Relevance of work-from-home culture in post Covid-19 era: regarding productivity of employees in IT sector

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Abstract
COVID-19 has not just affected the health of citizens. However, the world's economic wheel stopped. All the import-export activities were sieged, schools, colleges, malls, and any other similar place, where there is a chance of gathering, has been locked down. A major section of the global economy was closed down for a period of two to three months. Still, they are operating with minimum permitted capacity. The service sector is opening up stage-wise, and people have started to work in their respective offices. Before this, most people, right from teachers to CEOs of top companies, worked from home. 100% of IT and ITES based organizations were working from their homes in the recent past; rather, these people were working from home before the COVID-19 situation. This present study will evaluate the interest areas of people working from home and try to evaluate the scenario of working from home even after the pandemic of COVID-19 is over.

Keywords
COVID-19, Work-from-home, Direct and indirect employees, IT, Permitted capacity

1 Introduction

1.1 Culture of work-from-home during the covid-19 period

COVID-19 is one of the fiercest pandemics in human history; it has not only stopped the wheel of the economy rather intervened in the personal and social life of the people and ruined it. And not only in India, but this pandemic is also everywhere in the world. According to some great analysts, this phase of a pandemic will not over soon, so accordingly, make arrangements and follow all rules issued by our government to eradicate the risk factor. This pandemic changed everything overnight in the present scenario; every third person, at the globe, is sitting inside his house and waiting for things to get normal [1]. Presently every place where people can gather is seized for entry. Only places like hospitals and essential services are on. Social distancing, sanitization, wearing masks, etc., are the new essentials of routine life. Many authorities and organizations were already providing flexible working conditions because of this pandemic. Moreover, why people follow these things in their daily schedule because we all know there is no cure for this pandemic in the market? We all can maintain social distancing and keep ourselves strong and avoid direct contact with people around us. A major section of the global economy was closed down for a period of two to three months. Still, they are operating with minimum permitted capacity. The service sector is opening up stage-wise, and people have started to work in their respective offices [2]. Before this, most people, right from teachers to CEOs of top companies, worked from home. 100% of IT and ITES based organizations were working from their homes in the recent past; rather, these people were working from home before the COVID-19 situation. In education, capable agencies offer online teaching and learning techniques, and more than 38% of students worldwide are taking advantage of the same. Here again, it is a matter of investigation and how the government and private agencies will ensure the education of people from the deprived section of the society [3]. Moreover, in India, the work culture from home is very useful. It encourages all women to join the workforce without any second thought because this new normal will eradicate the daily traveling part. It gives hassle-free life to them.
It will be going constant because it saves a lot of money and whatnot before this new culture people need to travel from one place to another will create much pressure in their lives. However, now this new culture gives so much flexibility. So, overall, work-from-home is a very relevant thing after this pandemic outburst. The culture of work-from-home is not that new thing in the market. Many companies have already been into this culture before this COVID-19, so most people are aware of this new culture trending everywhere [4].

It can be stated that the pandemic of COVID-19 has shackled the labor market to the greatest extent, and this situation is not going to end even in the next six months or a year. National and international welfare agencies are taking all the preventive measures to improve the situation.

However, then again, the fear of infection is dragging behind all the parties involved. At the initial stage, people were confident that health agencies would control the situation. Things will soon get back to normal, but with every passing day, the number of positive cases increased, and more people started to lose their jobs [5]. Although several developed economies have supported their unemployed citizens in several ways, this was not sufficient. From this point onwards, commonwealth governments started to support the drive of work-from-home. Most of the public and private sector agencies also joined hands. From this point onwards, all the stakeholders understood the importance of keeping the economic wheel rolling and motivated work culture from home. At the initial level, only the organizations, agencies, and enterprises can run via the internet joined hands. At the second level, many of the service patrons, education providers, Higher Education Institutes (HEIs), public sector organizations, and even permitted and allowed manufacturers started to work-from-home [6], which was a new turnaround in the history of work culture, it was a new experience for all over the world. After some reluctance, people accepted that working from home is not that tough. Just an internet connection and access device, i.e., laptop, computer, tablet, etc., is required, and one is ready to work.

- Very feasible and not much hectic.
- While working from home, we can easily maintain social distancing.
- In terms of cost-cutting, it will help organizations.

It is not that work-from-home culture has initiated in the times of COVID-19 only, but it started in the initial years of the 21st century. IT- and ITES-enabled organizations were the initial beneficiaries. In the latter years other sectors like education, processing, financial agencies, and even manufacturing also joined the same. The Situation of COVID-19 has just boosted the flair. Even reluctant government officials are willing to work-from-home with all the available technologies in a do-or-die situation. Honorable Prime Minister, Shri Narendra Modi, is also taking the meetings off his cabinet and state chief ministers over video calling and conferencing [7].

