Teleworking and Stress Factor Amidst COVID-19 Pandemic in Total Nigeria

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ABSTRACT

Teleworking and Covid-19 Pandemic has become an emerging topic in business literature. However, very few studies have related both variables to stress management among employees. This study adopted the ex-post facto research design with a sample size of 346 and valid questionnaire of 330 indicating a 95.38% respondents’ rate to investigate the relationships between the dimensions of teleworking; regular home-based, high mobile and occasional patterns during Covid-19 Pandemic and the stress factor among Total Nigeria employees. The demographic data were presented with use of pie charts and graphical representations while Pearson correlation analysis was adopted to test the four hypotheses. The empirical analysis revealed significant and positive relationships between regular home-based teleworking and high mobile teleworking during the Covid-19 Pandemic lockdown and the stress factor of Total Nigeria employees. However, there was no significant relationship found between occasional teleworking during the Covid-19 Pandemic lockdown and stress of Total Nigeria employees. Finally, teleworking during the Covid-19 Pandemic lockdown significantly contributed to the general stress level of Total Nigeria employees. Recommendations were made and areas for future studies highlighted.
1 Introduction

Background to the study

Many organizations and individuals are increasingly seeing the need to work from home or away from the traditional workplace for so many reasons (Belzunegui-Eraso, & Erro-Garcés, 2020; Hatayama, Viollaz & Winkler, 2020). Given the increasing growth and development of technology, this need has been adequately fulfilled in recent times by the emerging work mode known as teleworking. This mode of working, which originated in the 70s, has incited a lot of interests in recent academic and scientific studies of the organizational structure (Belzunegui-Eraso, & Erro-Garcés, 2020; Hatayama, Viollaz & Winkler 2020; Andriessen, 1991).

In Nigeria, as in some other countries of the world, teleworking was very unpopular in academic literature until the advent of the recent Covid 19 pandemic lock down which inhibited human and vehicular movements except for people on very essential duties (Amzata, Aminub, Kolo, Akinyele, Ogundairo & Danjibo, 2020; Belzunegui-Eraso, & Erro-Garcés, 2020; Hatayama, Viollaz & Winkler 2020; WHO, 2020; ILO, 2020; CGTN Documentary). Yet, the risks of being exposed to and/or contracting and spreading the disease which the Nigerian health sector fought aggressively to curb its menace, was too much to be taken for granted. The Nigerian government as well as many governments of the world encouraged total lock to prevent the spread (CDC, 2020; NCT, 2020). As a result of this development, many organizations with jobs that could be done from home and away from the traditional office with the use of ICT introduced teleworking (Belzunegui-Eraso, & Erro-Garcés, 2020; Hatayama, Viollaz & Winkler 2020; ILO, 2020; Surabhi & Gustafsson, 2020).

As much as teleworking has certain appeals, it also has its challenges. These challenges which range from health to communication, transportation/traffic, productivity, and autonomy issues have been the focus of recent related studies (Konradt, Schmook, Wilm, & Hertel, 2000; Büssing, 1998; Mundorf, Meyer, Schulze, & Zoche, 1994; Andriessen, 1991). Some researchers have also conducted studies on gendered issues in teleworking (Belzunegui-Eraso, & Erro-Garcés, 2020; Tremblay, 2003; Mann & Holdsworth, 2003; Duxbury & Higgins, 1991). Consequently, this study is aimed at consolidating other studies that have been conducted on teleworking and stress issues with the aim of identifying the specific types of teleworking and their relationship with the stress experienced by employees of Total Nigeria during the Covid-19 pandemic lockdown.
Objectives of the Study

In view of the above, the objectives of the study were limited to the following;

1. To determine the relationship between regular home-based teleworking during the Covid-19 Pandemic lockdown and stress of Total Nigeria employees
2. To investigate the relationship between high mobile teleworking during the Covid-19 Pandemic lockdown and stress of Total Nigeria employees
3. To determine the relationship between occasional teleworking during the Covid-19 Pandemic lockdown and stress of Total Nigeria employees
4. To establish if teleworking contributed significantly to general stress level of Total Nigeria employees during the Covid-19 Pandemic lockdown

Research Hypotheses

Hypotheses formulated for testing were;

1. There is no significant relationship between regular home-based teleworking during the Covid-19 Pandemic lockdown and stress of Total Nigeria employees.
2. There is no significant relationship between high mobile teleworking during the Covid-19 Pandemic lockdown and stress of Total Nigeria employees.
3. There is no significant relationship between occasional teleworking during the Covid-19 Pandemic lockdown and stress of Total Nigeria employees.
4. Teleworking during the Covid-19 Pandemic lockdown did not significantly contribute to general stress level of Total Nigeria employees.

