African Journal of Social and Behavioural Sciences (AJSBS)
Volume 16, Number 3 (2026) ISSN: 2141-209X

SOCIODEMOGRAPHIC VARIABLES AND MENTAL HEALTH OUTCOMES AMONG PART-TIME WORKING STUDENTS: WORK–STUDY BALANCE IN HIGHER EDUCATION

Addah Temple Tamuno-Opubo[1], Ekong Akpan Essien[2]*, Oseni Oluwadamilare Shakirudeen[3]. Adebolaji Ekong Essien[4] & Chinemerem David Nwankwo[5]

[1,2,4,5]Department of Psychology, Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria.

[3]Department of Business, Administration and Management, Gateway (ICT) Polytechnic, Sapaade, Ogun State, Nigeria

*essien.ekong@oouagoiwoye.edu.ng

ABSTRACT: Part-time working students in higher education often face unique challenges as they attempt to balance the demands of work and study, leading to increased stress and potential mental health issues. Therefore, this paper investigated the role of sociodemographic variables and mental health outcomes for part-time working students in higher education: balancing work and study. The study employed a cross-sectional research design using a purposive sampling technique. The study population consists of 220 (F = 127, mean age = 26.85; SD = 7.35) part-time students attending the Federal College of Education, Abeokuta. Data was gathered using structured questionnaires, which included the General Health Questionnaire (GHQ-28) and the work-life balance scale (WLBS-15) alongside sociodemographic variables. The data collected were analysed using descriptive statistics like frequency and percentage distribution table, while correlation and multiple regression were used to test the stated hypotheses. The analysis showed no significant relationship between mental health outcomes and work-study balance ($r = .205$, $p > .05$). Multiple regression analysis showed that age significantly predicted work-study balance ($\beta = -.196$, $p < .05$). However, gender ($\beta = .026$, $p > .05$) and marital status ($\beta = .096$, $p > .05$) were not significant predictors. Although a positive association was observed, the relationship between work–study balance and mental health outcomes was not statistically significant. The study contributes to the growing literature on working students by providing evidence from a Nigerian higher education context and highlighting the limited explanatory role of sociodemographic variables in predicting work–study balance.

Keywords*:* Balancing Work and Study, Mental Health Outcomes, Part-Time Working Students, Sociodemographic

INTRODUCTION

The growing trend in part-time employment among college students has attracted significant scholarly interest, particularly regarding its effects on mental health. These demands have a great effect on the mental health of students who work part-time while going to school, due to the fact that they have to balance their schoolwork and work at the same time. Even though a part-time job helps with money and provides work experience, the extra work may cause stress, poor time management, and pressure to do well academically. Studies indicate that the interplay between

professional and academic life can either exacerbate or alleviate mental health issues, contingent upon individual and contextual variables (Park & Sprung, 2013; Boas, 2024; Ilori & Akerele, 2024). Thus, this complex link underscores the need to investigate the impact of socio-demographic characteristics on the mental health of part-time working students as they navigate the challenges of balancing employment and academic responsibilities.

Part-time students are individuals enrolled in higher education institutions who, because of various external factors (for instance, employment or family obligations), choose a smaller number of credits per semester, which is the main difference between part-time students and their full-time peers (Gbadamosi et al., 2015; National Centre for Education Statistics, 2021). According to Robotham (2012), such students often exhibit atypical traits, can handle multiple duties, and are generally older or employed. Brosnan et al. (2024) argue that the elasticity of part-time attendance aligns with these obligations and forms a unique segment of the higher education population that balances education with personal or professional life. The number of students taking part-time courses in the world has been growing as a result of the high cost of tuition and living expenses, and thus, many students have had to juggle between work and education (Abalogu et al., 2024; Pulman et al., 2024; Reid, 2024). For instance, almost three-fifths of students in the United States have some type of employment when studying (National Centre for Education Statistics, 2021; Chen, 2024). The same trend is observed in other parts of the world, such as Europe and Australia, where numerous students are undertaking part-time roles to cover the costs of education and gain work experience (Jackson, 2024; Kallos, 2024).

