



Article

Daily Work Hours, Work-Life Balance and Occupational Mental Health of Remote Workers in Nigeria

Temitope E. Omosebi * and David E. Okurame

Department of Psychology, University of Ibadan, Ibadan 200005, Nigeria

* Correspondence: eomosebi@gmail.com

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Abstract: Remote working is characterised by long daily work hours. Yet there are few empirical studies on the work-related mental health effects of daily work hours among remote workers, especially in the Global South. Cross-sectional data were collected from 254 Nigerian remote workers via a convenience sampling approach and an online questionnaire. The statistical investigations were conducted using analysis of covariance, Bonferroni mean comparison, and hierarchical regression. It was found that daily work hours had a statistically significant differential effect on occupational mental health ($F_{(3,249)} = 10.15, p < 0.005$, partial $\eta^2 = 0.10$) while controlling for age. Mean comparison analysis showed that remote workers working above 15 h daily scored significantly lower on occupational mental health than those working 8 h (Mean Diff. = $-15.43, p < 0.05$), and significantly lower than those working 13 to 15 h (Mean Diff. = $-21.05, p < 0.05$). Work-life balance had a statistically significant positive effect on occupational mental health ($\beta = 0.40, t = 6.98, p < 0.001$), after controlling for age, gender and moonlighting. However, further analysis showed that the significant positive effect of work-life balance occurred only among those who work 8 h or less or 9–12 h daily. The study concluded that longer daily work hours increase the risk of work-related depression and anxiety among remote workers.

Keywords: work hours; work-life balance; occupational mental health; remote working

1. Introduction

Mental health has been described as a major problem in the Nigerian workforce, coming as a result of poor organisational resources to support employees' mental wellbeing and a lack of awareness of occupational mental health [1–3]. A report indicates that about 30–50% of Nigerian employees experience work-related mental illness [4]. In the specific context of Nigerian remote workers, a report shows that 45% of individuals in the population experience negative work-related mental health outcomes such as depression, anxiety and mental exhaustion [5]. The negative mental health experience among Nigerian remote workers is a critical problem because it is a negative correlate of productivity, work and life satisfaction, and overall self-rated well-being. Persistent poor mental health among the population can also pose societal issues, including increased risk of suicidal ideation and declines in the contributions of the population to societal/national development.

Despite the work-related mental health issues in the Nigerian remote work context, there is a lack of empirical investigations to understand the factors (especially characteristic features of remote working, like longer work hours) that interact with occupational mental health outcomes. Beyond the Nigerian context, there is also a need to address empirical gaps in understanding the predictors of work-related mental health in remote work settings in Africa and the Global South, as work characteristic factors, such as work duration, have not been sufficiently examined in the existing literature [6–8]. To set foundations for addressing this gap, the present research investigates the interaction of daily work hours, work-life balance and occupational mental health outcomes,



particularly anxiety and depressive symptoms, in the Nigerian remote work context. Regardless of the customary work hours practices or regulations on work hours, remote workers tend to exhibit discretion with their work hours and work longer hours than traditional on-site staff and this often has detrimental health effects [7].

In contrast to long work hours, work-life balance has been demonstrated to play a salutogenic role in employees' well-being. Studies focused on the Nigerian context indicate that a high work-life balance is vital to building and sustaining positive mental health among employees, while a low work-life balance can be detrimental to their mental health status [1,9,10]. Baker et al.'s [11] empirical investigations reveal that work-life balance has a negative relationship with depression and anxiety, implying that a high work-life balance reduces workers' risk of experiencing work-related depressive symptoms and anxiety. With these insights, the present research hypothesises that work-life balance stimulates positive occupational mental health among remote workers in Nigeria.

This study investigates the differential influence of work hours and the predictive effect of work-life balance on remote workers' occupational mental health in Nigeria. Hence, the objectives of this research are to:

- (1) examine the influence of daily work hours (8 h or less, 9–12 h, 13–15 h, and above 15 h) on occupational mental health among remote workers in Nigeria; and
- (2) investigate the predictive role of work-life balance in occupational mental health among remote workers in Nigeria.