2 Review of Literature

The Covid-19 Pandemic and Lockdown Approach towards curbing its effects

The world was thrown into a pandemonium as the Chinese government reported the emergence of another type of virus, in December, 2019, a novel pathogen SARS-CoV-2, known as COVID-19 after the year of its discovery (WHO Situation Report-198). Within the first few months of its discovery, it had spread and affected thousands of communities and individuals all over the world (Chenneville, Gabbidon, Hanson and Holyfield, 2020). By March 11, 2020, the World Health Organization (WHO) declared the dreaded virus/disease a pandemic which necessitated the close down of international, national and territorial boundaries (Mirzaei, McFarland, Karamouzian & Sharifi, 2020). This development caused a lock down of people and economies as well (Zheng, 2020; Dauby, 2020; CGTN 2020 Documentary). Statistics of suspected, confirmed and death cases from the viral disease was on the rise between March and
September, 2020 (Dauby, 2020; Verma & Gustafsson, 2020;https://ncdc.gov.ng/reports/weekly) making livelihood a total strain. The fear of corona virus with its devastating effects on economies all over the world and the need to stay safe made teleworking the acceptable method of operation at the time because besides accomplishing work outside the traditional offices, series of meetings were held virtually which allowed work to go on while maintaining safety rules (Chenneville, Gabbidon, Hanson & Holyfield, 2020; Dauby, 2020; Verma & Gustafsson, 2020; Zheng). Thus, teleworking was compulsorily the only option for most organizations which had no arrangement to cope with the new normal approach or physically distancing mode of work. Although, it was a necessary option or an advantage at a time of partial and total lockdown of economic activities with a view to ensuring social distancing, but it came at a cost to both the employer and employees.

**Teleworking and Stress Management during the Covid-19 Pandemic Lockdown**

Teleworking affords workers opportunity to work outside the traditional office. It is a computer-mediated work form that decentralizes work away from the main organization (Konradt, Schmook, Wilm, Hertel, 2000). Olszewski and Mokhtarian, (1994) see teleworking (telecommuting) as a mode of working from home or in the neighborhood near to home, during regular working hours (but not necessarily every day) and communicating with the main office by means of telephone, fax, or modem. The definition given by Euro found and ILO(2017), cited in ILO (2020), is that it is “use of information and communications technologies ICTs), such as smartphones, tablets, laptops, and desktop computers, for work that is performed outside the employer’s premises. In other words, telework implies work achieved with the help of ICTs and conducted outside the employer’s locations”. Korte and Wynne, (1996) opine that with this arrangement, work can be carried on in offices that have no or low levels of infrastructure.

The advantages of this mode of operation include expediting work and family-related tasks, creating work hours autonomy/flexibility, with extra savings on money and time from commuting, reduced interruptions, etc. the cons of this arrangement include that it poses strain on health, communication, gender issues, quality of life and work (Konradt, Schmook and Mälecke., 2000; Büssing, 1998; Chapman, Sheehy, Heywood, Dooley & Collins, 1995; Mundorf, Meyer, Schulze & Zoche, 1994; Andriessen 1991).

Baruch and Nicholson (1997), have identified organizational factors, job factors, family/home factors and individual factors as the four factors that influence telework. Organizational factors
include strategy and culture; job factors include nature and technology; home and family factor include while individual factors include personality and situation. They highlighted that these four factors need to be fulfilled for telework to become feasible and effective. ILO (2020) further observes that organizations need to formulate teleworking policies as essential part of their continuity plan, for eventualities such as terrorism, terrible weather or pandemic which could obstruct the possibility of reporting in the office for normal office duties.

**Regular Home-Based Teleworking during the Covid-19 Pandemic Lockdown**

Harris (2003), defines home-based telework as a system that allows some employees to work from the home on a regular basis, or use home as a base, though few people wish to work at home full time as demonstrated by several scholars (Olszewski & Mokhtarian, 1994). Although this mode of teleworking relies heavily on working from home, being in the office sometimes is not ruled out (Sardeshmukh, Sharma, & Golden, 2012; Nätti, Tammelin, Anttila, & Ojala, 2011; Golden, Veiga, & Simsek., 2006; Madsen, 2003; Mann and Holdsworth, 2003; Nilles, 1994). Aguiléra, Lethiais, Rallet and Proulhac (2016), asserted that home-based teleworking was of limited practice and reserved only for a few intellectual professionals characterized by a considerable amount of job autonomy and with limited potential for development. Factors that have been indicated to determine the potentiality of working from home include; economic and occupational structure of the community; the portion of work amenable to teleworking; access to broadband internet; and ownership of a personal computer (ILO, 2020; Hatayama, Viollaz & Winkler, 2020).

**High Mobile Teleworking during the Covid-19 Pandemic Lockdown**

Sardeshmukh, Sharma, Golden (2012), have identified working in satellite offices or other remote locations away from home as another type of teleworking. According to Belzunegui-Eraso, and Erro-Garcés (2020), "high mobile telework refers to employees working in several places regularly, with a high level of mobility and using ICT. Use of technology takes place always or almost all the time and the location could be two others than the traditional organizational office at least several times a week or working daily in at least one other location. This mode of teleworking though frequently used, is not as common as the home-based teleworking.

**Occasional Teleworking during the Covid-19 Pandemic Lockdown**
Occasional teleworking involves the use of technology always or almost all the time at fewer locations and less frequently than regular home-based and high-mobile teleworking. According to Lopez-Igual and Rodriguez-Modrono (2020), occasional teleworkers are usually male managers or professional. Their job descriptions/expectations rarely require consistent activities.

**Stress Factor among Teleworking Employees**

Broman-Fulks and Kelso (2012); and Michie, (2002) have attested to stress being a fact of life. According to Broman-Fulks and Kelso (2012), stress is the “emotional, cognitive, behavioral and psychological reactions a person experiences in response to environmental threats or demands”. Michie (2002), sees it as “the psychological and physical state that results when the resources of the individual are not sufficient to cope with the demands and pressures of the situation”. It is “the way human beings react both physically and mentally to changes, events, and situations in their lives” ([www.uakron.edu](http://www.uakron.edu)).

