The Effect of Remote Working on Employees Productivity Levels in South Africa

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Abstract

The COVID-19 pandemic has had a major impact on the lives of people globally. The economy of countries as well as the mental health of human beings have deteriorated and it has also brought upon revolutionary changes. One of these significant changes has been organizations changing to remote working which developed as a result of social distancing of people. Remote working is when people perform their work from different locations, and, during the pandemic this has mainly been from home. The abrupt change to working from home was brought upon many South African employees during a period of uncertainty; there was no time for companies to prepare employees for this. As a result, the effect that remote working has had on employees in South Africa is unknown and therefore research was conducted to investigate issues pertaining to this. A survey was designed and electronically sent to participants; a sample size of 50 people was studied. Results were analyzed using the Statistical Package for Social Scientists (SPSS); the used of cross tabulations and chi square analysis was mainly used in the methodology. The challenges faced by employees were studied and solutions were suggested in order to overcome the challenges and maintain optimal levels of productivity. The main challenges faced by employees in South Africa included the effect of load shedding, longer working hours, the lack of resources, poor connectivity and a non-conducive home environment. Despite certain challenges, the majority of respondents stated that they would like to have a combination of a remote working and office based environment, and that remote working did not hinder productivity levels to a significant effect. Further research can be conducted with a different sample of employees, in different ages groups, as well as research done on employers.

Keywords
Productivity, employees, pandemic, remote working, environment.

1. Introduction

The COVID-19 pandemic has had a significant impact on the lives of millions of people, globally. As a result of the pandemic, people lost their lives, loved ones and jobs, and the effects of these losses have had a detrimental impact to the mental health of many. Along with these losses, there have also been paradigm changes in many aspects of people's lives. Due to the rapid spread of the virus, especially by people in close contact with one another, social distancing has to be adhered to at all times. This new "way of life" brought upon many changes in society and in the workplace. As a result of the new normal of social distancing, remote working became increasingly popular. Remote working or

teleworking is described as work that is performed from different locations; workers can access information using information technology (Nakrosiene, et al., 2019). COVID-19 has resulted in remote working globally, including South Africa, where it was not a common occurrence in the past. Due to remote working or working from home being a fairly new concept to many South Africans, there have been many developments regarding how employees have adapted to this new normal and how productive employees and organizations are, overall.

The objective of this research is investigate the challenges, benefits and productivity levels of employees who are working remotely in South Africa, during the COVID-19 pandemic. For the purpose of this study, remote working refers to working from home due to the COVID-19 pandemic and the associated restrictions. Primary research was conducted in the form of an online survey and the sample of 50 people of the working population in South Africa was investigated. The aim of the research is to find solutions to the challenges that South African employees have with working remotely and maintaining optimal productivity levels. The solutions proposed in this study can assist employees for the future as remote working is seemingly becoming popular and something that would be here to stay.

2. Literature Review

The novel COVID-19 pandemic has resulted in millions of people working from home with only limited numbers returning to the workplace if necessary. The pandemic crisis has increased the mass adoption of remote working to facilitate organisations to continue operating in these turbulent times. The COVID-19 lockdown delivers a unique context that is significantly different from previous working from home literature, this is because due to a lockdown, working from home is enforced with limited planning (Wazienegger, et al., 2020). Many organizations are wondering if life in the workplace will permanently change as a result of the pandemic, and benefits of remote working may shape the future of our workspaces and routines (PWC, 2020). According to Keursten (2020), remote working is here to stay for a growing number of workers, and this consequently, has a major impact on the future of physical office spaces.

2.1 Benefits and Challenges of Remote Working

A study undertaken by PWC (2020) highlights the advantages of remote working. The study claims that increased productivity, spending less time travelling to work, the feeling of making a positive contribution to the environment, and being more focussed due to less office distractions and interruptions from colleagues were the main advantages of working remotely. Other benefits cited were the ability to spend more time with the family during the day and having a flexible work environment. Working remotely, due to the COVID-19 pandemic, has also resulted in a number of challenges. PWC (2020), confirms that a major challenge was that employees felt pressured to be more productive and prove they are working. Other challenges included a feeling of loneliness due to reduced levels of human interaction and social encounters with co-workers, and blurred boundaries which meant more hours of work and reduced work-life balance. It is important to assess the health and well-being risks and benefits of remote working in order to preserve occupational health and productivity (Bouziri, et al., 2020). Given that the change to remote working was abrupt, appropriate planning could not be done for remote working. Unless homes were equipped with proper home office equipment, employees were forced to improvise: dining tables became desks, couches became office chairs, and bedrooms and living rooms became shared workspaces (Toniolo-Barrios, 2020). Toniolo-Barrios (2020) further asserts that working from home makes it harder to concentrate due to ambient distractions such as doorbells, noisy pets and interrupting children. Another challenge of successfully working remotely was having the right technology. PWC (2020) found that the lack of technology was a major stumbling block that impeded employees from working from home. The attitude as well as the policy of companies can also influence the way that employees feel when working from home; having the correct technology and training for employees is vital (Thorstensson, 2020). The study found that one of the main reasons as to why employees chose to work on-site despite being able to work remotely, was due to the organisation not being set up with the required systems, infrastructure, etc. to work remotely. In particular, employees confirmed that connectivity, IT infrastructure and communication tools were the most crucial resources to effectively work remotely. Also, many schools were shut during lockdown, and home schooling became

mandatory, which essentially created pressure on caregivers, and the balance between career and home deteriorated even more.

