

The Impact of COVID-19 on Remote Work: An Examination of Home-Based Work Consequences

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Received: 02-April-2023

Accepted: 05-November-2023

How to cite: Kumar, R., Dhiman, G., & Yadav, K. (2023). The Impact of COVID-19 on Remote Work: An Examination of Home-Based Work Consequences. *International Journal of Modern Research*, 3(1), 1 - 11.

ABSTRACT

The global COVID-19 pandemic has compelled numerous corporations and multinational companies to transition to remote work. Consequently, employees have sought alternative working arrangements. The impact of the contemporary surge in remote work is profound, significantly transforming individuals' daily lives and professional trajectories. Working from home presents diverse challenges for employees, with varying outcomes. Telecommuting and teleworking have emerged as novel paradigms of professional engagement. This study focuses on assessing the impact of telecommuting on Indian workers. The investigation aims to scrutinize the influence of working conditions on mental health, work-life balance, physical health, and productivity. To achieve this, a questionnaire has been developed for comprehensive data collection. A total of 137 responses were gathered, encompassing 17 questions covering aspects such as productivity, company support, work-life balance, familial and professional conflicts, as well as physical and mental health. The ensuing analysis aims to provide valuable insights into the implications of remote work on the well-being and productivity of Indian workers.

Keywords: COVID-19, Pandemic, Remote work, Investigation, Workers.

1 INTRODUCTION

The advent of the novel coronavirus has precipitated significant organizational changes and transformations in numerous companies, compelling the adoption of work-from-home policies [1]. In India, the propagation of the coronavirus has engendered a comprehensive shift in work culture, with work from home being implemented across all sectors for the first time. Employees find themselves confined to the domestic environment, carrying out professional responsibilities within the confines of their residences. This paper seeks to investigate the challenges encountered by employees engaged in remote work, focusing on its implications for working efficiency, mental and physical health, work-life balance, and the working environment [2].

The governmental response to these circumstances involves the institution of a policy termed "work from home" (WFH), also referred to as "teleworking" and "telecommuting." This policy permits employees to execute their duties remotely, utilizing various forms of electronic communication from the comfort of their homes [3]. The feasibility of remote work is contingent upon the professional field and specific duties of the employees, with corporate roles and administrative responsibilities being particularly conducive to remote engagement. The uncertainty induced

by the coronavirus has adversely affected individuals' health, both mental and physical, work-life balance, and the overall office atmosphere. This study aims to elucidate the challenges faced by remote workers during the COVID-19 pandemic, providing insights for businesses and organizations [4].

Amidst the global spread of COVID-19, the World Health Organization declared a pandemic on March 11, 2020. Subsequently, the high incidence of COVID-19 cases prompted a nationwide lockdown in India on March 22nd, as declared by Prime Minister Narendra Modi. This led to the closure of schools, organizations, colleges, companies, and public spaces, with stringent measures to curtail non-essential travel and recreational activities [5]. The resultant workplace inconveniences were exacerbated by the strict control measures implemented by the Indian government, prompting the initiation of various policies, including a work-from-home (WFH) directive for both the private and public sectors.

However, the transition to remote work has not been without challenges. Maintaining a healthy work-life balance emerged as a significant difficulty, followed by distractions at home, a diminished sense of personal connection with colleagues, extended workdays, mental fatigue, and reduced motivation. Physical health concerns, including weight gain, have also been reported among individuals working from home without proper permission or structure [6]. Consequently, conflicts arising from imbalances in household and family responsibilities can impact work productivity. Conversely, for some individuals, the shift to remote work has proven effective, leading to increased productivity and efficiency through the acquisition of new skills and the comfort of working from home [7].

2 OBJECTIVES

- Investigating the Impact of Remote Work on Productivity.
- Studying the Influence of Remote Employees on the Office Environment.
- Analyzing the Psychological Impact of Working from Home.
- Evaluating the Health Effects of Telecommuting.
- Utilizing Chi-Square Test and Cross-Tabulation to Assess the Relationship Between Two Variables.

3 METHODOLOGY

A survey instrument was developed using Google Forms to facilitate the systematic collection of data from individuals engaged in remote work [8]. Anonymity was rigorously maintained throughout the questionnaire, encompassing inquiries pertaining to the respondents' experiences with working from home, assessments of their physical and mental well-being, reflections on work-life balance, and perceptions of their working environment. A total of 137 responses were obtained, with participants spanning various professional domains including IT, finance, tax consulting, analytics, the government sector, and law [9].