Teleworking poses a lot of stress on the employees because of its inherent disadvantages. According Mann & Holdsworth (2003), social isolation, presenteeism, lack of support, career progression, blurring of boundaries, etc., are some of the disadvantages that pose psychological stress on the teleworker (Montreuil & Lippel, 2003; Ellison, 1999; Standen, Daniels & Lamond, 1999; Turner, 1998; Gray, 1995; Clark, 1994; Huws, 1984; Duxbury & Higgins, 1991).

### 3 Methodology

**Research Design**

The researcher adopted the online Expost-Facto Survey to obtain information from respondents. The design was appropriate because the events sought to be studied happened in the past and information from the respondents were obtained on the recall of these events.

**Population/ Sample Size/ Sampling Techniques**

The population of the study consisted of 2,556 employees of Total E & P Ltd and Total Upstream Nigeria Ltd, located in Port Harcourt and Lagos, Nigeria. The sample size was 346 and was calculated by using the Taro Yamene’s formula as recommended by (Uford and Etim, 2018), for determining sample size.

According to Yamene’s formula, \( n = \frac{N}{1+N(e)^2} \) where;

\( n = \) sample size =?
N = population size = 2556

e = error level of significance = 5% i.e. 0.05

Hence:

\[ n = \frac{N}{1+N(e)^2} = \frac{2556}{1+2556(0.05)^2} = \frac{2556}{1+2556(0.0025)} = \frac{2556}{1+6.39} = \frac{2556}{7.39} = 345.8 \approx 346. \]

The samples were randomly selected using the list of emails of employees which were made available on request. The instruments were administered electronically via Microsoft online questionnaire.

**Instrument for Data Collection**

A self-constructed questionnaire was the instrument used in collecting primary data for the study. It was structured in two parts. The first part solicited for personal data of the respondents while the second part sought for responses relating to the statements presented on the various proxies used as variables for the study.

**Validity/reliability of the instrument**

Validity and reliability of the test instrument are very important in ensuring that the instrument measures what it is intended to measure and is consistent in this measurement over time in order to guarantee the quality of study.

The face validity of the instrument was tested by subjecting it to the assessment in Test and Measurement by two Senior Lecturers at the Akwa Ibom State University. The relevance of each item in relation to the objectives of the study was examined by the experts who ensured that the instrument was valid. For reliability, the respondents were allowed to complete the questionnaire online at their convenience. This was done to ensure their comfort and relaxation while filling out the copies of questionnaire to prevent errors.

**Data Analysis Techniques**

Data for the study were analysed descriptively using frequencies, percentages, graphs and charts, mean and standard deviation. Personal data of the respondents were analysed using percentages of regular home-based teleworking; high mobile teleworking; occasional teleworking and stress factor on charts. Statements on the variables of the study (were analysed using mean and standard deviations. Microsoft Excel package and Statistical Package for Social Sciences (SPSS) for statistical data were used to obtain the results for the study.

**4 Results and Discussion**

**4.1 Questionnaire Administration**
Table 4.1 Questionnaire Administration

<table>
<thead>
<tr>
<th>Respondents</th>
<th>No. of Distributed Questionnaire</th>
<th>%</th>
<th>No. of Returned Questionnaire</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>263</td>
<td>76.01</td>
<td>252</td>
<td>76.36</td>
</tr>
<tr>
<td>Female</td>
<td>83</td>
<td>23.99</td>
<td>78</td>
<td>23.64</td>
</tr>
<tr>
<td>Total</td>
<td>346</td>
<td>100</td>
<td>330</td>
<td>95.38</td>
</tr>
</tbody>
</table>


Table 4.1 explained the copies of questionnaire administered to the respondents and returned copies. From the Table, a total of 346 copies of questionnaire were administered to the respondents, from the administered copies, 330 copies of the questionnaire were properly filled and returned to the researcher. Implying that, 16 copies of the questionnaire were either not returned or unusable. In effect, three hundred and thirty (330) respondents representing 95.38% respondents’ rate constituted the authentic sample size of the study.

4.1.2 Bio-Data of the Respondents
The bio-data of staff of Total E & P Ltd and Total Upstream Nigeria Ltd were analyzed and presented as follows:

4.1.1 Age of respondents

Figure 4.1: Distribution of Respondents according to their Ages


The age distribution of the respondents revealed that, 55% of the respondents were within 36 – 45 years of age, followed by 30% of the respondents who were between 25 – 35 years of age. In addition, 12% of the respondents were between 46 – 55 years of age. Finally, only 3.03% (10 respondents) were above 55 years of age. This implies that the workforce of Total Nigeria Plc encompassed mature persons in their vigorous and productive years (31 – 45) who are able to tackle daily challenges of the business organization in order to ensure that common goal are realized as at when due.
4.1.2. Marital status of respondents

Figure 4.2: Distribution of respondents according to their marital status

Source: Field Survey, 2020

From figure 4.2, the marital status indicates that 76% of the respondents were married, 18% were single, while 3.0% were separated and divorced respondents were also 3.0%. These imply that, most of the respondents are married and agree with the findings of Reddy, Vranda, Ahmed, Nirmala and Siddaramu (2010), which affirmed that there is a work-life balance among married people in a business organization as they will take cognizance of economic need as being the primary reason given for working. Thus, married people put in their best to actualize the common goal of business organization in order to avoid layoff.