The Research Hypotheses

- (1) Remote workers working longer hours daily will score significantly lower on occupational mental health compared to those working fewer hours daily in Nigeria, while controlling for age.
- (2) Work-life balance will positively and significantly predict occupational mental health among remote workers in Nigeria.

2. Materials and Method

2.1. Design

A quantitative cross-sectional design was adopted in this research, and the data collection was conducted in 2023. The design was applied to measure and assess the relationship among daily work hours, work-life balance and occupational mental health in purposively selected online groups of Nigerian remote workers. The selected communities were from three social media platforms: Telegram, X (previously Twitter) and WhatsApp. The Telegram communities included Skill Africa, which had 40,918 members; ALX Virtual Assistance C6, which had 18,036 members; and MyFreelanceHQ, which had 21,533 members. The WhatsApp communities were named UI/UX Mentorship Program, which had 209 members and FreelanceHub Community 7, which had 245 members. For X (previously Twitter), the online questionnaire link was shared via professional communities for Nigerian freelancers. The posts for participant recruitment on all the platforms indicated the recruitment of Nigerian remote workers to fill out a research questionnaire.

2.2. Sample Size and Sampling Technique

The convenience sampling technique was used. As described by Fricker [12], convenience sampling occurs because “either the probability that every unit or respondent included in the sample cannot be determined, or it is left up to each individual to choose to participate in the survey” (p. 199). According to Pearson and Mundform [13], ensuring 5 participants per psychometric item provides an adequate sample size for exploratory studies to reach conclusive findings. There were 16 psychometric items in this research; multiplying this by 5 gave 80. Hence, recruiting 254 participants was a statistically adequate sample size for this study. All the respondents were voluntary participants.

2.3. Instruments

An online questionnaire was adopted for data collection, using PollMill to design and administer questionnaires. The questionnaire had three sections.

2.3.1. Section A: Socio-Demographic Variables and Work Hours

This section collected information regarding participants' gender, age, marital status, religion, work design (fully remote or hybrid), daily work hours and whether or not participants have another form of employment in addition to being remote workers. Specifically, this research specified that healthy daily work hours were 8 h or less, based on a report from the International Labour Organisation [14]. Further daily work hours classification

included 9–12 h, 13–15 h and above 15 h. Daily work hour grouping is measured and used as the predictor of occupational mental health instead of weekly or monthly work hours because it reflects the discretionary work nature of remote workers and their irregular work durations better.

2.3.2. Section B: Work-Life Balance Scale

A 4-item work-life balance scale by Brough et al. [15], for assessing subjective perception of how work and non-work domains of life are balanced, was adopted. The four items were measured on a five-point scale from 1 (strongly disagree) to 5 (strongly agree), and high scores indicate perceptions of high balance [15]. The minimum score is 4, and the maximum is 20. Out of the 4 items, item 2 was reverse-scored [15]. The instrument's reliability was high in this study's population, with a Cronbach's alpha of 0.88. Cross-validation was conducted using item-total correlation analysis, and the lowest item was 0.65. Thus, each item had very good discrimination. The applicability of the scale for empirical research has been demonstrated in the existing literature [15–18].

2.3.3. Section C: Job-Related Affective Wellbeing Scale

This instrument was employed to measure occupational mental health by assessing employees' experience of work-related anxiety and depressive symptoms. The scale was developed by Warr [19], and it includes 12 items. The scale has two axes, including job-related anxiety-contentment and job-related depression-enthusiasm, each axis with six items [19]. The first three items on each axis were reverse-scored [19]. The items were measured on a 6-point rating scale; the responses included never, occasionally, some of the time, much of the time, most of the time, and all of the time [19]. The minimum score is 12, and the maximum score is 72. Higher scores on each scale indicate higher affective well-being in that category. In the population of this study, both axes showed a high reliability. The job-related anxiety-contentment axis had a Cronbach's alpha of 0.80, and the item-total correlation cross-validation showed that each item was above 0.40. The Cronbach's alpha of the job-related depression-enthusiasm axis was 0.79, and the item-total correlation showed that each item was above 0.40. The Alpha coefficient of the entire scale (both axes measured together) was 0.87.