Descriptive statistics were employed to summarize and analyze the gathered data. In order to derive meaningful insights, graphical representations such as bar charts and pie charts were generated [10]. Additionally, the Statistical Package for the Social Sciences (SPSS) was utilized to investigate relationships between variables through cross-tabulation and the Chi-square test. Given the modest scale of the dataset, the Chi-square test was deemed suitable for analysis. Furthermore, clustered bar charts were constructed to enhance the clarity and interpretability of the results obtained.

4 EXPERIMENTAL RESULTS AND DISCUSSIONS

A web-based survey was conducted to examine the impact of Covid-19 on remote work among Indian employees. A total of 137 responses were garnered from individuals representing diverse professional domains, including IT, Finance, Analytics, Audit, Consultancy, Law, and government sectors [11]. The collected data was stratified based on respondents' age groups. The questionnaire, comprising 17 inquiries, focused on aspects such as employee productivity, mental and physical health, organizational support, family and professional conflicts, and overall well-being [12, 13].

The initial three questions solicited information on participants' name, age-group, and professional affiliation [14]. Subsequent questions, numbered four and five, queried respondents on their experience of working from home during the Covid-19 pandemic and the availability of a suitable workspace [15]. The sixth question pertained to

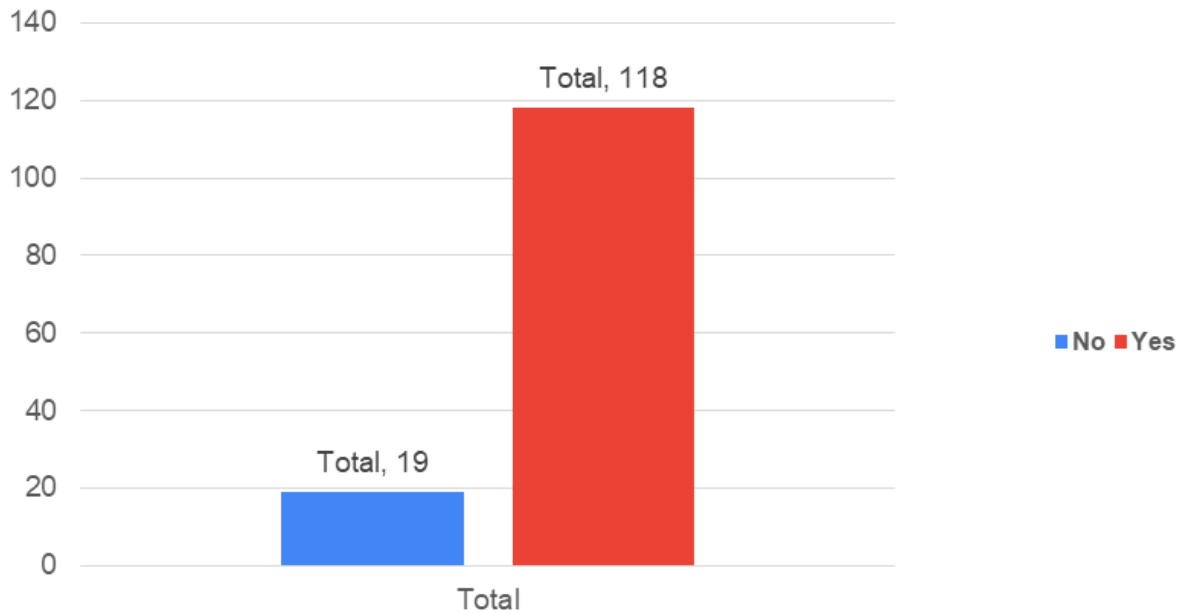


Fig. 1. Peoples working from home during COVID-19.

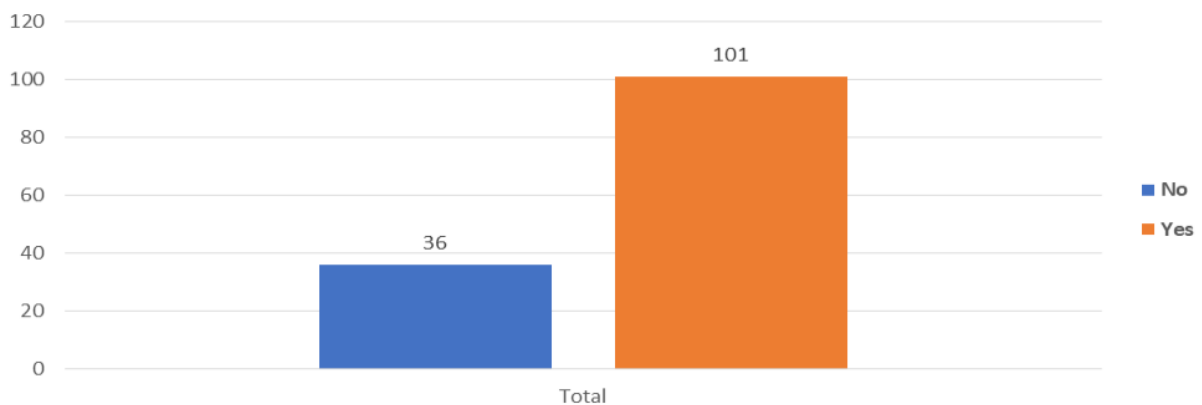


Fig. 2. Suitable workplace at home during COVID-19.