4.1.3 Education qualification of respondents

Figure 4.3: Distribution of the respondents based to their educational qualification


Figure 4.3 revealed that, 49% of the respondents were certified Master’s Degree holders, followed by 42% of the respondents who were holders of Bachelor’s Degree. The least were 3.0% of the respondents who were Ph.D. holders, Diploma and professional certificate holders accordingly. From this spread, about 94% of the respondents had attended tertiary institutions. This gives an insight to respond critically on the effectiveness of teleworking and stress factor amidst Covid-19 pandemic in Nigeria. As stated by International Labour Office (ILO, 2012),
when it comes to handling sensitive financial data, employees who have the most extensive educational backgrounds are best at forecasting trends and dealing with legal matters. Hence, the tendency of employing highly educated people in Total Nigeria is high as reflected in the result above.

4.1.4 Religious affiliation of respondents

Figure 4.4: Distribution of respondents according to their religious affiliation

![Religious group](image)


Figure 4.4 shows the distribution of the respondents according to their religious affiliation. The result shows that 94% of the respondents were Christians; this was followed by 6% of the respondents as Muslims and none of the respondents were traditional worshippers. The result aligns with appropriate expectations; because the researcher was exposed to Christians dominated regions more than any other religious group.

4.1.5 Place of Residence of respondents

Figure 4.5: Distribution of respondents according to their place of residence

![Residence](image)


From result in Figure 4.5 above, 90.9% of the respondents live within Nigeria, while 9.1% of the respondents reside outside Nigeria. In effect, majority of the staff members residing in the country of operation (including expatriates) are mainly needed to actualize the company’s goal within the period under study.

4.1.6 Monthly Income of respondents
Figure 4.6: Distribution of respondents according to their monthly income

Source: Field survey, 2020

Figure 4.6 above shows the distribution of the respondents’ basic monthly income. The result revealed that, 30.3% of the respondents earned ₦1,500,000 and above per month; followed by 24.2% and 18.2% who earned within ₦400,000 - ₦599,000 and ₦1,000,000 - ₦1,499,000 per month respectively. From this spread, Total Nigeria is one of the highest paying oil companies. The salary structure of Total Nigeria is generally sought after by job seekers in the Nigeria oil and gas sector. The company pays an average of between ₦8,000,000 – ₦12,000,000 per annum to entry level staff (Field Survey, 2020).

4.2 Data Presentation

4.2.1 Relationship between Regular Home-Based Teleworking during the Covid-19 Pandemic Lockdown and Stress of Total Employees

Table 4.2: determine the relationship between regular home-based teleworking during the Covid-19 Pandemic lockdown and stress of Total employees

<table>
<thead>
<tr>
<th>STATEMENTS</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>Total</th>
<th>x</th>
<th>Std.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I worked regularly from home during the Covid-19 Pandemic lockdown</td>
<td>270</td>
<td>40</td>
<td>20</td>
<td>-</td>
<td>330</td>
<td>3.75</td>
<td>0.55</td>
</tr>
<tr>
<td>(81.8)</td>
<td></td>
<td>(12.1)</td>
<td>(6.1)</td>
<td></td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I relied heavily on the use of internet of things (IOT) to accomplish my</td>
<td>230</td>
<td>70</td>
<td>30</td>
<td>-</td>
<td>330</td>
<td>3.60</td>
<td>0.64</td>
</tr>
<tr>
<td>work expectations during the Covid-19 Pandemic lockdown</td>
<td></td>
<td>(21.2)</td>
<td>(9.1)</td>
<td></td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(69.7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had much work to do during the Covid-19 Pandemic lockdown than the</td>
<td>170</td>
<td>90</td>
<td>60</td>
<td>10</td>
<td>330</td>
<td>3.27</td>
<td>0.86</td>
</tr>
<tr>
<td>conventional office pattern.</td>
<td></td>
<td>(27.3)</td>
<td>(18.2)</td>
<td>(3.0)</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(51.5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I worked in other locations outside my home and outside the premises of</td>
<td>97</td>
<td>91</td>
<td>71</td>
<td>71</td>
<td>330</td>
<td>2.62</td>
<td>1.11</td>
</tr>
<tr>
<td>Total Nigeria, during the Covid-19 Pandemic lockdown</td>
<td></td>
<td>(27.6)</td>
<td>(21.5)</td>
<td>(21.5)</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(29.4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My having to work from other locations was strictly because of the</td>
<td>100</td>
<td>80</td>
<td>100</td>
<td>50</td>
<td>330</td>
<td>2.69</td>
<td>1.06</td>
</tr>
<tr>
<td>Covid-19 Pandemic lockdown</td>
<td></td>
<td>(24.2)</td>
<td>(30.3)</td>
<td>(15.2)</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(30.3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field survey, 2020; Note: Values in parenthesis are percentage; values without parenthesis are frequencies.
The Table above examined the relationship between regular home-based teleworking during the Covid-19 Pandemic lockdown and stress of Total Nigeria employees. The result showed that, 93.9\% of the respondents worked regularly from home during the Covid-19 Pandemic lockdown. Out of 330 respondents, 90.9\% of them relied heavily on the use of internet of things (IOT) to accomplish their work expectations during the Covid-19 Pandemic lockdown. More so, 78.8\% of the respondents had much work to do during the Covid19 Pandemic lockdown than the conventional office pattern. Although 57.0\% of the respondents worked in other locations outside their home and outside the premises of Total Nigeria, 54.5\% of them commented that working from other locations were strictly because of the Covid-19 Pandemic lockdown. This implies that about 45.5\% of them had been working from other locations before the Covid-19 lockdown. Based on the decision rule that, a mean value > 2.5 is accepted while a mean <2.5 is rejected, it is obvious that, there is a significant relationship between regular home-based teleworking during the Covid-19 Pandemic lockdown and stress of Total employees since all of the five related questions have a mean value above 2.5.