2.4. Statistical Analysis

Descriptive statistics were used to examine and report the demographic characteristics of the research participants. Given the methods' appropriateness for assessing group differences in an outcome variable whilst controlling for age, analysis of covariance (ANCOVA) and Bonferroni multiple comparisons were used to test Hypothesis 1. Levene's test of equality of error variances showed that the data set aligns with the required ANCOVA assumption as the variance of the dependent variable is equal across groups ($F = 0.23, p > 0.05$). Additionally, the data met the normality assumption generally required for parametric analysis; this was assessed with the normality curve on a histogram. Hierarchical regression was used to test Hypothesis 2, with Model 1 testing the hypothesis and Model 2 controlling for demographic variables (specifically age, gender, and moonlighting). The use of parametric statistical analysis techniques was appropriate for this research because the dependent variable, occupational mental health, was measured as a continuous variable whose distribution is of clinical relevance. Data were analysed with the aid of SPSS 20.0.

3. Results

Table 1 below presents a summary of the socio-demographic characteristics of the participants in this study.

Table 1 summarises the demographic distribution of the participants in this study. The information attached to the table indicates that the participants in this study were aged 18 to 48, with a mean age of 26.26 years. This implies that the participants in this study were generally young adults to middle-aged adults. The table shows that 58.7% ($n = 149$) of the research participants were female, while 41.3% ($n = 105$) were male, indicating a slight gap in the representation of both genders. Furthermore, Table 1 shows that only 0.8% ($n = 2$) of the participants were divorced, 10.2% ($n = 26$) were married, while 89.0% ($n = 226$) were single.

For daily work duration, it was found that 54.3% ($n = 138$) were working eight hours or less, 35.4% ($n = 90$) were working 9–12 h, 7.9% ($n = 20$) were working 13–15 h and 2.4% ($n = 6$) worked above 15 h per day. Lastly, 40.2% ($n = 102$) of the respondents had other forms of employment apart from their freelance work, while 59.9% ($n = 152$) did not. While not included in Table 1 because of the length, about 50 different occupational groups were included in this study. The most represented occupational groups were writers ($n = 75, 29.5\%$), virtual assistants ($n = 42, 16.5\%$), social media managers ($n = 19, 7.5\%$), graphic designers ($n = 13, 5.1\%$), software engineers ($n = 11, 4.3\%$) and product designers ($N = 8, 3.1\%$).

Table 1. Socio-Demographic Characteristics.

Demographic Variables	n	%
Gender		
Female	149	58.7
Male	105	41.3
Marital Status		
Divorced	2	.8
Married	26	10.2
Single	226	89.0
Religion		
Christianity	194	76.4
Islam	42	16.5
Other	18	7.1
Work Design		
Fully remote	206	81.1
Hybrid	48	18.9
Daily Work Hours		
8 h or less	138	54.3
9–12 h	90	35.4
13–15 h	20	7.9
Above 15 h	6	2.4
Do you have any other form of employment apart from remote working? (Moonlighting)		
Yes	102	40.2
No	152	59.8

Note: N = 254 (100%). The mean age was 26.26, the minimum age was 18, and the maximum was 48 (SD = 4.62).

Table 2 presents a summary of the intercorrelation between variables in this study and the variables' means and standard deviations. Table 2 shows that age shared a significant positive correlation with work-life balance ($r = 0.14$, $df = 252$, $p < 0.05$) and occupational mental health ($r = 0.16$, $df = 252$, $p < 0.01$). Work-life balance was positively correlated with occupational mental ($r = 0.41$, $df = 252$, $p < 0.01$). Importantly, the mean of occupational mental health (the dependent variable) is 45.90 (out of the maximum score of 60), which indicates the population of this study's average work-related mental health was moderately positive. Lastly, the mean of work-life balance is 12.11 (out of the maximum score of 20), implying that the average work-life balance of this study's population is moderately positive.

Table 2. Zero-order correlation summary table showing the intercorrelation among variables.

Variables	M	SD	1	2	3
1. Age	26.26	4.62	-		
2. Work-life balance	12.11	3.74	0.14 *	-	
3. Occupational MH	45.90	10.66	0.16 **	0.41	-

Note: N = 254 (MH = Mental health). * $p < 0.05$, ** $p < 0.01$.