work-life balance, specifically inquiring whether working from home facilitated the maintenance of a satisfactory work-life equilibrium. A predominant majority of respondents answered affirmatively to these initial three inquiries [16]. This shows that maximum people are working from home, have a suitable work place at home [17].

In Fig. 1, among the 137 respondents, 118 individuals engaged in remote work, while 19 did not, indicating a predominant inclination toward working from home during the crisis period.

Fig. 2 illustrates that a majority of respondents possess a suitable workspace at home. In Fig. 3, out of 137 participants, 69 individuals perceive a favorable equilibrium between work and personal life, while 68 express dissatisfaction with their work-life balance. The subsequent three inquiries centered on efficiency, work-related stress, and extended work hours. Participants were queried on their task efficiency during prolonged work hours, work-related stress while working from home, the occurrence of extended work hours, and the psychological consequences of working from home. Fig. 4 indicates that a significant proportion of respondents faced extended working hours during the crisis, with 66% acknowledging this challenge, 18.98% negating it, and 15.33% expressing uncertainty. Results reveals the 54.74% experience low stress levels, 34.31% report high stress, and 10.95% claim no stress—a positive indication of relatively lower stress levels among the majority. Results demonstrates that 54.74% of participants exhibit moderate task productivity, 27.74% manifest high productivity, while the remaining respondents demonstrate lower productivity levels. The subsequent set of questions focused on organizational support, family conflicts, and professional conflicts arising from remote work. Fig. 5 indicates that, in the 20-30

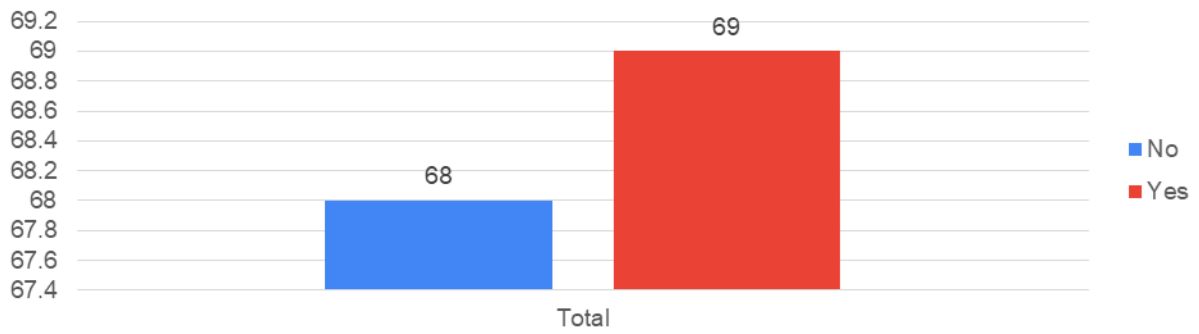


Fig. 3. Healthy Work lives Balance when working from home.

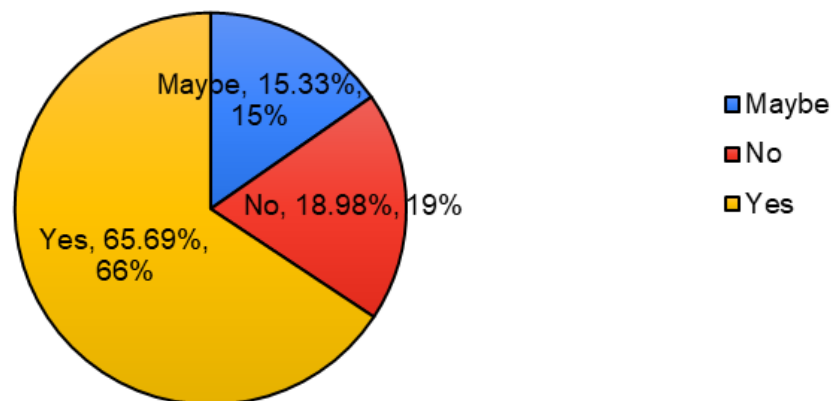


Fig. 4. Extended work hours during Work from home.