Ojonta et al. (2021) indicated that due to the economic and social conditions in the country, Nigerian students face heightened pressure to secure part-time employment. High unemployment, financial instability, and rising college costs are among the problems that necessitate financial self-sufficiency for many students (Longe, 2017; Ojonta et al., 2021). As Folawewo and Orija (2023) noted, Nigerian part-time students frequently get employed in informal or low-wage institutions, which can also increase their physical and psychological load. It has been reported that about 30-40% of university students in Nigeria have to work part-time to cover their education or help their families (Gbadamosi et al., 2015). As a result, work-academic balance in Nigeria presents unique issues, as economic constraints and, at times, the lack of an institutional framework to support such students create these challenges.

The balance between work and study is becoming a challenge for students worldwide, as many are turning to part-time employment to cover the high cost of education and living expenses. The dual demands of academic work and employment can lead to increased stress, insomnia, and poor time management (Navick & Gibbs, 2024). It manifests itself especially in the case of students who are forced to balance both changing work schedules, financial pressures, and school-related tasks and requirements, which often have a detrimental effect on academic performance, health, and psychological well-being (Peltz et al., 2020; Pregoner et al., 2020; Antoniadou et al., 2024). The research shows that students who are employed in the part-time sector state that they experience more stress and burnout than the students who are not working, and a considerable number of them also express that they are unable to keep their academic progress steady (Jardim, 2020; Hulla, 2021; Duong-Vo et al., 2024). National Centre of Education Statistics (2021) states that students working more than 20 hours a week in the United States are more likely to experience academic stress, and

the research conducted in Nigeria showed similar results, as students face a lot of pressure due to long working hours, irregular schedules, and limited access to academic support resources (Adebayo, 2015; Shehu et al., 2020).

According to Abalogu and Azor (2024), the financial demands of higher education in Nigeria force many students to take part-time jobs, but the conditions of their work often create significant stress. The need to reconcile school and employment often necessitates working late and leaving little time to study or rest (Okolie et al., 2023). Hulla (2021) commented that such an imbalance impacts the well-being of the mind and social interactions of many, as many of the students claim that they feel isolated and less satisfied with life. In addition, the unorganized support, including flexible working or specific academic counselling, complicates the situation of part-time students who have to balance between the two roles (Obi & Okeke, 2013; Adokiye, 2018). The existing delicate state of affairs raises questions about the sufficiency of mental health provision in academic establishments and underscores the urgent need for dedicated resources to support students' academic success and mental health under the pressure of work-study.

When applied to the issue of higher education, work-study balance can be defined in particular as the possibility for students to combine academic tasks with paid work. Work-study balance, though strongly associated with the more general concept of work-life balance, puts the responsibilities of students in academic areas at the core of the non-work aspects of students. This difference is especially pertinent to the part-time working students whose academic activity is competing on equal terms with the work requirements.

Mental health is defined by the World Health Organization (WHO, 2001) as a state of well-being in which individuals realize their abilities, manage the stresses of life, work productively, and contribute to their community. It involves emotional, psychological and social health and has a great influence on the way people think, feel and behave (Bohlmeijer & Westerhof, 2020). In this context, Singh and Kumar (2024) said that mental health is a growing issue in the field of higher education as more students are reporting stress and anxiety as well as other mental health issues related to academic and employment-related pressures. Mental health problems in working students are common all over the world; it is estimated that about 15% of the working-age population has a mental disorder (WHO, 2021). Mental health issues are a big deal in Nigeria. Studies show that 20–30% of college students have symptoms of anxiety and depression. According to Adeleke et al. (2023), this fact is especially relevant for students who are also working in the same field, because they have to divide their time between school and work; employed students tend to experience higher levels of stress and burnout. This can negatively impact their mental health and productivity. However, it is probable that social-demographic characteristics are a contributing element to the difficulties that the students who work part-time are experiencing.

Demographic characteristics, such as age, gender, marital status, and individual preferences, can considerably affect how students involved in part-time jobs manage the challenges of dual tasks. Smith et al. (2022) found that older students may engage in additional duties, such as familial obligations and full-time employment, which could disrupt their ability to achieve an appropriate equilibrium between work and study. This is another significant factor that influences decision-making. The results of Mordi et al. (2023), however, indicate that younger students who do not

necessarily have many commitments outside of school might find it easier to focus on their academic endeavours. As the results of the research conducted by Ajibade et al. (2021) indicate, older students often face a range of exceptional challenges, including reconciling their employment and academic requirements. This can translate into a rise in the mental strain that is involved in balancing work and schooling.