Hypothesis 1. Tables 3 and 4 and S1 below show the results of the ANCOVA and multiple comparison analysis. Hypothesis 1 stated that “Remote workers working longer hours daily will score significantly lower on occupational mental health compared to those working fewer hours daily in Nigeria, while controlling for age”.

Table 3. Summary table of ANCOVA results showing the influence of work hours on occupational mental health, while controlling for age.

Source	SS	df	MS	F	p	Partial η^2
Corrected Model	3822.66	4	955.66	9.54	<0.001	0.13
Intercept	8926.34	1	8926.34	89.14	<0.001	0.26
Age	5114.89	1	511.89	5.11	<0.05	0.02
Daily Work Hours	3051.76	3	1017.25	10.15	<0.005	0.10
Error	2493.25	249	100.13			
Total	564,105.00	254				
Corrected Total	28,754.917	253				

$R^2 = 0.13$, Adjusted $R^2 = 0.11$. Dependent variable: Occupational mental health.

A one-way ANCOVA was conducted to examine the effect of daily work hours on occupational mental health, controlling for age. After adjusting for age, there was a significant effect of daily work hours on occupational mental health ($F_{(3,249)} = 10.15, p < 0.005$, partial $\eta^2 = 0.10$). The partial Eta Squared value represents a small effect size, indicating that approximately 10% of the variance in occupational mental health, after controlling for the effect of age, is explained by daily work hours. Additionally, the model accounted for 13% of the observed variance in the occupational mental health of Nigerian remote workers ($R^2 = 0.13$). Table 4 presents the multiple comparison post hoc analysis. See Table S1 in the Supplementary Material section for the descriptive statistics of daily work hour groups in occupational mental health.

Table 4. Bonferroni mean comparisons of daily work hours on occupational mental health.

Group 1	Group 2	Mean Diff.	Std. Error	95% Confidence Interval	
				Lower Limit	Upper Limit
8 h or less	9–12 h	4.64 *	1.35	1.03	8.25
	13–15 h	−4.95	2.41	−11.36	1.46
	Above 15 h	14.70 *	4.18	3.57	25.83
9–12 h	8 h or less	−4.64 *	1.35	−8.25	−1.03
	13–15 h	−9.59 *	2.48	−16.20	−2.98
	Above 15 h	10.06	4.23	−1.20	21.32
13–15 h	8 h or less	4.95	2.41	−1.46	11.36
	9–12 h	9.59 *	2.49	2.98	16.20
	Above 15 h	19.65 *	4.69	7.15	32.15
Above 15 h	8 h or less	−14.70 *	4.18	−25.83	−3.57
	9–12 h	−10.06	4.23	−21.32	1.20
	13–15 h	−19.65 *	4.69	−32.15	−7.15

Note: N = 254 (Mean Diff = Mean Difference, Std. Error = Standard Error). * $p < 0.05$.

A Bonferroni post-hoc analysis was conducted to compare daily work hours groups on occupational mental health, controlling for age. Mean differences, standard errors, and 95% confidence intervals are reported in Table 4. Workers who reported working above 15 h daily ($M = 32.00$, $SD = 10.62$) scored significantly lower on occupational mental health than those working 8 h or less ($M = 47.43$, $SD = 10.15$) (Mean Diff. = -14.70 , $p < 0.05$) and significantly lower than those working 13–15 h ($M = 53.05$, $SD = 9.97$) (Mean Diff. = -19.65 , $p < 0.05$). However, remote workers working above 15 h did not score significantly lower than those working 9–12 h daily ($M = 42.91$, $SD = 9.97$) (Mean Diff. = -10.06 , $p > 0.05$). Additionally, remote workers in Nigeria who work 9–12 h daily scored significantly lower on occupational mental health than those working 8 h or less per day (Mean Diff. = -4.64 , $p < 0.05$) but, contrary to the a priori position, scored significantly lower than those working 13–15 h per day (Mean Diff. = -9.59 , $p < 0.05$).

Only those working 13–15 h did not score significantly lower on occupational mental health compared to those working 8 h or less (Mean Diff. = 4.95 , $p > 0.05$). In fact, they scored significantly higher than those working 9–12 h (Mean Diff. = 9.59 , $p < 0.05$) and those working above 15 h (Mean Diff. = 19.65 , $p < 0.05$).