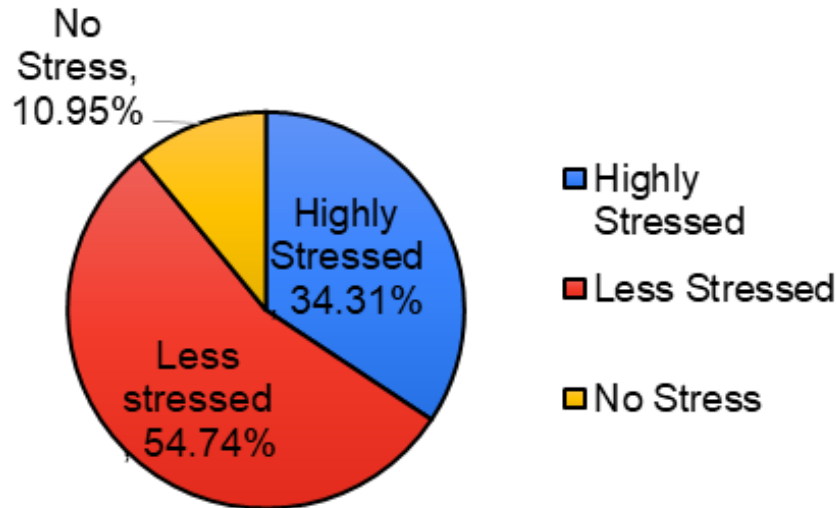


Fig. 5. Work related stress as you work from home.

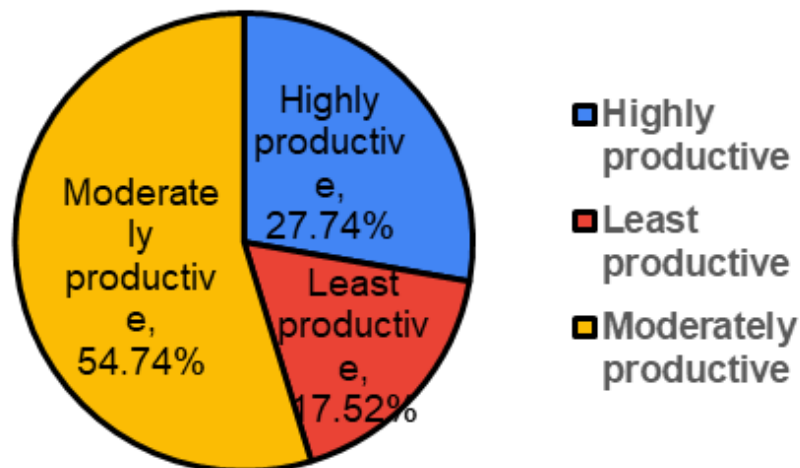


Fig. 6. Efficiency in performing tasks during extended working hours.

age group, a substantial number of respondents affirm organizational support during remote work. In the 30-40 age group, respondents predominantly perceive organizational support. Fig. 6 illustrates that a considerable number of participants encountered family conflicts due to remote work, emphasizing the significance of work-family balance.

The final two inquiries pertain to physical health, specifically weight changes and engagement in physical activities during remote work. Fig. 7 demonstrates that a notable proportion of respondents in the 20-30 and 30-40 age groups experienced slight weight gain, with 19 individuals in the 20-30 age group reporting substantial weight gain. Additionally, 20 respondents in the 20-30 age group did not observe any change in their weight.

5 CHI-SQUARE ANALYSIS AND CROSS-TABULATIONS

The data is put through a cross-tabulation and a Chi-square test to get a good look at it. Cross tabulation is used to investigate how various factors are connected. Chi – square is basically used in order to check the association between the two variables. Assumption for Chi -square: Expected frequency for every cell > 5 $P < 0.05$ means that the relationship between the two variables is statistically significant, and the null hypothesis is rejected. Formula: $\text{Row Total} * \text{Column Total} / \text{Grand Total}$ To find the relationship between affect on psychological health when working from home and Does you company provide proper support as you work from home. Null Hypothesis H_0 = No significant difference exists between the two variables. H_1 = Significant difference exists between the two

