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Exploring organizational challenges and psychological wellbeing among remote working employees during the COVID-19 pandemic: A general linear model approach

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Abstract
The rapid adoption of remote work arrangements in recent years has prompted a critical examination of the challenges inherent in this evolving work environment. This study aims to identify and assess these challenges, considering variations based on gender and job roles among workers. Employing a linear model approach, we analyze data to gain insights and make predictions about the nature and extent of these challenges. Our findings reveal statistically significant differences in the perceived level of challenges in remote work environments, particularly with respect to gender, where female workers report higher levels of challenges. Additionally, job roles play a significant role, with non-provisionary job positions experiencing more challenges in the remote work setting. Recognizing that addressing these challenges is essential for enhancing organizational performance, this study underscores the importance of collaborative efforts involving employees, their families, and management to effectively mitigate remote work-related challenges. In today's fiercely competitive market, the emergence of virtual teams has become a strategic response to expedite time-to-market, reduce costs, and offer agile solutions to complex organizational issues. Virtual teams facilitate the amalgamation of talent and expertise from diverse sources, transcending geographical and temporal barriers. Companies are increasingly investing in virtual teams to bolster performance and maintain competitiveness. Despite their growing prevalence, there remains a dearth of comprehensive understanding regarding virtual teams. Therefore, this study commences with an exhaustive literature review, encompassing definitions of virtual teams and a systematic analysis of the existing body of knowledge concerning their dynamics and functioning.

Keywords: Remote work challenges, gender disparities, job roles, organizational performance, virtual teams

1. Introduction
The recent Covid-19 outbreak changed working place a lot. The institutions and organizations of both public and private sector should reflect on their learnings from employees working remotely and its arrangements. The institutions and the organizations to give more liberty to the employees to adjust their working schedules to suit to their well-being. It is not only for the employee, individually, but to every organization and the society, and the world as a whole to get tuned to this new situation. Every human resource within a working landscape attempts to balance his/her own needs with the needs of the environment. The work from home has become a popular phrase. It saves the commuting time, the overheads and the resources associated with physical office management. The work practice in all the sectors, where the productivity, services and solutions can be managed without the necessity of being physically present, such as information technology, pharma, healthcare, research and development, eCommerce, etc., However, it is not possible to manage the workforce belong to unskilled and unorganized sector, which constitute a considerable number of total workforce. As far as information technology sector is concerned, they are finding the ways and means to figure out the activities that can be accomplished remotely using latest communication technologies like Microsoft Teams, Zoom, Skype, WhatsApp, Hangouts etc. Several organizations irrespective of the sector convenes virtual meetings/conferences/ workshops/seminars via the above mentioned communication tools.

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It is expected that some of the people would suffer from post-pandemic stress and some of the people might realize their inner strengths and display a great amount of gratitude with what they have. This would mean the employees would go through a lot of emotional journey, and their psychological well-being.

2. Objectives of the study

The concept of remote work has recently emerged, which means that employees perform their job duties inside the work place by using various men of communication and information technology.

In so and the beginning of 2023, the practice of working remotely increased because of the COVID-19 pandemic. As the free movement of individuals was restricted, most activities attempted, and study was disrupted in most parts of the world therefore, organisations tended to assign their employees to weak remotely using IT. Homes love turned in places of work and for studies, managers gives their lectures employees to conduct their work and participate in conferences and meetings using various computer application. Those practicing the work remotely and from home face many challenges in the work environment the home, previously the place for relaxation and comfort, becomes the workplace. Matters become especially complicated when there are so clear boundaries between the working life and when there are multiple remote writers in the same loose. The work event requires employees to adapt to new conditions and to experience's a merger work and personal life. The work environment consists of two types of pressure one physical and mental.

Results of working from home during the COVID-19 Pandemic indicate that only 12% of workers want to work for home, and that most of the respondents want in return to the workplace but only with precautionary measures put in place to confront the epidemic. This suggests the existence of challenges in the role work environment that can affect the efficiency of performance. Therefore, this study identifies some challenges of the remote work environment (physical and behavioural) in the contest of the COVID-19 pandemic and determines the level of these challenges according to the gender (male, female) and job. The importance of the study steam from that of the topic of remote work and its impact an employee productivity with which organisations must deal if they want survive in a rapidly changing event. This study also examines the importance of the suit community. The study confirms that there are sectors that will continue to work remotely even after the end of the COVID-19 pandemic, taking advantage of the experience of working remotely. All these factors make studying the entire work environment and its challenges important. The following stay hypotheses can be execute. First, there is no statistically significant differences at the guidance level soon for the level of challenges in the remote work met according to the gender (male/female) of the respondent's context of COVID-19 pandemic: Second, there are no statistically significant differences at the level of cons for the level of challenges.