**Trend Analysis**

![Figure 4.7: Analysis of Regular Home-Based Teleworking and Stress of Employees](image)

From the result in the trend analysis above, the regular home-based teleworking was calculated on hours per day and level of stress was gotten from number of tasks to be completed per day. As shown in the graph, increase in regular home-based teleworking leads to increase in stress of Total employees and vice versa. Thus, regular home-based teleworking contributes significantly on stress of Total employees during Covid-19 Pandemic lockdown.

### 4.2.2 The relationship between high mobile teleworking during the Covid-19 Pandemic lockdown and stress of Total employees

**Table 4.3:** The relationship between high mobile teleworking during the Covid-19 Pandemic lockdown and stress of Total employees

| STATEMENTS | SA | A | D | SD | Total | $\bar{x}$ | Std. |
|------------|----|---|---|----|-------|----------|------|-----|
I was required to work from other locations less frequently because of the Covid-19 Pandemic lockdown

<table>
<thead>
<tr>
<th>Even though I had to work from other facilities during the Covid-19 Pandemic lockdown, I used less of IOT enablement</th>
</tr>
</thead>
<tbody>
<tr>
<td>It was so much stressful having to work from home during the Covid-19 Pandemic lockdown</td>
</tr>
<tr>
<td>The stress was as a result of having to work more hours from home during the Covid-19 Pandemic lockdown than the average eight hours daily</td>
</tr>
<tr>
<td>The stress was as a result of having to significantly reduce my break period (less than 2 hour) during the duration of working from home due to the Covid-19 Pandemic lockdown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I was required to work from other locations less frequently because of the Covid-19 Pandemic lockdown</th>
<th>120 (36.4)</th>
<th>90 (27.3)</th>
<th>80 (24.2)</th>
<th>40 (12.1)</th>
<th>330</th>
<th>2.88</th>
<th>1.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Even though I had to work from other facilities during the Covid-19 Pandemic lockdown, I used less of IOT enablement</td>
<td>40 (12.1)</td>
<td>40 (12.1)</td>
<td>160 (48.5)</td>
<td>90 (27.3)</td>
<td>330</td>
<td>2.08</td>
<td>0.94</td>
</tr>
<tr>
<td>It was so much stressful having to work from home during the Covid-19 Pandemic lockdown</td>
<td>190 (57.6)</td>
<td>80 (24.2)</td>
<td>60 (18.2)</td>
<td>330</td>
<td>3.39</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>The stress was as a result of having to work more hours from home during the Covid-19 Pandemic lockdown than the average eight hours daily</td>
<td>200 (60.6)</td>
<td>90 (27.3)</td>
<td>40 (12.1)</td>
<td>330</td>
<td>3.48</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>The stress was as a result of having to significantly reduce my break period (less than 2 hour) during the duration of working from home due to the Covid-19 Pandemic lockdown</td>
<td>136 (41.2)</td>
<td>71 (21.5)</td>
<td>102 (30.9)</td>
<td>21 (6.4)</td>
<td>330</td>
<td>2.97</td>
<td>0.99</td>
</tr>
</tbody>
</table>

Source: Field survey, 2020: Note: Values in parenthesis are percentage; values without parenthesis are frequencies

From the result above, most of the respondents (60.6%), strongly agreed and (27.3%) agreed that stress was as a result of having to work more hours from home during the Covid-19 Pandemic lockdown than the average eight hours daily. This totals 87.9% agreement rate and it is supported by 81.8% of the respondents who strongly agreed/agreed that it was so much stressful having to work from home during the Covid-19 Pandemic lockdown. On the other side, 62.7% of the sampled staff stated that, their stress was as a result of having to significantly reduce my break period (less than normal 2 hours) during the duration of working from home due to the Covid-19 Pandemic lockdown. More so, 63.7% of the respondents were required to work from other locations less frequently because of the Covid-19 Pandemic lockdown. Against the backdrop, 75.8% of the respondent disagreed/strongly disagreed that even though they had to work from other facilities during the Covid-19 Pandemic lockdown, they used less of internet of things (IOT) enablement. This means that additional cost of IOT wasn’t the cause of their stress. Only 37.3% of the respondents strongly disagreed/disagreed that, stress was as a result of having to significantly reduce my break period (less than 2 hour) during the duration of working from home due to the Covid-19 Pandemic lockdown. Considering the mean variance for decision rule, it’s reflected that, four out of five related questions have a mean value above 2.5. Hence, it is evident that, there is a significant relationship between high mobile teleworking during the Covid-19 Pandemic lockdown and stress of Total employees. However, this was not as a result of incurring additional cost because they are well paid.
Figure 4.8: Analysis of high mobile teleworking and stress of employees

As shown from the trend analysis above, the use of high mobile facilities leads to stress of Total employees. This is because, with high mobile equipment employees are delegated with more tasks to accomplished within a period. Thus, employee devote most of their time to official activities coupled with household responsibilities. Hence, increase in high mobile teleworking leads to increase in stress of Total employees and vice versa. In conclusion, high mobile teleworking contributes significantly on stress of Total employees during Covid-19 Pandemic lockdown.