2.2 The impact of working remotely on organizations

Despite the recent popularity of remote working, not every organization has embraced the concept due to several reasons and limitations. Working remotely can benefit organizations by reducing office space resulting in less investment, but not all companies are able to just make the change (Aitha & Acharya, 2015). Firstly, many companies are rigid; they are not willing to change their long standing, non-flexible work culture and move to a flexible one. These companies are also unaware of the benefits of flexible working and fear of how it may impact the overall company culture. An important factor that influences companies to move to flexible working is the privacy, technical requirements and data security (Routley, 2020). Koenig, et al. (2020), stated that around 90% of employees are now handling intellectual property, and personal and confidential information at home when remote working. Personal information also includes financial and health information. The readiness of different countries for remote working varies globally. The success of remote working overall depends on the countries Internet infrastructure and how it would be able to cope with the spikes in digital traffic and increasing use of high bandwidth (using maximum Internet capacity) connections. All factors of remote working need to be prioritised if organizations are considering a permanent shift or a longer period of remote working. Planning must not only focus on maintaining productivity while working remotely but go beyond, including a revamp of the organisational culture and technology infrastructure to equip the organisation to effectively make these changes to working practices. Employers must also be mindful of the factors impacting the wellbeing of their employees in the new remote working environment. Whilst the remote working experience has highlighted key benefits, it has revealed critical challenges, which organizations need to address to ensure successful remote working.

3. Methodology

The aim of this study is to examine the perceptions of employees on working remotely during the COVID-19 lockdown. The objectives of this study are: to ascertain the levels of productivity with working remotely during the COVID-19 lockdown, to investigate the benefits and challenges of working remotely and to determine measures to improve working remotely during the COVID-19 lockdown. Since the study focuses purely on employees, primary data was collected from employees. This research is relatively low risk and is aimed to examine views and perceptions from the adult working population. The research has an academic and practice component in that information will be used to develop solutions that could be used by both employees and employers.

3.1 Population and Sample

The population for this study comprised of people who have been working from home or remotely during the COVID-19 lockdown restrictions. The survey targeted employees from a number of different career fields including architecture and engineering, business management and administration, education, science and technology, healthcare and medicine and others. Using the snowball sampling technique, the researcher targeted a population that was known to her and were working remotely during the lockdown. This sampling technique helped the researchers find a sample that was very specific and difficult to locate. The primary data was collected from respondents using an online survey through Google Forms. A link to the survey was sent via WhatsApp and/or email, to friends and acquaintances that were employed and who were working from home at the time of the study. The online user-administered questionnaire was chosen for a number of reasons. Firstly, given that the survey was administered during lockdown, it was not appropriate to administer the questionnaires face-to-face. Secondly, the use of an online survey targets respondents over a large geographical area. And thirdly, the online surveys tend to have a quicker response rate, given the time constraints to undertake the study.

The development of the online survey for this research was based on desktop research done by Rist (2020), Keursten (2020) and Caramela (2020) on the advantages and disadvantages of working from home. To ensure reliable results,

the covering narrative that accompanied the survey, will ensure that the survey must be filled only if the description is applicable. The online survey will also ensure that the results are captured immediately and that no changes should be made once the survey is completed. The measuring technique used in this study ensured validity of the study. The survey included a number of scales, number ratings and checkboxes to choose from. This will ensure that accurate and valid variations of the results will be presented.

3.2 Data Analysis

This section presents and discusses the data that was collected for this study. The data is presented in three key sections. Section one focuses on the characteristics of respondents in terms of their age, gender, career field, and their current employment position. Section two centres on the employment situation of respondents during the lockdown, whilst section three examines the perceptions of respondents on working remotely.

Table 1: Characteristics of Respondents

Characteristics		Percent
Age	18 to 25 years	10.0
	26 to 30 years	54.0
	31 to 40 years	18.0
	41 to 50 years	14.0
	51 to 60 years	2.0
	More than 60 years	2.0
Gender	Male	44.0
	Female	56.0
Current career field	Architecture and Engineering	18.0
	Business Management and Administration	44.0
	Education	20.0
	Tourism	2.0
	Healthcare	4.0
	Law	4.0
	Marketing	4.0
	Science and Technology	4.0
Current employment position	Managerial	34.0
	Operational	36.0
	Technical	20.0
	Other	10.0

The data displayed in Table 1 depicts the characteristics of respondents. In terms of age, more than half of the respondents (54%) were between 26 to 30 years old, whilst 18 % were between 31 to 40 years, 14% were between 41 to 50 years old and 10% were between 18 to 25 years old. A very small proportion of respondents were more than 50 years old (4%). Females comprised a larger percentage of respondents (56%) compared to males (46%). Majority of the respondent's careers were in the field of business management and administration (44%), followed by education (20%) and architecture and engineering (18%). The current employment positions of respondents were operational (36%), managerial (34%), technical (20%), and other (10%).