3. Review of some relevant studies

The review summarizes empirical research on the management of virtual teams, i.e., distributed work teams whose members predominantly communicate and coordinate their work via electronic media (e-mail, telephone, video-conference, etc.). Instead of considering virtual teams as qualitatively distinct from conventional teams, the degree of "virtuality" of teams is understood as a dimensional attribute. This review is guided by a lifecycle model in which five phases are distinguished in the management of teams with high virtuality: Preparation, launch, performance management, team development, and disbanding. The main focus of the review is on quantitative research with existing virtual teams in organizational contexts. However, experimental research and case studies are considered when no field studies are available. The major research results are summarized for human resource management tasks within these phases, and recommendations for practitioners are derived.

The concept of restore work is not new. Rather, this concept was used in 1975 and developed with the start of and communication technology Remote work meant that employees would perform their jobs duties from a place other than that specified for work by wing information and communication technology Remote work requires tools such as computer, mobile smart phones, computer application and the internet (Robb Coulter, 2010) [9].

Milan (2020) [10] has studied employees of a financial services company in Finland. The rents indicated that the employees were very satisfied with working remotely; most of them were willing to continue doing so in the future as well. Respondents mentioned benefits of working remotely such as more efficient work, better possibilities of concentration at work, increased work-life balance and increased motivation to work. However, they also raised negative such as a deteriorating work environment and decreased social interaction.

Michael and Smith (2015) [11] stated that wanking remotely leads to an increase in job satisfaction among workers because of the flexibility that such work provides for example, some woman prefer working remotely so that they can work and care for children at the same time. Others have reported that there is little clear evidence that remote worker increase job satisfaction and productivity (Bailey & Kurland 2000) [19]. Thirty percent of workers said they wished remote work would still be possible after the pandemic. Telework gives them a flexible schedule, allowing them to spend less money on lunch, commuting or work clothes. They stated that there are also negative effects of working remotely as it became difficult for them to maintain a work life balance and because of problem concentration and effectiveness.
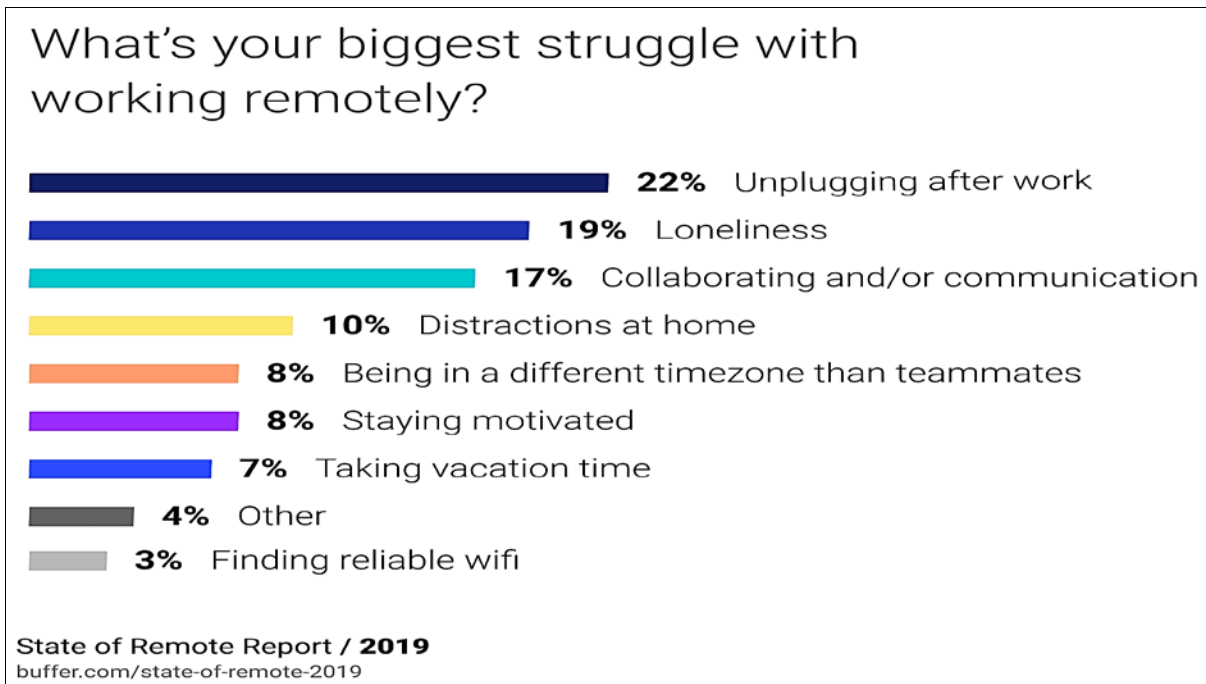
Hartig, Kylin, and Johansson (2007) [12] reached similar conclusion about the negative effects of remote work such as the interference between work and the employer's home life.