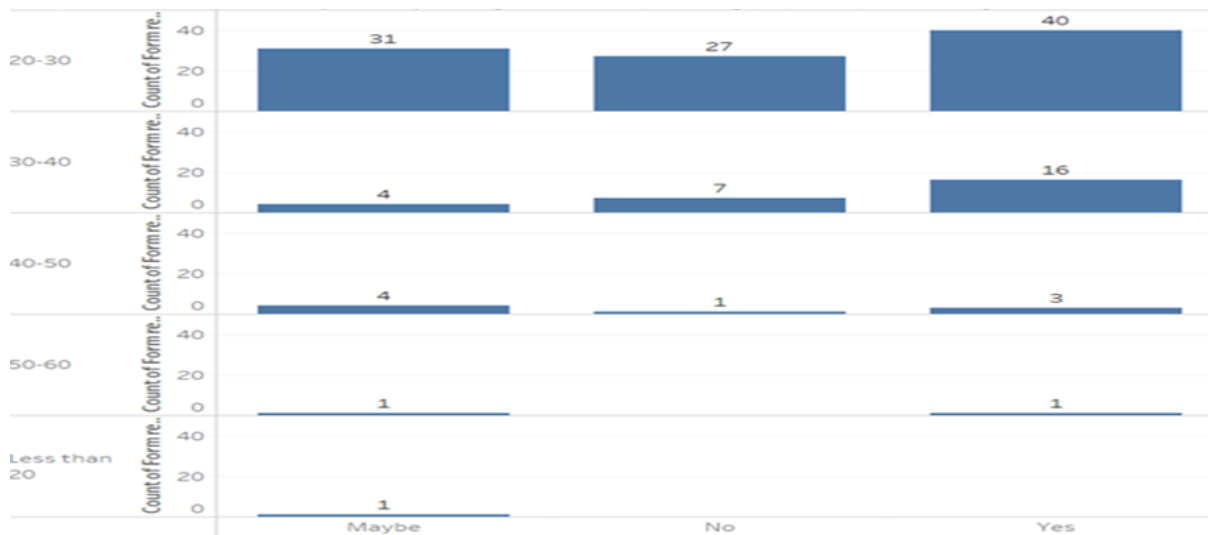


Fig. 7. Support from organization for Work from home.

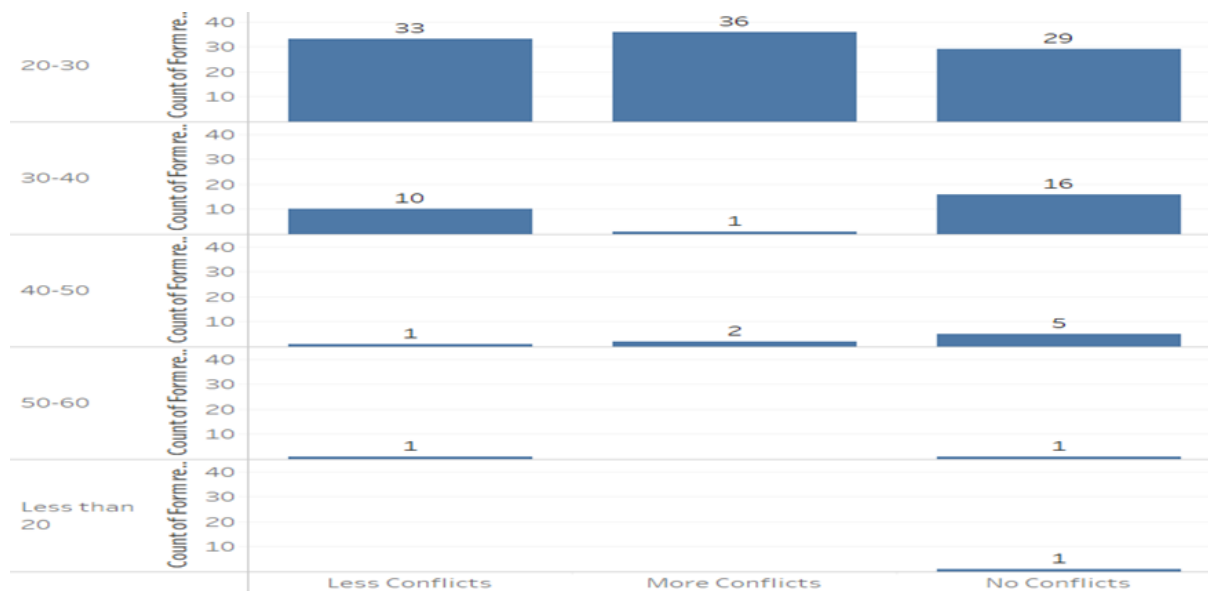


Fig. 8. Family conflicts due to work from home.

variables. Using SPSS, Cross Tabulation is applied.

In Fig. 8, a cross-tabulation table was constructed to elucidate the relationship between the impact of psychological health during work from home and organizational support for remote work. The majority of individuals reporting positive psychological health believed their organizations provided adequate support during remote work. Conversely, those with negative psychological health tended to perceive uncertainty in organizational support. Notably, respondents with no change in psychological health predominantly acknowledged organizational support.