3.3 Employment situation during the lockdown

This section focuses on the situation of employees whilst working remotely. Data relating to the duration of working remotely, the number of people per household working remotely, and the level of household conduciveness for working remotely.

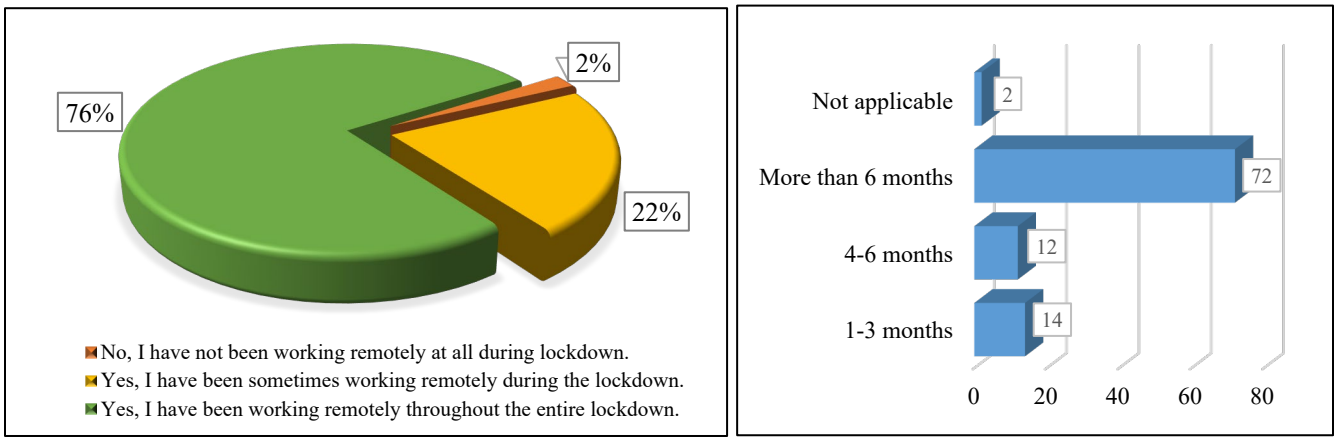

Figure 1: Remote working and duration during COVID-19 lockdown

During the COVID-19 lockdown, majority of respondents (76%) have been working remotely throughout the lockdown and 24% have been working remotely sometimes during this period (Figure 1). Only 2% of respondents had not been working remotely. A large proportion of respondents (72%) have been working remotely for more than 6 months, 14% for between 4 to 6 months and 14% for between 1 to 3 months. The study also confirmed that most respondents (94%) worked remotely for 5 days a week, 2% for 6 days a week and 4% for 7 days a week.