Given these findings, Hypothesis 1 was partially accepted. The findings indicate that remote workers in Nigeria who work longer than 15 h per day score lower on occupational mental health than those who work 8 h or less and 13–15 h per day, while those working 9–12 h also score lower than the 8 h or less and 13–15 h per day groups. Workers in the 13–15-h group demonstrated comparable or better occupational mental health outcomes relative to other groups. These findings indicate that longer working hours per day, especially longer than 15 h per day, increase the risk of work-related depression and anxiety among remote workers.

Hypothesis 2. Table 5 reports the findings from testing hypothesis 2. Hypothesis 2 stated that “work-life balance will positively and significantly predict occupational mental health among remote workers in Nigeria”. Model 1 tests the hypothesis, while Model 2 advances the assessment of the influence of work-life balance by controlling for age, gender and moonlighting.

A hierarchical regression analysis was conducted to test whether work-life balance positively and significantly predicts occupational mental health among remote workers in Nigeria. Model 1 showed a significant positive relationship between work-life balance and occupational mental health ($F_{(1,252)} = 53.49$, $\beta = 0.41$, $p < 0.001$). The R^2 value of 0.17 indicates that work-life balance alone explained 17% of the variance in occupational mental health. Model 2 included work-life balance along with age, gender, and moonlighting as control variables. The overall model remained significant ($F_{(4,249)} = 15.85$, $R = 0.45$, $R^2 = 0.20$, $p < 0.001$). The addition of control

variables increased the explained variance by 3% ($\Delta R^2 = 0.03$). The effect size for Model 2 ($R^2 = 0.20$) shows that work-life balance, age, gender and moonlighting account for 20% of the observed variance in the occupational mental health of Nigerian remote workers. After controlling for age, gender, and moonlighting, work-life balance remained a strong and significant positive predictor of occupational mental health ($\beta = 0.40$, $t = 6.98$, $p < 0.001$). The multiple correlation coefficient ($R = 0.45$) indicates a moderate positive linear relationship between the set of predictors (work-life balance, age, gender, moonlighting) and occupational mental health.

Table 5. Hierarchical regression summary table showing the impact of work-life balance on occupational mental health, while controlling for age, gender and moonlighting.

Model	Predictor	R	R ²	F	p	β	t	p
1	WLB	0.41	0.17	53.49	<0.001	0.41	7.31	<0.001
2	WLB	0.45	0.20	15.85	<0.001	0.40	6.98	<0.001
	Age					0.09	1.68	>0.05
	Gender					−0.10	−1.85	>0.05
	Moonlighting					0.08	1.46	>0.05

Dependent variable: Occupational mental health. Note: N = 254 (WLB = work-life balance).

Based on the serendipitous findings presented in the zero-order correlation (Table 2), which shows a significant negative correlation between daily work hours and work-life balance, further investigations were conducted to test the influence of work-life balance on occupational mental health across specific daily work-duration groups. Table 6 below presents the findings.

Table 6. Linear regression summary showing the differential effect of work-life balance on occupational mental health across daily work hours groups.

Predictor	Work Hours	R	R ²	F	p	β	t	p
WLB	8 h or less	0.34	0.11	18.16	<0.001	0.34	4.26	<0.001
	9–12 h	0.63	0.40	60.88	<0.001	0.63	7.80	<0.001
	13–15 h	0.11	−0.04	0.23	>0.05	0.11	0.48	>0.05
	Above 15 h	0.68	0.33	3.48	>0.05	0.68	1.86	>0.05

Dependent variable: Occupational mental health. Note: N = 254 (WLB = work-life balance).

The results in Table 6 reveal a notably differential pattern of effects depending on how many hours per day an individual works. Among those working 8 h or less, WLB was a significant positive predictor of occupational mental health ($\beta = 0.34$, $p < 0.001$), accounting for 11% of the variance ($R^2 = 0.11$). This effect was considerably stronger in the 9–12-h group, where WLB explained 40% of the variance ($R^2 = 0.40$, $\beta = 0.63$, $p < 0.001$), representing the most robust finding in the analysis and suggesting that work-life balance is especially consequential for the mental health of employees working moderately extended hours.