Fig. 9 employed a Chi-square test to assess the association between these variables, where the p-value (0.006) was found to be less than the significance level ($\alpha = 0.05$). Consequently, the null hypothesis, positing no significant association, was rejected in favor of the alternative hypothesis, establishing a significant association between psychological health and organizational support during remote work. Fig. 10, a clustered bar chart, further illustrates this association. Employees who receive organizational support predominantly perceive a positive impact on their psychological health, while those without such support or with uncertain support tend to report a negative impact. A cross-tabulation analysis was conducted in results that examining the relationship between work-related stress during remote work and the allocation of time to exercise, yoga, or physical activity. The results indicated that individuals not devoting time to physical activity experienced higher stress levels, whereas those engaging in physical activities tended to report lower stress levels. Subsequently, a Chi-square test in Fig.

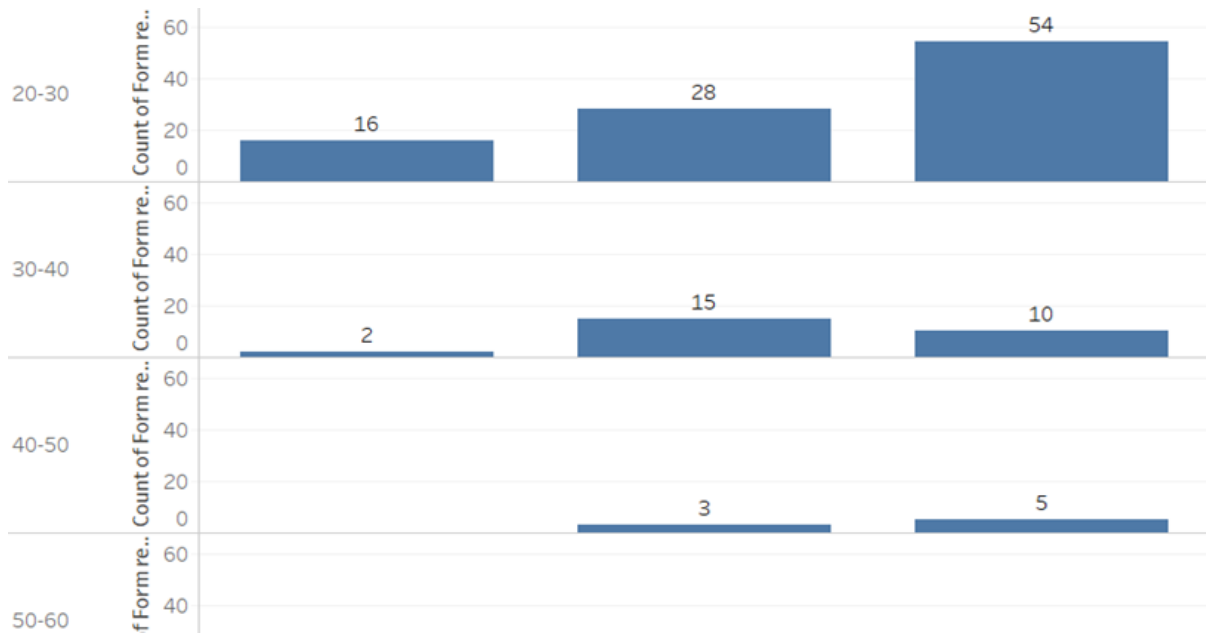


Fig. 9. Professional conflicts as you work from home.