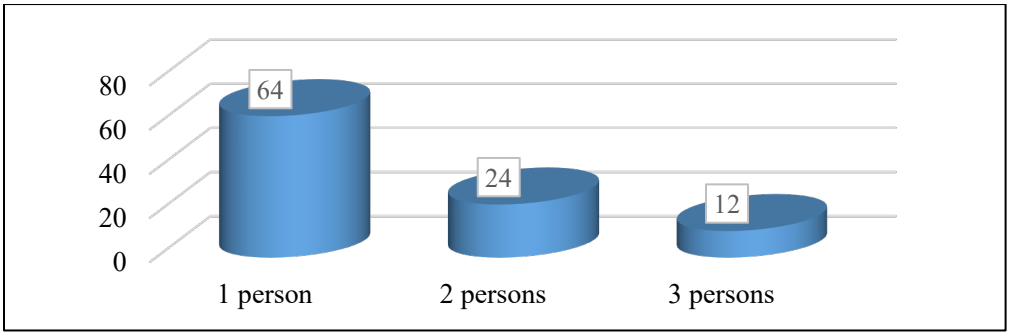

Figure 2: Number of people working remotely per household

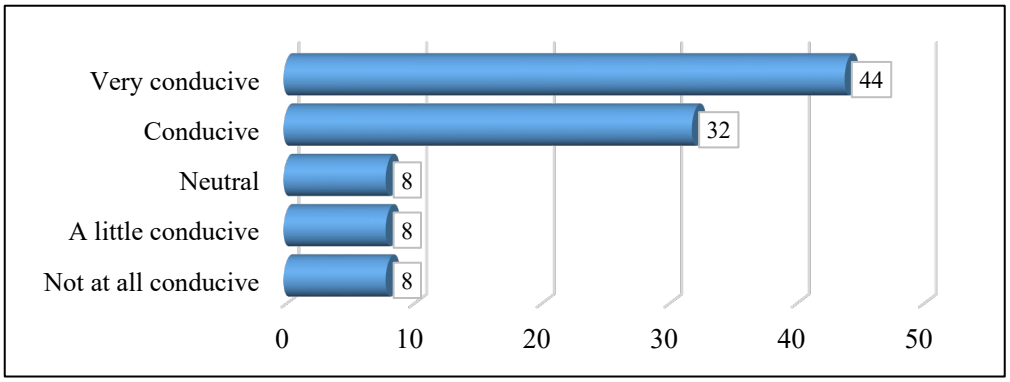

Figure 3: Level of household conduciveness for working remotely

Respondents were asked to specify how conducive their homes were for working remotely and the data for this is reflected in Figure 3. Overall, 44% of respondents confirmed that their home was very conducive and 32% stated that it was conducive. Homes were not very conducive for work for 16% of respondents. During lockdown, many people throughout the world were compelled to work from home. Therefore, the conduciveness of the home environment, as well as social and physical and technological challenges will affect work and productivity levels. To understand this better, cross-tabulations were undertaken to determine whether variables such as career field, age, gender, number of people working in a household and childcare had an effect on the conduciveness of the home for working remotely.

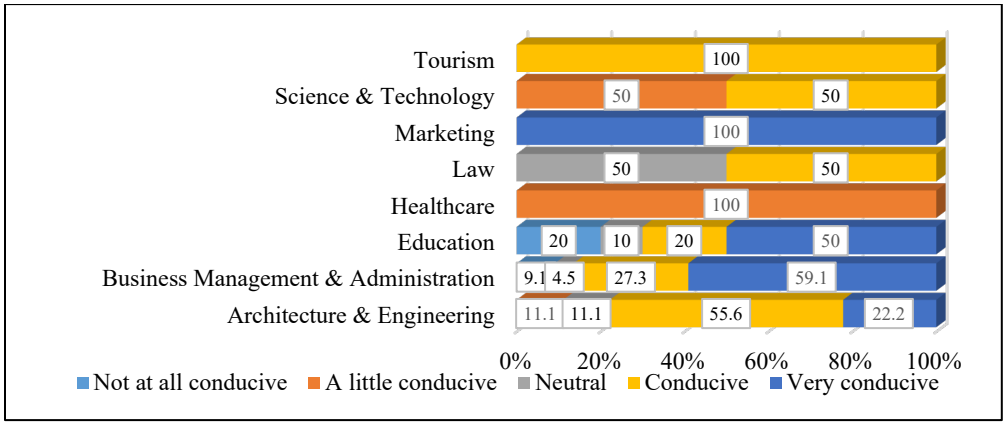

Figure 4: Cross-tabulation: Level of conduciveness of household by career field

Figure 4 shows the data on the cross-tabulation between the level of household conduciveness and the career field of respondents. It was interesting to note that it was mostly those working in the education sector (20%) that found the home environment to be not at all conducive for work. A chi-square analysis revealed a significant association between career field and household conduciveness, where $X^2(28) = 49.3$, $p = .008$. The chi-square analysis p-value above .05 indicates that there is a relationship between the two variables. Remote working in the education sector has been challenging for educators and professors globally, especially when the transition to remote learning had to be implemented rapidly. Due to COVID-19, countries went into sudden lockdowns which resulted in the closure of schools and universities without contingency plans on how to conclude the academic year. Institutions, along with the government, had to plan accordingly and implement solutions for educational institutions in South Africa to complete the academic year in time, despite the delay of the lockdown. Solutions included remote learning through platforms such as Microsoft Teams, Zoom and information shared on WhatsApp Messenger groups. These measures posed a number of challenges, including the fact that students did not have the required resources such as laptops and Internet connectivity. Data was also made available for some and not for others. The result of this was that educators often had to reschedule online classes or make alternate plans for the disadvantaged students with the above challenges. Educators, especially at a primary school level find joy in their jobs by simply seeing the laughs, body language and interaction of students in the classroom. The change to remote learning proved to be depressing for these educators along with the fact of being unsure of what is being taught is really being understood by students (Heim, 2020). The challenge was to ensure that children were always fully engaged in the classes. Another challenge that many of the older educators experienced is that pertaining to technology.

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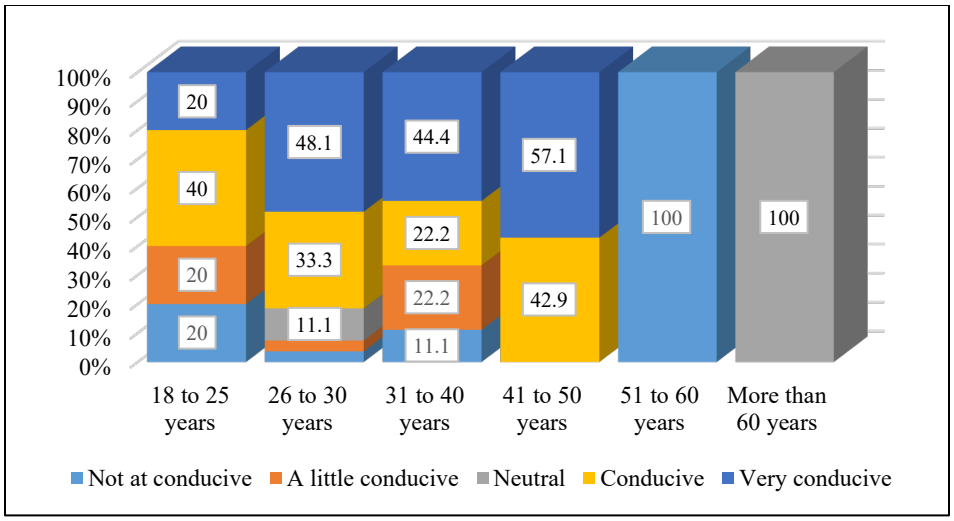