The gender difference has also been identified as another aspect that is exceptional in the way students execute their duties. As Daniel and Madugu (2022) state, female students are also expected to cope with societal demands, in addition to those at home. That is why their already overloaded schedules are getting harder. As Nicklin et al. (2019), Nwagbara (2020), and Ojo-Ebenezer and Olofin (2022) found, female students who work part-time are more likely to experience stress and higher anxiety than male students. This is mainly because women are more likely to perform carer roles alongside their academic and professional roles. Denson and Szelenyi (2022) concluded that a student's marital status can play a major role in this equilibrium. This is because married students are likely to have more complicated time management needs. Married students often have to juggle family, work, and school. Consequently, they face a higher risk of developing burnout and stress-induced mental disorders (Nnubia & Eze, 2023). Kusi et al. (2024) found that part-time students who chose to marry were more likely to struggle to balance their jobs and education, which would negatively affect their grades and overall well-being.

The growing number of students who are part-time employees studying at higher institutions of learning is evidence of the strong need to understand how working and academic activities can be combined to influence students' psychological well-being. Due to the ever-increasing cost of living and school fees, more and more students are joining the workforce in efforts to settle their bills. Based on this, we need to conduct research on how these two responsibilities affect their health and academic performance. Nevertheless, the facts indicate that this correlation may not be universal across situations and among different people (Nicklin et al., 2019; Kwasu, 2024). Numerous works demonstrate that the imbalance between work and study may hurt mental health. The fact that this link may be influenced by cultural, institutional, and individual factors is why it is essential to investigate whether it is present in the population currently being studied. Therefore, in the current research, when the majority of the existing literature supports a correlation, the null hypothesis that there is no significant link is tested. This enables an objective analysis to be conducted based on the evidence that has been obtained. The notion of Stress and Coping, developed by Lazarus and Folkman (1984), serves as a source of inspiration for this investigation. The appraisal of stress factors a person may have and their coping resources, which provide the framework for interpreting how students who work part-time might cope with the difficulties of their employment, are said to be the main elements that determine reactions to stress, according to this theory. During the primary evaluation phase, individuals determine whether or not a circumstance poses a threat to them. On the other hand, during the secondary evaluation phase, individuals assess their capacity to deal with the problem. A key viewpoint is provided by the theoretical framework, which allows the lives of these children to be analyzed and their perceived stress and coping methods to be explained. This explains how many factors influence their mental health. In this particular scenario, the term "work-study balance" refers to the students' consideration of role conflict, while the socio-demographic aspects can impact the resources that are utilized in the process of the students' coping mechanisms. This research is a case study that was conducted at the Federal College of Education in Abeokuta.

The purpose of the study was to shed light on the unique mental health concerns that some students had while working and studying simultaneously.

Despite growing research on working students, limited empirical studies in Nigeria have simultaneously examined the relationship between work–study balance, mental health outcomes, and sociodemographic predictors among part-time students. This study addresses this gap by examining whether these factors significantly predict students' ability to balance work and academic responsibilities.

The following hypotheses were tested:

1. There will be no significant relationship between mental health outcomes and balancing work and study.
2. There will be no significant influence of sociodemographic variables (age, gender, and marital status) on balancing work and study

METHODS

Design

The study utilized a descriptive cross-sectional design to examine the relationship between socio-demographic variables, mental health outcomes, and the challenges of balancing work and study among part-time working students at Abeokuta, Ogun State, Nigeria.

Participants

The study population comprised part-time students attending the Federal College of Education, Abeokuta, with 220 participants. These individuals were chosen using purposive sampling, a non-probability sampling technique that ensures participants meet specific characteristics relevant to the study objectives.

Sampling and Sampling Technique

In order to get individuals who met the criterion of working part-time and being enrolled in school, purposive sampling techniques were utilized. The researcher was able to focus on individuals who juggle both work and academic responsibilities to obtain a sample relevant to the research objectives. However, because purposive sampling is a non-probability technique, the findings cannot be generalized to all part-time students. Despite purposive sampling limiting the extent to which the findings can be generalized, it was appropriate for this study because it ensured that only people actively engaged in both paid labour and academic learning were included, which was the primary emphasis of the research aims.