4.2.3 Determine the Relationship between Occasional Teleworking during the Covid-19 Pandemic Lockdown and Stress of Total Employees

Table 4.4: Relationship between occasional teleworking during the Covid-19 Pandemic lockdown and stress of Total employees

<table>
<thead>
<tr>
<th>STATEMENTS</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>Total</th>
<th>(\bar{x})</th>
<th>Std.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The stress was as a result of having to significantly reduce my private/personal time during the duration of working from home due to ease of accessibility and no formal closure time during the Covid-19 Pandemic lockdown</td>
<td>180</td>
<td>70</td>
<td>80</td>
<td>-</td>
<td>330</td>
<td>3.30</td>
<td>0.83</td>
</tr>
<tr>
<td>The stress was as a result of having to significantly increase my data subscription and electricity bills during the duration of working from home due to the Covid-19 Pandemic lockdown</td>
<td>150</td>
<td>100</td>
<td>50</td>
<td>30</td>
<td>330</td>
<td>3.12</td>
<td>0.98</td>
</tr>
<tr>
<td>It was so much stressful having to work from other facilities because of the Covid-19 Pandemic lockdown</td>
<td>90</td>
<td>100</td>
<td>100</td>
<td>40</td>
<td>330</td>
<td>2.73</td>
<td>0.99</td>
</tr>
<tr>
<td>I experienced less stress because my workload during the Covid-19 Pandemic lockdown was less or the process was seamless</td>
<td>-</td>
<td>60</td>
<td>160</td>
<td>110</td>
<td>330</td>
<td>1.85</td>
<td>0.70</td>
</tr>
</tbody>
</table>
The reduction in stress was as a result of having a flexible working duration during the period of working from home due to the Covid-19 Pandemic lockdown (7.9) (40.3) (27.6) (24.2) 100

Source: Field survey, 2020: Note: Values in parenthesis are percentage; values without parenthesis are frequencies

Table 4.4 examined the relationship between occasional teleworking during the Covid-19 Pandemic lockdown and stress of Total employees. The result revealed that, 75.7% of the respondents strongly agreed/agreed that their stress was as a result of having to significantly reduce private/personal time during the duration of working from home, due to ease of accessibility and no formal closure time during the Covid-19 Pandemic lockdown. Similarly, 75.7% of the respondents strongly agreed/agreed that their stress was as a result of having to significantly increase mobile data subscription and electricity bills during the duration of working from home due to the Covid-19 Pandemic lockdown. Surprisingly, his is contrary to the results from high mobile teleworkers. Maybe, they could be compensated for handling more frequent (high mobile) tasks than occasional teleworkers. Although, 48.2% of the respondents posited that, reduction in stress was as a result of having a flexible working duration during the period of working from home due to the Covid-19 Pandemic lockdown, 51.2% did not agree to this position. More so, 57.6% supported that it was so much stressful having to work from other facilities because of the Covid-19 Pandemic lockdown. Against the backdrop, large portion (89.8%) of the sampled staff strongly disagreed /disagreed that, they experienced less stress because their workload during the Covid-19 Pandemic lockdown was less or the process was seamless. From the decision rule, since three out of five related questions have a mean value above 2.5, hence, it signifies that, there is a relationship between occasional teleworking during the Covid-19 Pandemic lockdown and stress of Total employees. However, this relationship is insignificant.

![Graphical presentation of occasional teleworking and stress of employees](image-url)
Graphical presentation of occasional teleworking and stress of Total employees revealed that, working occasionally at home does not significantly contribute to stress of employees. This is because, occasional teleworking involves working at personal allocated times, without any pressure to deliver the task within a specified period. In effect, occasional teleworking insignificantly leads to increase in stress of Total employees during Covid-19 Pandemic lockdown.

4.2.4 Establish if Teleworking contributed significantly to the General Stress Level of Total Employees during the Covid-19 Pandemic Lockdown

Table 4.5: Establish if teleworking contributed significantly to general stress level of Total employees during the Covid-19 Pandemic lockdown

<table>
<thead>
<tr>
<th>STATEMENTS</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>Total</th>
<th>( \bar{x} )</th>
<th>Std.</th>
</tr>
</thead>
<tbody>
<tr>
<td>My ability to cope with the stress was as a result of having to spend quality time (physical presence) with my family during the period of working from home due to the Covid-19 Pandemic lockdown</td>
<td>40</td>
<td>160</td>
<td>70</td>
<td>60</td>
<td>330</td>
<td>2.55</td>
<td>0.92</td>
</tr>
<tr>
<td>My ability to cope with the stress was as a result of having to reduce my time spent in traffic during the period of working from home due to the Covid-19 Pandemic lockdown</td>
<td>56</td>
<td>142</td>
<td>81</td>
<td>51</td>
<td>330</td>
<td>2.60</td>
<td>0.94</td>
</tr>
<tr>
<td>I attest to the fact that the Covid-19 Pandemic lockdown made work very stressful</td>
<td>110</td>
<td>120</td>
<td>60</td>
<td>40</td>
<td>330</td>
<td>2.91</td>
<td>0.99</td>
</tr>
<tr>
<td>I coped effectively with the stress of working during the Covid-19 pandemic lockdown</td>
<td>100</td>
<td>170</td>
<td>60</td>
<td>-</td>
<td>330</td>
<td>3.12</td>
<td>0.68</td>
</tr>
<tr>
<td>Although, I coped effectively with the stress of working during the Covid-19 pandemic lockdown, but I don’t recommend it for a longer duration or to become the new normal</td>
<td>134</td>
<td>103</td>
<td>82</td>
<td>10</td>
<td>330</td>
<td>3.09</td>
<td>0.87</td>
</tr>
</tbody>
</table>

Source: Field survey, 2020. Note: Values in parenthesis are percentage; values without parenthesis are frequencies

In Table 4.5 above, the extent to which teleworking contributes to general stress level of Total employees during the Covid-19 Pandemic lockdown was assessed. The result revealed that, 81.8% of the respondents attest that they coped effectively with the stress of working during the Covid-19 pandemic lockdown. This implies that such stress is not at the extreme. Consequently, a good stress management can suffice. And 60.6% of the respondents strongly agreed/agreed that their ability to cope with the stress was as a result of having to spend quality time (physical presence) with my family during the period of working from home due to the
Covid-19 Pandemic lockdown, while 60.0% of the respondents strongly agreed/agreed that their ability to cope with the stress was as a result of having a reduced time spent in traffic during the period of working from home due to the Covid-19 Pandemic lockdown. From the sampled staff, 72.1% who posited that, although, they coped effectively with the stress of working during the Covid-19 Pandemic lockdown, but they don’t recommend it for a longer duration or to become the new normal.