Figure 5: Cross-tabulation: Level of household conduciveness by age

The study found that age also influenced the conduciveness of the home environment for work, as indicated in the data in Figure 5. A chi-square analysis revealed a significant association between age and household conduciveness, where $X^2(35) = 51.3$, $p = .037$. All the respondents between 51 to 60 years indicated that the home was not conducive to work. This may be due to the fact that this older age group may not have the knowledge to deal with technical hiccups such as computer-related problems, Internet connectivity, etc. Those respondents between 31 to 40 years old stated that their homes were not at all conducive (11.1%) and a little conducive (22.2%). This may due to the fact that this age group may have little children, which may make it difficult to work from home. Working from home has been far more challenging for people with children as opposed to those with no parental responsibilities. Gen Z and millennials found the balance of a household and work to be far more demanding than Generation X and Baby Boomer professionals according to a survey done by Microsoft (Fabiano, 2020). The 26 to 30 years old group found it most conducive to work from home.

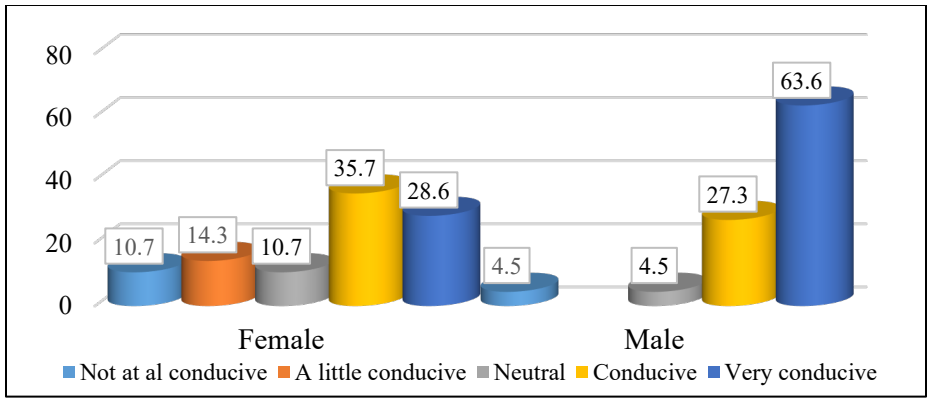

Figure 6: Cross-tabulation: Level of household conduciveness by gender

The data in Figure 6 confirms that gender also has a bearing on the conduciveness of the home environment for work. A chi-square analysis revealed a significant association between gender and household conduciveness, where $X^2(7) = 14.2$, $p = .047$. Overall, males found the home environment to be more favourable for work compared to females. The reason for this may due to the fact that, if the household has children or parents to care for, then the responsibility generally lies with the female of the household for this. Moreover, females are usually responsible for the upkeep and cleaning of the home, making it a work environment that is less favourable to females. A study found that professional men with and without children, as well as professional women without children, seem to increase their unpaid overtime

hours, especially when there is more control over their schedules, but women with children do not (Ibarra, et al., 2020). According to Bonacini, et al., 2020, working from home would favour male, older, high educated and high paid employees.

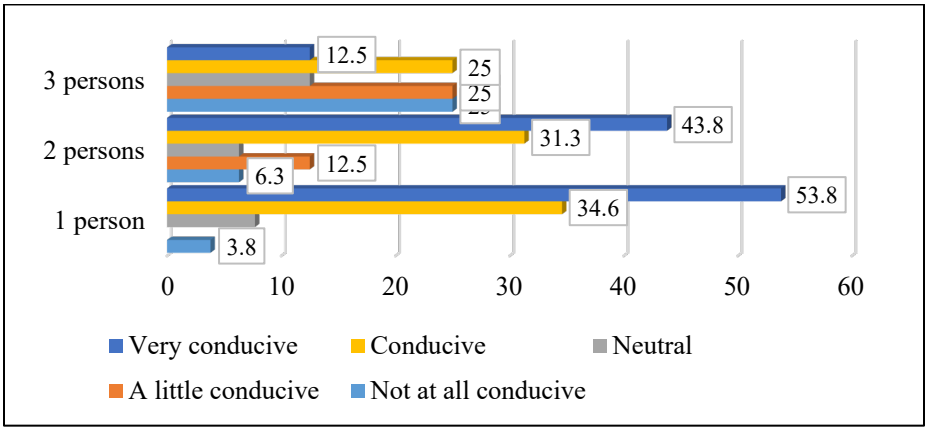

Figure 7: Cross-tabulation: Level of conduciveness by number of persons working remotely in household

The data in Figure 7 unsurprisingly reveals that the conduciveness of the home as a work environment is dependent on the number of people working remotely at the home. Higher levels of conduciveness were evident in households with one person working remotely. Evidently, the more people working remotely in a home, the less conducive the home becomes for remote working. This could be attributed to a number of factors. Sharing of resources, such as Internet connectivity, desks, chairs, etc. may create challenges in a household. Also, noise levels amongst a number of people working in a house at the same time, may affect the conduciveness of the environment.