Available Infrastructure for Work-from-home facility:
- Dedicated computer software and applications,
- 4 G High-Speed Internet connections
- Compatible devices (advanced Laptops, computers, tablets, etc.)
- The widespread availability of internet and telecom connections
- Training and education to employees for using such peripherals,
- Supportive government policies and regulations.

1.2 The road head
As of now, i.e., August 2020, the global death rates have reduced to 37%, and the recovery rate has increased to 70% of the total infected and positive patients of COVID-19. Except for a few avenues, all the commercial and economic establishments have been opened for operations, business is back online. Deliveries have even started, but some avenues are still working on the platform of work-from-home like education, financial services, customer care centers, and IT- and ITES-enabled services. As per the experts, the situation of COVID-19 is not going to settle until and unless a proper cure is developed; scientists are working day and night to develop the vaccine, even Russia has got a chance to do so, but then again, it is going to take another year or two to reach normal people all over the world. Although in this period, it is necessary to keep the world running, and public and private sector organizations may not stop functioning for the welfare of human beings [8].

To a certain extent, the culture of work-from-home has two positive effects on the life of the general public. On the one hand, it has saved people from coming in contact with each other and on the other hand increased the output as compare to routine work schedules. Some of the benefits of working from can be explained as follows:
- People can work with an increased capability of 22% as compared to routine work systems,
• Output is better and more precise
• People get a chance to work from the comfort of their homes
• The chance of getting infected has reduced to zero for people working from home
• Working women can take care of their children and homes while working for their respective companies.
• No need to take leaves for personal work as one can work for flexible hours and complete the work
• Work satisfaction and life balance both are maintained
• Very feasible and not much hectic.
• While working from home, we can easily maintain social distancing.
• In terms of cost-cutting, it will help organizations.

Moreover, my entire research is about the benefits of work-from-home. As we all know, nothing is perfect. Everything has its drawbacks and I work-from-home culture to talk about some challenges of this new normal. In India, this thing is very problematic because, in most families, they have just two bedrooms. Some have even less, and some are in joint families, so finding a peaceful environment at home is very tough for them. Many households there struggled for laptops good internet connection if both husband and wife are working, then they facing this issue for sure [9].

1.3 Should it be continued?

As stated above, the culture of work was optional before the pandemic of COVID-19. However, in the process and after that, it has become a compulsion for several workers in the country and even abroad as they had joined the organization on the conditions of working from home. The question arises: will such workers be allowed to work in the routine format, and even if the workmen will be willing to work in any given organization routinely. It should be continued in the future because the impact of work from culture is very impactful, especially in this pandemic. Many companies, as well as certain employees, are favoring this new culture. This present study tries to find the answers to both of these questions and try to evaluate people working from home and trying to handle more than one avenue at a time [10].

2 Literature review

A small study was conducted by Wotton et al. on the employees working from home in Australia; this study was limited to 300 IT sector employees. The findings of the study stated that people use to miss the clubbed environment of the routine office. However, they are working from home to earn a living and supporting their family. On the other hand, several employees reported that they would certainly join office if they are called upon, subject to the precautions taken for prevention from COVID-19, which proves that man is a social animal and is willing to join a group the first choice given.

A study was conducted by Stewart et al. on the indirect employees and daily wage workers in some of the metro cities of Europe. Findings of the study stated that in the present situation of COVID-19, most of the indirect and daily wage workers are willing to contribute to the growth and development of the companies they are working with and may take all the online and offline work given to them. The threat of COVID-19 is fierce in Europe but then again, with all given precautions, people are willing to work even on slashed wages [11].

The researcher, Lasker, conducted a study on the employees of Yahoo who have taken the option of work-from-home; the researcher found in the process that many of the employees were given the option of work from as a condition. The study’s findings stated that even though in the initial, people thought that COVID-19 would become normal in a short time and everyone will be back to work like normal. However, now it is almost a year, and the authorities believe it will take at least another year to normalize things. In such a scenario, all the respective employees must normally work from their homes. It is their responsibility to work efficiently and give the desired result. Rather, companies like Yahoo keep a close eye on their employees and take their snaps every 5-10 minutes along with their workstations.

Troy conducted a study to evaluate the willingness of pharma sector employees to continue to work-from-home even after the lockdown period. This study was conducted on the top three pharma companies in Australia. The respective sample of the study was around 200 respondents. The study’s findings stated that if everything goes well, they would like to work from the office and avoid working from home. On the other hand, 62% of the respondents stated that if a certain amount of liberty is given to them, they would like to work-from-home and achieve them. They also stated that they do not object to the timely surveillance con-
ducted by respective companies and cooperate instead of the same [12].