Fig 4.4: Graphical presentation of teleworking and stress of Total employees during the Covid-19 Pandemic lockdown

Graphical presentation of teleworking and general stress level of Total employees during the Covid-19 Pandemic lockdown revealed that, working at home contributes significantly to stress of employees. This could be because, combination of household responsibilities and official activities leads to pressure and anxiety among staff who engage in teleworking. In practice, regular-home based and high mobile teleworking had significant effect on stress of Total employees during Covid-19 Pandemic lockdown than the occasional teleworking.

4.3 Test of Hypothesis

4.3.1 Test of Hypothesis 1

H0: There is no relationship between regular home-based teleworking during the Covid-19 Pandemic lockdown and stress of Total employees.

Table 4.6: Pearson Correlation coefficient analysis of the relationship between regular home-based teleworking during the Covid-19 Pandemic lockdown and stress of Total employees

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Regular Home-Based</th>
<th>Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.626**</td>
</tr>
</tbody>
</table>
The result of the Pearson correlation matrix showing the relationship between regular home-based teleworking during the Covid-19 Pandemic lockdown and stress of Total employees indicates that there is positive and significant relationship between regular home-based teleworking during the Covid-19 Pandemic lockdown and stress of Total employees. This result aligned with the finding of Belzunegui-Eraso and Erro-Garcés (2020), who studied teleworking in the context of the Covid-19 crisis and their result revealed that teleworking has been implemented for employees working in a specific region that is severely suffering from the Covid-19 crisis. This means the null hypothesis has been rejected and alternative hypothesis accepted.

4.3.2 Test of Hypothesis 2

H02: There is no relationship between high mobile teleworking during the Covid-19 Pandemic lockdown and stress of Total employees.

Table 4.7: Pearson Correlation coefficient analysis of the relationship between high mobile teleworking during the Covid-19 Pandemic lockdown and stress of Total employees.

<table>
<thead>
<tr>
<th></th>
<th>Highmobile</th>
<th>Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.378**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>330</td>
<td>330</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.7 above explained the Pearson correlation matrix showing the significant relationship between high mobile teleworking during the Covid-19 Pandemic lockdown and stress of Total employees. This means the null hypothesis is rejected while the alternative hypothesis is
accepted. The result connotes with appropriate expectations because, access and utilization of high mobile network inspires teleworking and cause stress to employees.

4.3.3 Test of Hypothesis 3

**H0**: There is no relationship between occasional teleworking during the Covid-19 Pandemic lockdown and stress of Total employees

**Table 4.8**: Pearson Correlation coefficient analysis of the relationship between occasional teleworking during the Covid-19 Pandemic lockdown and stress of Total employees

<table>
<thead>
<tr>
<th>Correlations</th>
<th>occasional</th>
<th>stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.130</td>
</tr>
<tr>
<td>Occasional Sig. (2-tailed)</td>
<td></td>
<td>.191</td>
</tr>
<tr>
<td>N</td>
<td>330</td>
<td>330</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.130</td>
<td>1</td>
</tr>
<tr>
<td>Stress Sig. (2-tailed)</td>
<td>.191</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>330</td>
<td>330</td>
</tr>
</tbody>
</table>

The Pearson correlation matrix result of the relationship between occasional teleworking during the Covid-19 Pandemic lockdown and general stress level of Total employees was explained in Table 4.8 above. The result shows that, there is no significant relationship between occasional teleworking during the Covid-19 Pandemic lockdown and stress of Total employees. This implies that working occasionally does not have significant relationship with stress of Total employees during the Covid-19 Pandemic lockdown. In effect, we accept null hypothesis stating that, there is no relationship between occasional teleworking during the Covid-19 Pandemic lockdown and stress of Total employees.

4.3.4 Test of Hypothesis 4

**H0**: Teleworking during the Covid-19 Pandemic lockdown did not significantly contribute to general stress level of Total employees.

**Table 4.9**: Simple Regression Result on effect of teleworking during the Covid-19 Pandemic lockdown on general stress level of Total employees

| Dependent Variable: Stress Method: Least Squares Date: 12/13/20 Time: 14:07 Sample: 1 330 Included observations: 330 |
The coefficient of teleworking (TEL) was statistically significant at 1% level with a positive sign, implying that a unit increase in teleworking leads to 2.307 units increase in general stress level of Total employees. This is in agreement with a priori expectation, spending much time on official duties with combination of household responsibilities contributes synonymously to the general stress level of Total employees during the Covid-19 Pandemic lockdown.