3.4 Perceptions of working remotely during the lockdown

This section discusses the data on the perceptions of respondents on working remotely during the COVID-19 lockdown. In particular, the disadvantages of working remotely are explored and suggestions to improve conditions for working remotely are examined.

Table 2: Disadvantages of working remotely during the COVID-19 pandemic

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean
Lack of motivation	6%	20%	20%	36%	18%	3.40
Too many distractions	16%	18%	26%	16%	24%	3.14
Lack of discipline	8%	12%	8%	38%	34%	3.78
Take more frequent breaks	14%	30%	14%	24%	16%	2.98
Not a good work environment	10%	20%	16%	22%	32%	3.46
Not very productive	6%	10%	10%	24%	50%	4.02
Family demands attention	16%	20%	10%	32%	22%	3.26
Lack of office equipment	20%	24%	18%	12%	22%	2.92
No access to software & documents	10%	16%	22%	18%	34%	3.50
Internet connectivity issues	8%	20%	16%	38%	14%	3.36
No micro management	16%	22%	12%	26%	24%	3.16
Load shedding	24%	26%	28%	8%	14%	2.62
Longer working hours	52%	16%	12%	12%	6%	2.02
Household chores interruption	20%	22%	22%	20%	16%	2.90
Home schooling interruption	4%	10%	28%	20%	38%	3.78

The data in Table 2 confirms that most respondents agreed that the main disadvantages with remote working were longer working hours (mean=2.02), the effect of load shedding (mean=2.62), household chore interruptions (mean=2.90), a lack of office equipment (mean=2.92) and taking more frequent breaks (mean=2.98). Respondents did not agree much that not being very productive (mean=4.02), lack of discipline (mean=3.78), home schooling interruption (mean=3.78), and no access to software and documents (mean=3.50) were disadvantages of working remotely. The reason why home schooling interruption, household chore interruption, family demands and too many distractions were not major disadvantages of working from home, is possibly due to the fact that the sample size consisted largely of a young age group, of which many do have the added responsibilities of children and chores whilst at home. People are now working longer hours than they did prior to working remotely. On average, employees are working roughly three hours more per day when working from home (Howington, 2020). The reason for this would be that it is more difficult to keep track of time at home in contrast to the office; you do not really have to commute anymore which usually signals the start and end of a day. In order for people to work from home, they need a stable Internet connection and power; load shedding in South Africa makes remote working less viable without other forms of backup power such as a generator. Load shedding has a major effect on productivity levels of an employee; they could lose between three to four hours at a time due to load shedding. The lack of office equipment leads to ergonomic problems and people can suffer from injuries and the discomfort can hinder productivity when working remotely.

Table 3: Suggested ways to improve working remotely

	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree	Mean
More user-friendly IT systems	30%	36%	26%	4%	4%	2.16
Access to IT solution if problem arises	32%	38%	22%	4%	4%	2.10
Flexible working hours	56%	34%	4%	0%	6%	1.66
Allow certain employees into offices if remote working is a challenge	54%	26%	14%	0%	6%	1.78
Assistance with data & Internet	52%	30%	10%	4%	4%	1.78
Encourage video call meetings	46%	28%	14%	10%	2%	1.94
Supervise progress regularly	14%	30%	30%	18%	8%	2.76
Make available resources & equipment	42%	34%	16%	0%	8%	1.98
More access to software & documents	34%	30%	26%	2%	8%	2.20
Provide adequate support systems	42%	34%	16%	2%	6%	1.94
Employer must consider challenges with working remotely	54%	38%	2%	0%	6%	1.66

Table 3 indicates that the main suggestions for improvement were flexible working hours (mean=1.66), employer to consider challenges of working remotely (mean=1.66), assistance with data and Internet (mean=1.78), allowing certain staff to use offices occasionally (mean=1.78), provide adequate support systems (mean=1.94), encourage online meetings (mean=1.94) and make more resources and equipment available. Flexible working hours are what employees think could be improved when it comes to remote working. A flexible work schedule is one that allows employees to work when and where they will be most productive – they are not bounded by rigid work hours (Work-Life, 2020). The main reason that flexible working needs to be improved is that for millennials, job satisfaction matters more than having a higher salary and within the next two years, millennials will occupy more than 50% of the workforce (Work-Life, 2020). Employees stated that an adequate support system was also a suggested way in which working remotely could be improved. At times, employees may be facing difficulty with adapting to their new work routine and do not have the sufficient support in order to help them overcome this. Adequate resources are required for optimal work to be performed at home by employees. Many companies have allowed their employees to take home their required equipment such as computer hardware and office chairs, however this is not mandatory for all companies. This could be as a result of some companies having limited resources to supply all employees; this is an ergonomic risk and can hinder productivity.