However, this predictive relationship broke down for employees working the longest hours. In the 13–15-h group, the model was non-significant ($F = 0.23$, $p > 0.05$, $\beta = 0.11$), with a negative adjusted R^2 (−0.04), indicating that WLB offered virtually no explanatory value for occupational mental health at this level of work intensity. Similarly, while the 16-h-and-above group produced numerically large coefficients ($\beta = 0.68$, $R^2 = 0.33$), the overall model was non-significant ($F = 3.48$, $p > 0.05$), and these estimates are likely unreliable given the presumably small subsample size and limited statistical power. Collectively, the findings suggest that work-life balance functions as a meaningful predictor of occupational mental health up to a threshold of approximately 12 h of daily work, beyond which its protective effect appears to diminish substantially, possibly because extreme workloads render the concept of balance practically unattainable.

4. Discussions

The results contribute critical insights to the literature on the factors that influence occupational mental health among remote workers in Nigeria. The findings indicated that daily work hours significantly influence occupational mental health outcomes in this study's population, after controlling for age. The focus on work hours per day in this study is different from the focus on work hours per week in the majority of the existing literature; this was done to reflect the unique work nature of remote workers because, although remote working is flexible, remote workers tend to work long hours per day [20].

The findings show that the longer remote workers in Nigeria work per day, the lower they score on occupational mental health. For instance, this study reported that those who work above 15 h per day scored significantly lower on occupational mental health than those who work 8 h or less and 13–15 h per day, while controlling for age. Those who work 9–12 h per day also score significantly lower on occupational mental health than those who work 8 h or less per day. Hence, it was observed that working excessive work hours per day is detrimental to the mental health of remote workers in Nigeria, as the practice increases their risk of work-related anxiety and depression, even after accounting for age.

These findings corroborate the findings from multiple studies that focus on the workers in Japan and China [21–23]. A cohort study with 15,143 participants in Japan demonstrates that personnel who work long hours (greater than 45 h per week) experienced significantly greater levels of depression, anxiety and irritability than those who work healthy hours (35–45 h per week) [24]. Similarly, the empirical study by Ricketts et al. [25] further affirms these opinions and highlights that the negative effect of long work hours on mental health manifests earlier in women compared to men in the United States of America. In the Chinese context, Chu [26] highlights that even when wages are increased, the negative mental health outcomes of excessively long hours persist among workers. This insight from Chu [26] indicates that even higher compensation does not moderate the negative mental health effect of excessively long work hours, thus indicating the primacy of long work hours as a stressor. Similarly, working excessive hours has been established as a correlate of high work-stress experiences [21,27]. The Job Demands–Resources Model by Bakker and Demerouti [28] similarly posits that high job demands, such as long work hours, negatively affect workers' mental health, often by leading to emotional or psychological burnout, mental exhaustion, depressive symptoms or anxiety. The findings in this study and the existing studies support the opinion by Voglino et al. [29] that the reduction of daily work hours (and weekly work hours) could be an effective workplace intervention for the improvement of employees' wellbeing. This study contributes new insights to the existing literature via its focus on one of the countries in the Global South (Nigeria), which is often underrepresented in the global literature. Additionally, the study indicates that the influence of work hours on occupational mental health, particularly depression and anxiety, is constant across ages (specifically ages 16 to 48, as represented in this research).

It was further shown that work-life balance has a positive predictive impact on occupational mental health among remote workers in Nigeria. Findings from other occupational contexts in the existing literature support our results. Okeya et al. [9] and Oginni et al. [1] report quantitative findings that indicate work-life balance as a significant and positive predictor of employee psychological well-being among Nigerian workers in the banking sector. Akanji et al. [10] also show that there is a notable relationship between employees' work-life balance and their mental health. The study shows that a poor work-life balance experience will lead to negative mental health outcomes, while a high work-life balance will contribute positively to mental health [10]. Uzonwanne and Ijide conduct an empirical investigation into the influence of work-life balance (and its dimensions) among Nigerian employees [30]. The study identifies that work-life balance predicts anxiety among workers, specifically that a poor work-life balance significantly increases work-related anxiety while a high work-life balance reduces the risk of anxiety [30]. Studies that focus on other regional contexts (non-Nigerian) report similar findings, thus emphasising the importance of work-life balance in building and sustaining positive mental health among workers [11,31]. The unique contributions of the present research are that the positive effect of work-life balance on occupational mental health persists after controlling for age, gender and moonlighting, and this positive effect is observable only among persons who work 8 h or less or 9–12 h daily.