The value (0.443) was observed as $R^2$ (coefficient of multiple determination), implying that, 44.3% variation in the dependent variable was explained by changes in the independent variable, while 55.7% was unexplained by the stochastic terms in the model. Thus, the independent variable (teleworking) can only explain 44.3% of changes in stress of Total employees during the Covid-19 Pandemic lockdown, leaving 55.6% unexplained. The $R^2$ adjusted was 43.8% indicating a goodness of fit of the regression model adopted in this study which is statistically significant at 5% probability level. The Durbin-Watson statistic value was 1.988 which is close to 2.5, implying that there is no evidence of autocorrelation. More so, the F-statistical value of 10.52 and F-probability value of 0.000 was observed from the analysis which is less than 0.05 (95% of freedom), indicating that estimated regression model adopted in this study is statistically significant at 5% level. With this, the researcher rejected the null hypothesis and accept alternative hypothesis hence, teleworking during the Covid-19 Pandemic lockdown significantly contribute to general stress level of Total employees.

5 Concluding Remarks

Findings of the study were drawn from both descriptive and empirical analyses and presented in the data analyses and test of hypotheses sections respectively. Summarily, the bio-data of the respondents showed the following as dominant figures; 55% of the respondents were within 36 – 45 years of age; 76% of the respondents were married; 49% of the respondents were certified Master’s Degree holders; 94% of the respondents were Christians; 90.9% of the
respondents live within Nigeria; 30.3% of the respondents earn monthly, from ₦1,500,000 and above.

In line with the objectives, result from test of hypothesis one indicates that the null hypothesis has been rejected and alternative accepted, which states that there is a significant relationship between regular home-based teleworking during the Covid-19 Pandemic lockdown and stress of Total employees. This implies that the diffusion of new home-based teleworking during the Covid-19 Pandemic at home has made organizations less dependent on co-location of their workers in time, space and stress free. As a consequence, work is increasingly disconnected from traditional office space and office buildings and needs to be conducted in more suitable or convenient places without much stress. In particular, during recent lockdown of Covid-19 pandemic, working from home with the support of computers and telecommunication tools has emerged as a new and promising way of performing work for large segments of the workforce. This phenomenon is usually referred to as distance work, telework (Gray, Hodson and Gordon, 2013).

Similarly, result from test of hypothesis two indicates that the null hypothesis has been rejected and alternative hypothesis; which states that there is a significant relationship between high mobile teleworking during the Covid-19 Pandemic lockdown and stress of Total employees is accepted. The need for mobile technological support associated with this development has resulted in the fast development of technical devices enabling workers to access important information when working away from company premises as reported by (Goudswaard and de Nanteuil, 2010).

On the contrary, result from test of hypothesis three indicates that the null hypothesis; stating that there is no significant relationship between occasional teleworking during the Covid-19 Pandemic lockdown and the general stress level of Total employees is accepted. This could be because, in occasional teleworking, employees working outside their physical offices do so occasionally and with a much lower degree of mobility than the regular home-based and high mobile groups hence, there is no much stress encountered among staff who adopted this technique or type of teleworking. Thus, this method of teleworking, enhance work flexibility and lead to a loss of control over working time by employer while ensuring recreation opportunities to employees.

The empirical analysis revealed significant and positive relationships between regular home-based teleworking and high mobile teleworking during the Covid-19 Pandemic lockdown and
stress of Total Nigeria employees. However, there was no significant relationship found between occasional teleworking during the Covid-19 Pandemic lockdown and stress of Total Nigeria employees. Finally, teleworking during the Covid-19 Pandemic lockdown significantly contributed to the general stress level of Total Nigeria employees.

Implications
More people now opt to work from home due to the expansion of high-speed internet during the recent decades and more specifically the Covid-19 pandemic lockdown. Nevertheless, researchers are still divided as per the effect of the contributions of teleworking (particularly working from the home front) to stress and employees’ well-being in the literature. Hence, this study was conducted to fill the gap by examining the relationship between teleworking and stress factor amidst covid-19 pandemic in Total Nigeria Plc. The significant and positive relationships established between regular home-based teleworking and high mobile teleworking during the Covid-19 Pandemic lockdown with the stress experienced by Total Nigeria employees indicate that these constructs relate. In effect, we concluded that, regular home-based teleworking and high mobile teleworking during the Covid-19 Pandemic lockdown significantly contributed to the stress experienced by Total Nigeria employees than the occasional teleworking.

Recommendations
Based on the results and findings, the researcher recommended the following:
1. There is need for subsidiaries of Total Nigeria to map-out a standard time-table for occasional teleworking. This will help to reduce the level of stress and inspire commitment as at when due.
2. Since teleworking greatly depends on technology and technical equipment, there is need for Total Nigeria to make provisions for adequate mobile facilities. If the employees have access to the appropriate technology, equipment, productivity tools and technical/logistic supports, their stress level will reduce.
3. If there are electrical power outages or disruptions of the internet network, there could be difficulty in sending heavy work files between employees; thus, decreasing their productivity. Thus, power and internet solutions to employees’ systems must also be addressed.

Limitations and Area of Further Studies
One limitation to this study is that the survey was administered online and not physically, hence it hinders opportunity for some respondents who would have sought for further clarifications on some questions, since it is an emerging business issue. Based on the fact that this study is an emerging business topic, the study is limited to the fact that it focused only on employees in the oil and gas sector in two states in Nigeria who are believed to be well remunerated and as such hinders their stress factors.

Furthermore, there appears to be no consensus in the literature on the causes of stress to different genders. Consequently, it would be appropriate if further research should aim at gender differences of teleworkers and stress; socioeconomic factors affecting teleworking among employees of other business sectors in Nigeria and management of stress among male and female teleworkers during COVID-19 pandemic lockdown.

References