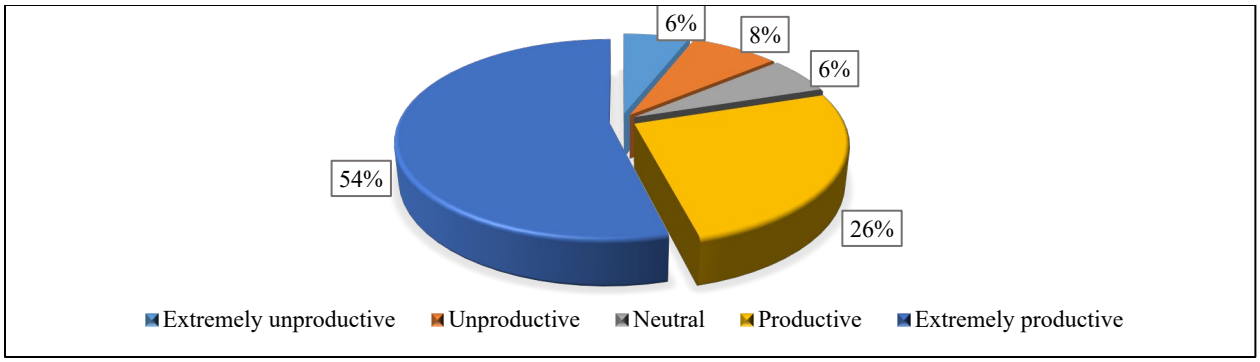

Figure 8: Level of productivity whilst working remotely

Many respondents indicated that their level of productivity working from home was extremely productive (54%) and productive (26%), whilst a small proportion stated that they were unproductive (8%) and extremely unproductive (6%) (Figure 8). One of the main reasons as to why people believe that they are more productive is because remote working results in less time used for commuting (Caramela, 2020). People who work from home tend to work longer hours and get more done; although this can be demanding on their work-life balance and mental health, it results in more productivity in the majority of people. Before COVID-19, many companies feared letting employees work from home as they believed that they would be less productive. On the contrary, these results of this study, along with other studies (Caramela, 2020) confirm that employees are fairly productive working from home.

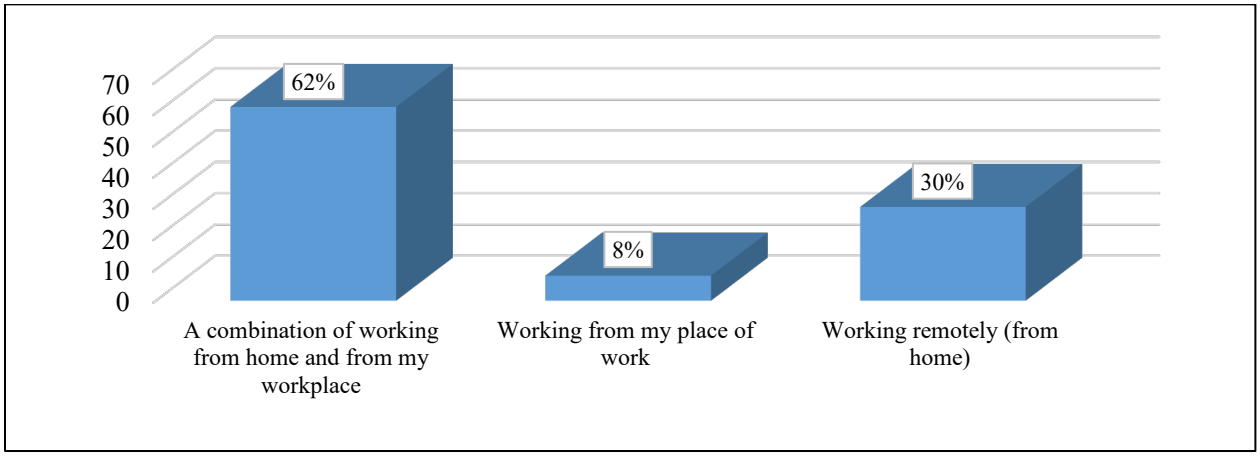

Figure 9: Overall working preference

As indicated in Figure 9, a number of respondents (62%) preferred a combination of working from home and their workplace, whilst 30% preferred working from home. Only 8% of respondents stated that they prefer working from their place of work. Having a combination of working from home with working from a workplace would provide the correct balance of being both flexible and productive. Remote working gives you more flexibility, reduces commuting and is said to increase productivity, but interaction with people is equally as beneficial, especially for mental well-being.

4. Conclusion

The purpose of this research was to determine the effect that remote working had on productivity levels in South Africa. Moreover, the study examined the advantages and disadvantages of working remotely during the COVID-19 pandemic lockdown. The results of the research show that the majority of respondents felt that they were fairly productive when working remotely, however, the majority also noted that they would prefer a combination of working

from both the workplace and from home. Optimal productivity levels can be achieved with minimal distractions and a balance between work and home life, and this study suggests that this balance is difficult to maintain due to a number of problems. Overall, the problems encountered that had a significant affect with remote working productivity in South Africa was load shedding, maintaining a work-life balance and having the correct equipment and furniture.