Nassif and Koumouche (2020) [13] studied the imperative of working remotely and the shift towards electronic management in 72 Syrian organisations operating in Turkey during COVID-18. They concluded that these organisations possess the necessary ingredients for a shift towards electronic management but need time- up to two years to shift to work from away, facing weakness in some transformation requirements.

The researcher Abu (2015) [14] evaluated the experience of companies working remotely in the Gaze Strip, concluding that the level of knowledge of working remotely in the Gaza Strip is weak the level of trust between the parties in the remote work system is medium, and that the level of the

remote experience available in the Gaza Strip is mediocre. Achieving goals through remote work has also had a high degree of influence on the empowerment dimension in the work environment.

Pyoria (2011) [15] concluded that the speed of completion of work in the workplace is superior to that of remote work due to the absence of a culture of remote work among of Finish society, however, remote work can be successful if employees know from the beginning what to expect and are ready to deal with any problems and concerns associated with the new work culture.

What's your biggest struggle with working remotely?

22% Unplugging after work
19% Loneliness
17% Collaborating and/or communication
10% Distractions at home
8% Being in a different timezone than teammates
8% Staying motivated
7% Taking vacation time
4% Other
3% Finding reliable wifi

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buffer.com/state-of-remote-2019

4. Hypothesis
After reviewing the research an identifying the problem the following hypotheses were framed
1. Employee individual, organisational, and external factors significantly influence the psychological well-being of an employee during Covid-19 Pandemic
2. Employee individual, organisational, and external factors does not significantly influence the psychological well-being of an employee during Covid-19 Pandemic
3. There are significant gender and age differences on factors effecting the psychological wellbeing of the employees.

There are no significant gender and age differences on factors effecting the psychological wellbeing of the employees

5. Theoretical framework
Theoretical framework proposed by Prasad *et al*. (2018) [16], (2020) [1] has followed on remote working, occupational stress, and coping.
Work life balance
1. Social workplace isolation-I. Lack of Guidance
2. Career Development-I. Technology New Policies
3. Infrastructure Development-I. Work Station/Internet costs
4. Work Schedule-I. Working too much

6. Data and Methodology
6.1 Description of data
For calculating the data author has used primary data and

Estimation of sample size: As the population size is unknown the researchers used Cochran (1977) [8] formula to estimate the sample size for this empirical study. Cochran (1977) [8] developed a formula to calculate a representative sample for proportion as

$$n_0 = \frac{z^2 pq}{e^2}$$

where no is the sample size, z is the selected critical value of desired confidence level, p is the estimated proportion of an attribute that is present in the population, q, p and e is the desired level of precision and this formula was used to calculation where population is unknown assuming the maximum variability which is equal to 50% (p=0.5) and taking 95% confidence level with ±5% precision, the required sample size is p = 0.5 and hence q = 1-0.5 = 0.5; e = 0.05 and z = 1.96

$$n_0 = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2} = 384.16 = 384$$

Therefore, we have chosen a sample size of > 384 i.e. 400 the sample demography and description are presented in Tables 1 and 2 and the study variables both dependent and independent are presented in Table 3.

Table 1: Demography of the sample

Gender	Percent
Men	57
Women	43
Total	100

Source: Authors' calculation from Primary data

Table 2: Sample description

Age group	Number of respondents
20-30	160
31-40	100
41-50	80
51-60	60

Source: Authors' calculation from Primary data

Table 3: Independent factors that measured dependent factor psychological wellbeing

Factor	Description	No items
1	Team Work	4
2	Communication	5
3	Peer	3
4	Job related factors	5
5	Organization policies	6
6	Organization climate	5
7	Job satisfaction	4
8	Psychological factors	5

Source: Authors' calculation based on shortened version psychological wellbeing scale Ryff and Keyes (1995) [5]

Table 4: Dependent factors - psychological wellbeing

Factor	Description	No items
1	Environment Mastery	3
2	Positive Growth	3
3	Positive Relations	3
4	Self-Acceptance	3
5	Autonomy	3
6	Purpose of Life	3

Source: Authors' calculation based on shortened version psychological wellbeing scale Ryff and Keyes (1995) [5]

6.2 Methodological overview

Measurement of psychological wellbeing-based factors: A shortened version of 18-point scaler developed by Ryff and Keyes (1995) [5] was used. This is a 7-point rating scale with Strongly agree = 7, Somewhat agree = 6, A little agree = 5, Neither agree nor disagree = 4, A little disagree = 3, Somewhat disagree = 2, Strongly disagree =1 and the factors measured are Autonomy, Environmental Mastery, Personal Growth, Positive Relations, Purpose in Life and the Self-Acceptance with 3 items for each factor.