2.1 Objective

So the main objective of this entire study is to find the viability of work-from-home culture, even after the threat of COVID-19, and also to evaluate the sentiments of employees working from home for IT and ITES enables companies.

2.1.1 Hypothesis

H₀: Control and surveillance measures can improve work-from-home and motivate the employees to continue from home even after COVID-19.

H₁: Control and surveillance measures can humiliate the employees working from home and do not motivate the employees to continue from home even after COVID-19.

3 Research methodologies

• The researcher has considered primary data for this present study. Most of the respondents are working in IT and ITE-enabled organizations. Some of the respondents were from the education sector and even from the pharma industry. One thing that is common in all the respondents was that they all worked from home since the lockdown.

• This present study includes simple random sampling. The researcher could not follow any specific kind of sampling method due to the threat of COVID-19.

• The total sample of the study is 200. The researcher has contacted 215 respondents, but then again, for ease of calculation, the researcher has shredded the number of respondents to 200.

• The researcher has prepared a structured questionnaire to collect data from the respondents. All the questionnaires were mailed to the respondents in the form of a google document.

• In order to be sure of the objectives and correctness hypothesis, the researcher has followed a trail of secondary data. The main sources of secondary data were government records for the spread of COVID-19, policies, and measures taken by different agencies concerning the threat of COVID-19.

• Then, on the other hand, several other sources like research articles from national and international journals, magazines, newspapers, and many other avenues were approached.

• The main tool for analyzing data was paired sample ‘to test and SPSS Ver. 23.0 was used to analyze the data [13].

4 Data analysis and interpretation

Table 1, Table 2, Table 3 and Table 4 represent the IT and ITES, Education and Pharma Sectors, and Processing Industry Employees.

4.1 Interpretation

In this present study, the researcher has considered paired samples’ tests to find the variation between the responses. It is also important to mention that paired sample ‘is used in those cases where all the sample elements are from the same sampling frame. It is required to study the samples separately [14]. In this present analysis, the researcher has considered that the variance between the samples is equal. There is a considerable difference between the responses given by them for selected variables. The variable under study was:

| Variable 1 | Variable 2 |
|------------|------------|
| Mean 4.5775 | 5.775 |
| Variance 0.118091667 | 4.446567 |
| Observations 50 | 50 |
| Pooled Variance 2.282329167 | |
| Hypothesized Mean Difference 0 | |
| df 46 | |
| T Stat -1.120989074 | |
| P (T > |t|) one tail 0.15257202 | |
| t Critical one tail 1.944180281 | |
| P (T < |t|) two tail 0.30514404 | |
| t Critical two tail 2.446918510 | |
### Table 2

**Education sector employees**

| t-Test Two-Sample Assuming Equal Variances | Variable 1 | Variable 2 |
|-------------------------------------------|------------|------------|
| Mean                                      | 7.8175     | 7.7475     |
| Variance                                  | 7.113292   | 11.30756   |
| Observations                               | 50         | 50         |
| Pooled Variance                           | 9.210425   |            |
| Hypothesized Mean Difference              | 0          |            |
| df                                        | 46         |            |
| T Stat                                    | 0.032619   |            |
| P (T <= t) one tail                       | 0.487518   |            |
| t Critical one tail                       | 1.94318    |            |
| P (T <= t) two tail                       | 0.975036   |            |
| t Critical two tail                       | 2.446912   |            |

### Table 3

**Pharma sector employees**

| t-Test Two-Sample Assuming Equal Variances | Variable 1 | Variable 2 |
|-------------------------------------------|------------|------------|
| Mean                                      | 6.17       | 6.205      |
| Variance                                  | 0.168133   | 0.0783     |
| Observations                               | 50         | 50         |
| Pooled Variance                           | 0.123217   |            |
| Hypothesized Mean Difference              | 0          |            |
| df                                        | 46         |            |
| T Stat                                    | -0.14101   |            |
| P (T <= t) one tail                       | 0.4462390  |            |
| t Critical one tail                       | 1.94318    |            |
| P (T <= t) two tail                       | 0.892478   |            |
| t Critical two tail                       | 2.446912   |            |

### Table 4

**Processing industry**

| t-Test Two-Sample Assuming Equal Variances | Variable 1 | Variable 2 |
|-------------------------------------------|------------|------------|
| Mean                                      | 6.4675     | 6.44       |
| Variance                                  | 2.670825   | 0.1662     |
| Observations                               | 50         | 50         |
| Pooled Variance                           | 1.418513   |            |
| Hypothesized Mean Difference              | 0          |            |
| df                                        | 46         |            |
| T Stat                                    | 0.832654   |            |
| P (T <= t) one tail                       | 0.487505   |            |
| t Critical one tail                       | 1.94318    |            |
| P (T <= t) two tail                       | 0.97501    |            |
| t Critical two tail                       | 2.446912   |            |
• Satisfaction from work-from-home
• Willingness to continue work-from-home.