In light of the findings of this study, the following recommendations are made to improve the environment and productivity levels of working remotely in South Africa. The recommendations are based on the main causes of a reduction in productivity as shown in the diagram below:

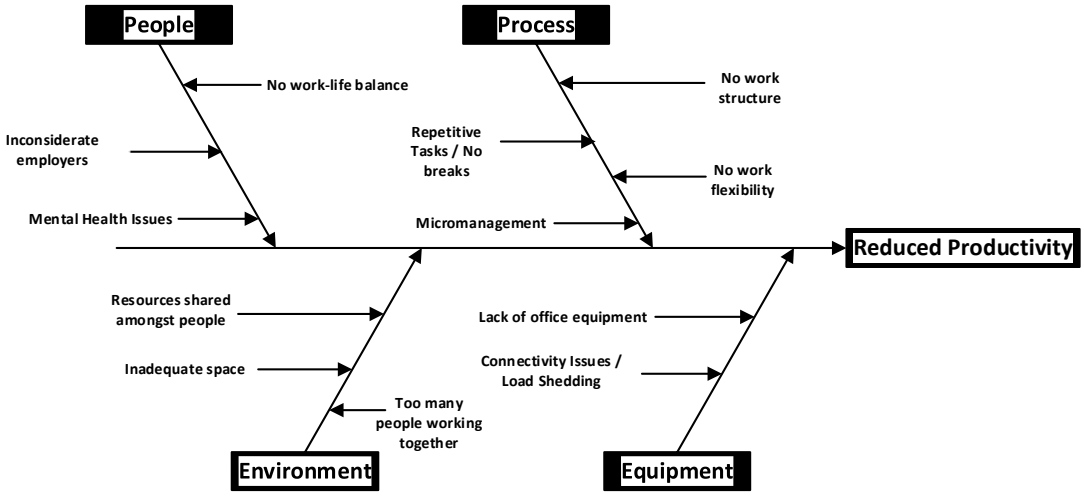

Figure 10: Cause and effect diagram showing factors that reduce productivity

5. Recommendations

- To overcome the challenge of limited technological knowledge, employees should be appropriately trained and should have mentors to assist them in learning how to engage in an online platform for their specific work. There should be online resources to assist people in any technical issues they may have when online after hours with nobody to call.
- Employees working from home must take regular breaks; when in a traditional office environment, breaks are always taken, but at home it is often forgotten. Taking time off is also essential in order to maintain this balance.
- It is also important to structure your day as you would in an office – without this rigid structure it is easy to lose track of time. This could be assisted by using an app that is designed to help you assign tasks that need to be completed by a certain time in the day. There are many apps that currently exist (many have gained popularity post lockdown); these apps assist in helping employees organize their days and keep them up to date with the milestones that need to be completed. Certain apps generate time sheets and analysis of results in terms of how completion of tasks were carried out throughout the day, week or month. This is an important tool and would benefit the employer and employee; the employee would be able to manage their time effectively and the employer would be able to do a performance analysis more effectively.
- It is important for companies to know how to implement a flexible working schedule; how to basically optimize implementing a flexible work schedule. One way of providing a flexible work schedule is through job sharing where two people can work on the same task in order to enhance problem-solving and make high-peak workloads more manageable. Compressed work schedules can also be a solution to providing employees with a more flexible work schedule. A compressed work schedule is when an employee works a full week

with the required number of hours in fewer days than the usual schedule. A shorter work week is able to assist employees in being more productive while maintaining their personal life.

- The reduction of tedious and repetitive tasks could assist employees in handling their work load, especially when trying to establish a home-life balance. This can be achieved by having automation-driven solutions which will take care of repetitive tasks and allow employees to focus more on creative and higher-level thinking work.
- The mental health of employees should be taken into consideration at all times, especially during times of a pandemic and having to adjust to new work routines. It is the duty of employers to always communicate and establish the well-being of their employees and the way in which this could be improved. Surveys can be sent out regularly to identify the issues that employees may have and assistance should always be available for employees to cope.
- Since the majority of respondents prefer a combination of remote working and office working, companies should implement having both. One of the ways of doing this is by having office space that can be booked in when an employee wants to come into work – a system will be created where an employee enters their details and books an office space (such as desk and equipment) to use on the days they want to come in. In this way, the company can reduce real estate costs by having smaller building with fewer offices that do not really belong to employees – but instead are hired out spaces when employees do not or cannot work remotely.

To ensure the productivity levels, remain optimal and further increase, companies as well as employees should look to implement the solutions and recommendations provided in this study. Ensuring that remote working always remains effective requires continuous improvement and keeping up to date with global trends and technology to enhance an employee's experience. Future research can be conducted relating to different samples of the population; people in certain age groups may feel differently due to different responsibilities in their lives. The limitation of this study is that it was done on employees only, and therefore the perspective on productivity levels is only from that of employees. An employer's perspective will be different with different solutions and recommendations; therefore, further research will be required in this area.

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