Measurement of internal, external, and organization factors: A standardized, undisguised research instrument based on five-point Likert Type scale, with rating scale of Strongly agree =5; Agree = 4; Neutral =3; Disagree =2; Strongly

disagree 2 were used to measured Team work, Peer, Organizational climate, Organizational policies, Job related factors Communication, Job satisfaction and psychological factors following the model of Prasad *et al*. (2016, 2017, 2018) [16, 17, 18]. The total items measured are 37

6.3 General Linear Model (GLM) Multivariate analysis:

In our observation study the dependent variable psychological wellbeing an outcome variable is measured with six subscales, Environment Mastery, Personal Growth, Positive Relations Self-Acceptance, Autonomy and Purpose of Life against 8 independent variables Team Work Communication, Peer, Job related factors, Organization Policies, Organization climate, Job Satisfaction, Psychological factors that effecting the psychological wellbeing of the employees. The General Liner Model multivariate analysis was carried as we are interested to measure effect of independent variable on each of the psychological wellbeing factors as described earlier. In GLM model more than one dependent variable can be predicted using independent variables, and we also studied to observe if there are any significant age group and gender differences that effect the psychological wellbeing of the employees.

The General Linear Model is the appropriate choice for our analysis because it allows us to comprehensively evaluate the impact of multiple independent variables on various aspects of psychological wellbeing while controlling for potential confounding factors and assessing the effect size and assumptions of the model. This statistical approach enhances the depth and reliability of our research findings.

Statistical testing of these estimates is crucial for examining specific research hypotheses regarding relationships between variables or differences between groups. The use of the General Linear Model (GLM) enables us to succinctly summarize a broad range of research findings and assess the significance of these relationships.

7. Analysis

We used descriptive statistics, standard deviation and dispersion methods. Psychological wellbeing was categorized as low, medium and high level. All the data analysis was carried out using statistical package for social sciences ver 26.

Reliability Methods – whereas was assessed using Cronbach alpha (overall C-alpha measured as 0.92) for all the time of Split-Half (odd- even).Correlation 0.82 whereas Split-Half with Spearman-Brown Adjustment at 0.94. The result from the General Linear Model Multivariate analysis indicates Communication, Organization climate, Organization policies, Job satisfaction and Psychological factors significantly influencing the psychological wellbeing of employees in organization during the survey.

Table 5: Indicate the survey instrument is reliable and consistent.

Factor	Description	C-alpha	Split-Half (odd-even) Correlation	Split-Half with Spearman-Brown Adjustment
1	Team Work	.66	.44	.61
2	Communication	.70	.63	.77
3	Peer	.78	.63	.77
4	Job related factors	.66	.59	.74
5	Organization Policies	.81	.67	.80
6	Organization climate	.75	.51	.67
7	Job Satisfaction	.85	.75	.86
8	Psychological factors	.81	.73	.77

Source: Authors' calculation from Primary Data

Independent factors that measured dependent factor psychological wellbeing

Table 6: Psychological wellbeing (Dependent factors)

Factor	Description	C-alpha	Split-Half (odd-even) Correlation	Split-Half with Spearman-Brown Adjustment
1	Environment Mastery	.80	.58	.73
2	Personal Growth	.73	.54	.70
3	Positive Relations	.87	.66	.79
4	Self-Acceptance	.81	.71	.83
5	Autonomy	.85	.63	.77
6	Purpose of Life	.80	.64	.78
	Overall-Psychological Wellbeing	.96	.92	.96
	Overall-Independent Factors	.92	.88	.94

*Source***:** Authors' calculation from Primary Data Dependent factors - psychological wellbeing

8. Conclusion

The author opined that more sectors need to be researched to address this new and challenge issue of remote working during pre and post-Covid19 Pandemic. The sector wise research results need to be collared and a manual/protocol should be developed to face the similar situations in future. The remote working will be successful only if there is trust between employee and employer. Suitable modification in Human Resource policies including to address the issues of remote working and the associated employee/employer costs need to be documented. Flexible policies, on-line training, career development issues need to be addressed during this pandemic to motivate and raise the confidence of employees. A study on occupational stress causing during the pandemic period will be immensely beneficial for the organisations to modify the strategies and decide future course of action. Another area of important is agricultural sector, in particular seed industry which is the backbone of our country. The behavioural changes of employees need to be studied with appropriate survey instrument.

The statistical testing of these estimates, is what enables us to test specific research hypotheses about relationships between variables or differences between groups. The GLM allows us to summarize a wide variety of research.

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