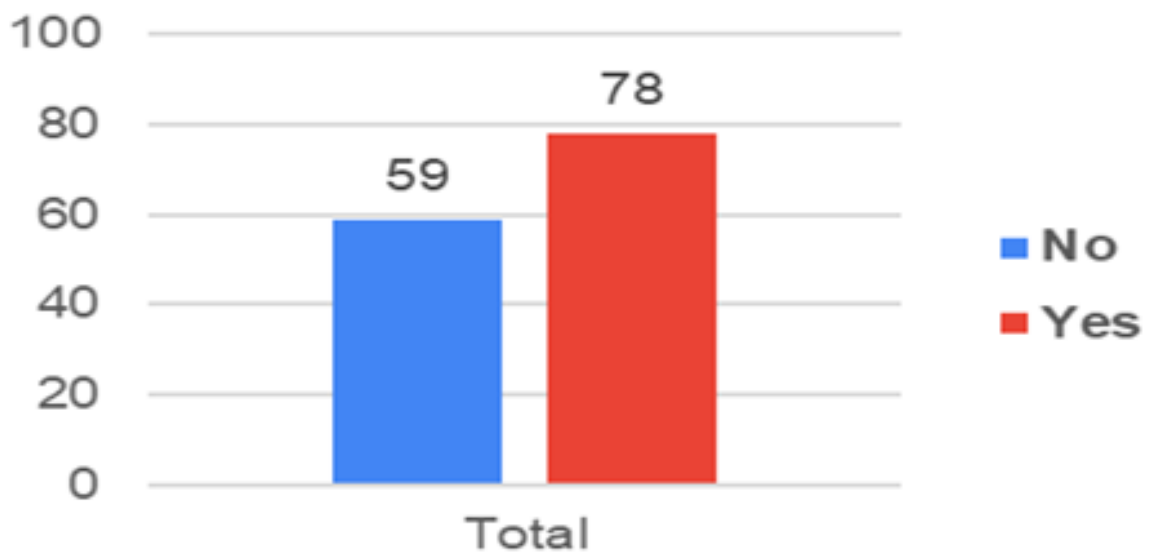


Fig. 10. Were you able to devote time in exercise.

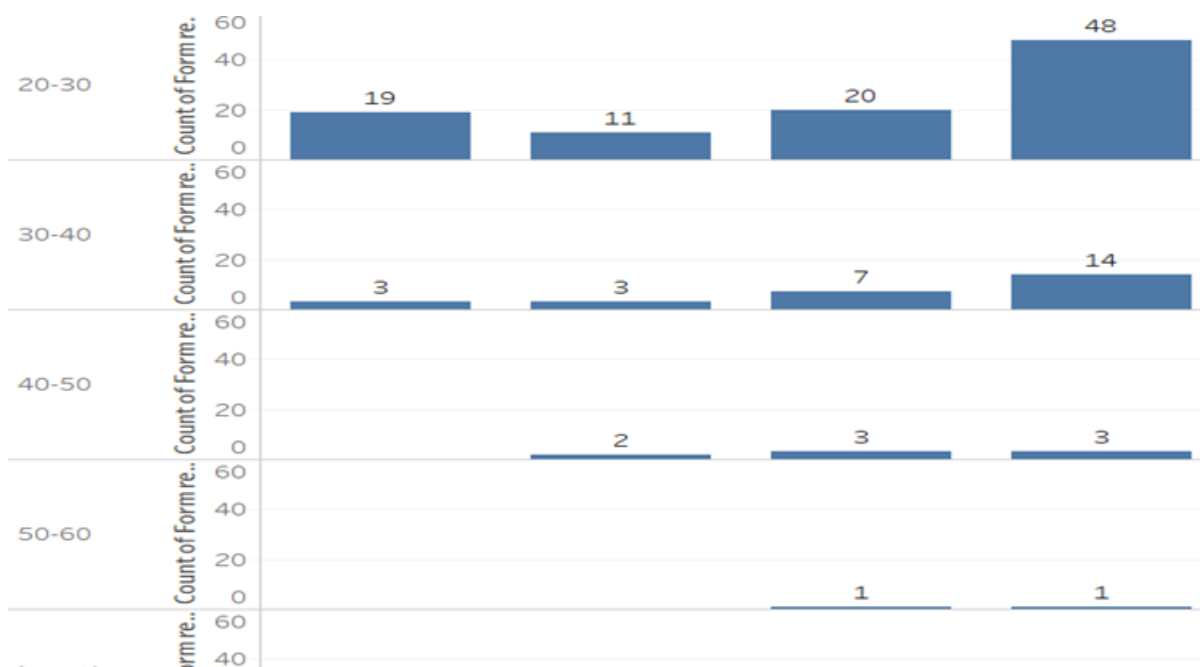


Fig. 11. Gaining weight due to work from home.

		Maybe	No	Yes	Total
10. What is the affect of psychological health when working from home?	Negative	25	23	20	68
	No change	9	4	15	28
	Positive	7	8	26	41
Total		41	35	61	137

Fig. 12. Cross Tabulation between Affect of psychological health on people when working from home and Organisation support towards working from home.

11 confirmed a significant association between work-related stress and physical activity, leading to the rejection of the null hypothesis. Fig. 12, a clustered bar chart, emphasizes that individuals with lower stress levels are more likely to allocate time to physical activity, promoting both mental and physical well-being. In Fig. 13, a cross-tabulation table examined the association between family conflicts and work-related stress during remote work. The analysis revealed that individuals experiencing more family conflicts tended to exhibit higher stress levels, while those with fewer or no family conflicts reported lower stress levels. A Fisher-t test was applied due to expected frequencies below 5 in Fig. 14, leading to the rejection of the null hypothesis and establishing a significant association between family conflicts and work-related stress during remote work. Fig. 15, a clustered bar chart, illustrates that individuals experiencing fewer family conflicts are generally less stressed, emphasizing the positive impact of reduced family conflicts on stress levels during remote work.