Instruments

Socio-demographic Data: Gender, age, marital status, working hours, place of work, reasons for part-time employment, effect of part-time employment, and reasons for employed students' sleep deprivation.

Work and study: This variable was measured using the Work-Life Balance Scale (WLBS) developed by Fisher-McAuley et al. (2003). The WLBS, a 15-item adaptation of the original 19-item scale developed by Fisher-McAuley et al. (2003), captures employee perceptions on work-life balance across three dimensions: Work Interference with Personal Life (WIPL), Personal Life Interference with Work (PLIW), and Work/Personal Life Enhancement (WPLE). Sample questions include “My personal life suffers because of work”, “My personal life drains me of energy for work”, and “My job gives me energy to pursue personal activities”. Each item was scored on a seven-point scale ranging from "1"-not at all, "2"-rarely, "3"-occasionally, "4"-sometimes, "5"-often, "6"-very often, and "7"-all the time, allowing participants to rate the frequency of each behaviour or feeling. This scale provides a cumulative score for overall work-life balance and subscale scores for each dimension. For this study, the higher the score on this scale, the greater the perceived work-life balance challenges, whether due to work demands infringing on personal life, personal life affecting work, or positive cross-influences between both areas. For clarity, the last two items of the WLBS were revised to ensure mutual exclusivity in responses. In this study, the WLBS was adapted conceptually to assess work-study balance, with academic responsibilities serving as students' primary non-work role. Higher scores on the scale indicate greater perceived difficulty in balancing work and academic demands. The Cronbach's alpha coefficients for the scale's reliability were .88 for the total scale and .93 (WIPL), .85 (PLIW), and .69 (WPLE) for the subscales. The current study found a reliability coefficient of 0.72 among students in Nigeria.

Mental Health Outcomes: This variable was assessed using the 28-item General Health Questionnaire (GHQ-28) developed by Goldberg (1978). The GHQ-28 is mainly meant to be used as a screening tool in identifying psychiatric conditions within the community and non-psychiatric clinical contexts. This tool assesses respondents' overall health perception. The answers are evaluated according to four subscales, namely: a) Somatisation, b) Anxiety-insomnia, c) Social difficulties and d) Depression, which in totality give a general measure of the mental health status. GHQ-28 was implemented to determine the psychological well-being of the respondents by detecting signs of distress, including anxiety, depression, and social dysfunction. It is a popular tool for detecting possible mental health issues in non-clinical settings (Goldberg & Hillier, 1979; Abiodun, 1994). Because of its multidimensionality, it has the capacity to include various psychological symptoms applicable to student groups, and as such, it can be used to investigate the relationships between work-study imbalance and overall mental health. Illustrations of enquiries in the sample include: Have you been feeling in optimal health? Have you lost significant sleep due to anxiety? Have you managed to remain engaged and occupied? Have you been perceiving yourself as insignificant? Each individual is evaluated using a four-point Likert scale, with response options ranging from 0, indicating "Not at all," to 1, indicating "Not more than usual," to 2, indicating "Rather more than usual," and finally to 3, indicating "Much more than usual." The GHQ-28 was evaluated on a Likert scale (0-3), resulting in a score range of 0-84. Higher scores correlate with increased psychological suffering, and no clinical diagnosis is indicated. Although initially

developed with specific cultural considerations in mind, the scale has demonstrated commendable psychometric properties and has been successfully utilised across diverse cultural settings. The dependability coefficient was determined to be 0.88 among students in Nigeria in the current study.

Data Collection Procedure

The collected data in this study consist of the socio-demographic variables, mental health outcomes, and work-study balance. This research was conducted using self-report questionnaires. Data collection was done with the consent of the relevant ethical review board. All protocols were based on the ethical standards of institutional and national research committees, grounded in the 1964 Helsinki Declaration and its subsequent revisions, as well as other ethical principles. Participation in the study was not mandatory, and informed consent was received by every participant, who was assured of the anonymity and confidentiality of his or her answers. The participants were also told that they could withdraw at any point in the study without any penalty. All instruments were administered in English, the official language of Nigerian universities. The participants were university students with a good command of English to understand the questionnaire questions. Before the main study, the instruments were pilot-tested with 20 students from a similar group to confirm clarity and comprehension; no language-related issues were identified. All participants had sufficient English-language proficiency to complete the questionnaire independently, as English is the official language of instruction at the university.

