrastructure and security measures to ensure seamless remote work operations and safeguard sensitive data.

Conclusion

This study sheds light on the impact of virtual work environments on employee well-being from various perspectives. The findings reveal a mixed sentiment among employees regarding their overall satisfaction with remote work in terms of well-being. While some employees experience positive outcomes such as improved work-life balance and technology access, others face challenges like increased workloads and stress, leading to reduced job satisfaction. Blurring boundaries between work and personal life can also negatively affect employee well-being, contributing to work-family conflict and feelings of isolation. Effective coping mechanisms are crucial for managing stress in virtual work settings. These insights offer valuable implications for organizations aiming to optimize employee well-being in virtual work environments.

The research underscores the importance of acknowledging the diverse impacts of virtual work on employee well-being. Notably, the study identifies the need for organizations to strike a balance between the benefits and challenges of remote work. By providing necessary tools and support, promoting work-life balance, and encouraging appropriate coping mechanisms, companies can enhance the well-being of their remote workforce. Furthermore, organizations should consider implementing policies and initiatives that foster a positive remote work culture, emphasizing social support and effective communication to mitigate feelings of isolation and work-family conflict. Addressing these factors can positively influence employee satisfaction, engagement, and overall well-being in the virtual work environment.

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