The major limitation of this research is that the sample size does not achieve a statistical representation of the Nigerian remote workers' population, particularly because the study's population were purposively selected. Additionally, the study did not provide a comparison of remote workers and onsite workers in its investigations; thus, limiting its ability to establish a strong causal relationship and the uniqueness of the obtained findings among remote workers. The cross-sectional research method also limits the ability of the research to establish a cause-and-effect relationship. Longitudinal studies and cross-sectional studies that include large sample sizes can be used to improve our understanding of the influence of daily work hours and work-life balance on occupational mental health among remote workers in Nigeria. Future studies can also investigate how certain job characteristics, like job arrangement (fully remote or hybrid) and industry, confound the influence of daily work hours on occupational mental health among remote workers. Similarly, individual differences such as personality type and sociability can be considered as control variables. Lastly, this study only assessed anxiety and depressive symptoms in occupational mental health outcomes. Thus, the study's findings do not reflect other potential mental health outcomes linked to daily work hours and work-life balance.

5. Recommendations

The findings emphasise the importance of working healthy work hours per day to reduce potential negative mental health outcomes of long work hours. It is recommended that remote workers in Nigeria strive to work healthy hours daily, that is, 8 h or less. This greatly reduces the risk of poor work-related mental health outcomes such as depression and anxiety. Strategies to reduce daily work duration to 8 h include scheduled distribution of work tasks over days, the use of digital task management technologies, and the employment of assistants. We also recommend coping strategies for managing existing negative mental health outcomes of working long hours daily. Affected persons need to engage in leisure activities and reduce their workload, work stress and daily work duration. Companies that hire remote workers can also integrate daily work duration policies, task management tools and work arrangements such as job rotation or shared positions that promote healthy daily work hours among their employees.

Given the significant positive relationship between work-life balance and occupational mental health, organisations employing or contracting remote workers should prioritise policies that encourage work-life balance. Employers can support this by providing flexible work schedules, encouraging breaks, and setting realistic deadlines to prevent burnout. Individual remote workers can improve their work-life balance by creating structured schedules, automating their repetitive tasks where possible and consciously including social activities in their schedules. Additionally, awareness programs from employers and freelancing platforms on the importance of balancing work and personal life could empower remote workers to manage their time effectively. The mental wellness of employees is paramount to their work capability, productivity and ability to cope with day-to-day stress. Hence, promoting healthy daily work hours and work-life balance initiatives is a key human resources management concern for companies.

Supplementary Materials

The additional data and information can be downloaded at: <https://media.sciltp.com/articles/others/2607221711148451/WAH-26030230-SI.pdf>. Table S1. Descriptive statistics of the groups of daily work hours in mental health.

Author Contributions

Conceptualisation, T.E.O. and D.E.O.; Methodology, T.E.O.; Formal Analysis, T.E.O.; Investigation, T.E.O.; Resources, T.E.O.; Data Curation, T.E.O.; Writing—Original Draft Preparation, T.E.O.; Writing—Review & Editing, D.E.O.; Supervision, D.E.O.; Project Administration, D.E.O. Both authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement

No ethical approval was needed for research involving only non-interventional and non-clinical survey data in the Nigerian context. Only informed consent, data anonymisation and data protection are required as provided in the National Code of Health Research Ethics 2007.

Informed Consent Statement

Informed consent was approached by providing a section that explains the purpose of the study, the data to be collected, and participants' right to participate and withdraw consent in the questionnaire. The section concluded by requesting participants to indicate their consent to participate in the research based on the information explained to them. All the participants in this study were aged 18 and above. Persons in vulnerable groups were not recruited for this study.

Data Availability Statement

The dataset associated with this study will be provided upon reasonable request.

Conflicts of Interest

The authors declare no conflict of interest.

Use of AI and AI-Assisted Technologies

No AI tools were utilized for this paper.

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