6 CONCLUSIONS

This study, specifically focused on evaluating the impact of telecommuting on Indian workers, delved into the intricacies of working conditions and their influence on mental health, work-life balance, physical health, and productivity. A meticulously designed questionnaire facilitated comprehensive data collection, yielding 137 responses across 17 questions. These inquiries covered critical aspects such as productivity levels, company support, work-life balance, familial and professional conflicts, as well as physical and mental health. The subsequent analysis aims to furnish valuable insights into the profound implications of remote work on the well-being and productivity of Indian workers, thereby contributing to our understanding of the evolving dynamics of professional engagement in the contemporary landscape.

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	14.458 ^a	4	.006	.006
Likelihood Ratio	15.014	4	.005	.006
Fisher-Freeman-Halton Exact Test	14.405			.006
N of Valid Cases	137			

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.15.

Fig. 13. Chi-square test.

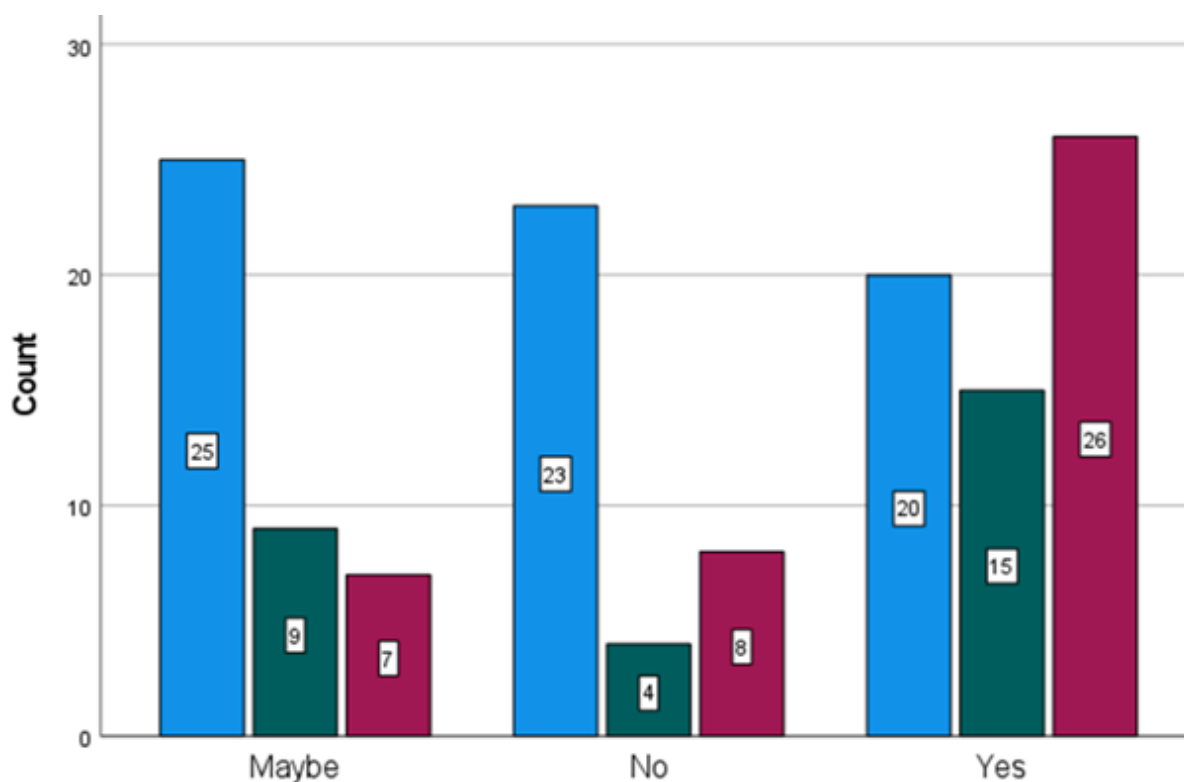


Fig. 14. Clustered Bar chart.

		No	Yes	Total
8. Your work related stress as you work from home?	Highly Stressed	32	15	47
	Less Stressed	25	50	75
	No Stress	2	13	15
Total		59	78	137

Fig. 15. Cross tabulation between work related stress during work from home and people devoting time on exercise, yoga or any physical activity during work from home.

CONFLICT OF INTEREST

The author confirms that there is no conflict of interest to declare for this publication.

ACKNOWLEDGEMENTS

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. The authors would like to thank the editor and anonymous reviewers for their comments that help improve the quality of this work.

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