4.2 For IT- and ITTES-enabled organization

The above is one of the country’s growth sectors, and the culture of work-from-home was practiced before COVID-19. In the case of COVID-19 problems, it has become a way of life. There is no effect on the functioning of IT and IT-enabled services and respective employees, as the test result shows that the calculated values are within the accepted limits. The fact can be accepted that the industry is not much affected by the pandemic of COVID-19.

4.3 For education sector employees

As far as work-from-home is concerned, it was only used in emergencies and special cases in the education sector. However, in the present scenario of COVID-19, it has become a new way of learning. Facilities like LMS (Learning Management System) and OLT (Online Learning Tools) were already there before COVID-19. The pandemic of COVID-19 has changed the overall teaching and learning scenario; as of now, most of the schools, colleges, and universities are running their classes on online mode. All the stakeholders are comfortable with the same. The test statistics fall within the acceptable limits and support the above-stated facts.

4.3.1 Pharma sector employees

Pharma sector is one industry where the work culture from home was not much popular, and employees of the sector were either working in the labs for product development or in the field to promote and sell their products. To work-from-home is a new idea, and this took time for the employees to accept it. However, as of now, they had accepted it and are willing to work from even after the pandemic of COVID-19 is over, which is evident from the test results, i.e., the ‘t’ statistics fall within the acceptable limits; this can be stated that employees are satisfied from the work-from-home culture [15].

4.3.2 Processing industry

The processing industry is one of the prominent industries as many base industries are related to the processing industry. The employees of the processing industry have never worked from home. They were not confident about working from home in the near or far future, which is very closely related to the fact that most suffered industry is processing industry; almost 41% of the employees from the processing industry have lost their jobs during the pandemic of COVID-19. The test statistics do not fall within acceptable limits and higher than the set limit of 5% level of significance. The employees working from home are not feeling confident and making mistakes all the time, as reported by their respective bosses [16].

5 Conclusions

According to research, the once-desired, highly favorable WFH has not proven to be one of the best choices for most Hong Kong staff. WFH continues to pique people’s interest, but not in its present form. Better government rules and regulations are needed to control and make WFH a reality properly. Guidance on transitioning to remote online jobs is one field of policy where strategy and delivery are critical. The decision to halt in-person meetings and practice was made quickly, but with no instructions for doing so. Workers are unsure of what WFH means. They lack the tools needed to make this transition, such as applications, access to official documentation, and adequate workspace. If this procedure is to become a viable alternative or the new standard, proper preparation is expected. After the pandemic, where WFH is no longer a forced order but rather a versatile choice, the working balance will be apparent. Employee interaction in a simulated environment is a challenging challenge. Any non-work-related contact that previously engaged workers has been limited by the employee-employer interaction using a virtual network. Job has become monotonous, tedious, and non-creative due to limited staff engagement, team meetings, and individual learning opportunities. Nevertheless, those who like this modern work culture believe that there is a lack of identity at work and in the company. Work is more akin to a task that necessitates more dialogue and language in order to communicate thoughts.

6 Findings

Apart from the analysis shown above, some other observations are worth mentioning here:
1. Several employees work-from-home for the first time, and they are not very comfortable with the electronic peripherals and devices. However, they are learning to do so and willing to contribute.
2. 23% of the sampled employees are not very comfortable with the monitoring and surveillance mea-
sures taken by the respective companies; they look at it like a threat and state that they are uncomfortable with such measures.  
3. Employees from IT- and ITES-enabled organizations stated that their targets have increased in COVID-19. Even they are working 6-7 days a week.  
4. 62% of the employees from all the sectors are willing to continue working from home, provided they are given certain liberties and day-offs according to their needs.  
5. 47% of the respondents said that they could work on both the modes, i.e., in the office and work-from-home.  
6. 48% of the respondents stated that they want to join the office and work from the office as they miss socializing and gathering with friends and near ones.  
7. 40% of the respondents stated that they are suffering from ailments like headaches, eye rashes, etc., after starting to work-from-home.

Statement on ethical issues
Research involving people and/or animals is in full compliance with current national and international ethical standards.

Conflict of interest
None declared.

Author contributions
The authors read the ICMJE criteria for authorship and approved the final manuscript.

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