Data Analysis

Data were analyzed using IBM SPSS Version 25. Descriptive statistics, such as means, standard deviations, frequencies, and percentages, were used to summaries demographic characteristics and primary variables. In order to assess relationships between variables, Pearson's correlation was used for normally distributed data. Additionally, multiple regression analysis was conducted to examine the predictive effect of socio-demographic variables on work-study balance. Statistical significance was set at $p < 0.05$ for all analyses. Prior to analysis, assumptions of normality, linearity, and absence of multicollinearity were examined. Normality was assessed using skewness and kurtosis values, while variance inflation factors (VIF) were used to assess multicollinearity. All assumptions were found to be satisfactory.

RESULTS

Distribution of Socio-Demographic Characteristics of Respondents

Table 1: Socio-Demographic Characteristics of the Respondents (n=220)

Variables	Frequency	Percentage
Gender		
Male	93	42.4
Female	127	57.3
Marital status		
Single	152	69.1

Married	63	28.6
Divorced	4	1.8
Separated	1	0.5
Working hours per week		
less than 10 hours	72	32.3
10-20 hours	45	20.5
21-30 hours	60	27.3
31-40 hours	36	16.4
41-50 hours	6	3.6
Where do you work?		
Restaurant	30	13.6
Supermarket	30	13.6
Petrol Station	17	7.7
Within the University Community	39	17.7
School	48	21.8
Retail Shop	27	13.6
Menial Job	29	13.2
Reasons for the part-time employment		
Professional studies	24	10.9
Free time use for extra cash for fun, outing, etc	20	9.1
Financial necessity	88	40
Improving personal and social skills	63	28.6
The job is relevant to my future career	25	11.4
What effect have you experienced in recent times, as a part-time employee		
I work at night	33	15
I have less time for learning	72	32.7
If you'll give more attention to the studies, you have learned well	62	28.2
I spend to learn more than three hours a day.	26	11.8
I cannot complete the homework	15	6.8
I have no effect	12	5.5
The reasons for employed student's sleep deprivation:		
Sleeps 4-5 hours a day	33	15
Sleeps 6-7 hours a day	22	10
Not enough sleep	43	19.5
The reason for the disturbance is the difficulty of combining work and learning	21	9.5
Sleep disturbance at work	38	17.3
Do not have a similar problem	63	28.7
Age in years Mean± Standard deviation (SD)	26.85±7.35	Range 18 - 52

The socio-demographic data for the 220 participants highlight a diverse group in terms of gender, age, marital status, work type, and employment motivations. The demographics are 57.3 per cent

female and 42.4 per cent male. Most of the answers are provided by people between the ages of 21 and 25, which means that the sample is composed of rather young people. The mean age is 26.85 years. Most marriages in this category are single (69.1%), married (28.6%), divorced (1.8%), or widowed (0.5%). This signifies that the population has a wide range of marital statuses. 32.3 per cent of the labour force works less than 10 hours a week. Such roles are mostly found in the hospitality industry, such as restaurants, stores and in colleges. Forty per cent of those working part-time do it due to economic reasons, whereas 28.6 per cent take part-time employment to improve their social and personal capacities. Part-time working has had numerous effects on people. As an example, 36.4% of them said they did not have enough time to study, and 28.6% of them said that they would have done better academically with more study time. One other significant effect is sleep deprivation: 19.5 per cent of respondents reported poor sleep, and 17.3 per cent attributed it to their job. This table will show the demographic and employment problems that were faced by the participants. The effects have a great impact on the lives of the subjects, academically and at a personal level.

Table 2: Descriptive statistics for Work–Life Balance Scale (WLBS) scores (N = 220)

Scale / Subscale	Mean	SD	Min	Max
Total WLBS score	52.13	8.27	30	70
Time balance	17.20	3.11	8	20
Involvement balance	16.85	2.97	8	20
Satisfaction balance	18.08	3.19	8	20

Table 2 presents the descriptive statistics for the Work–Life Balance Scale (WLBS) among the 220 participants. The mean overall WLBS score of 52.13 (standard deviation = 8.27) shows that participants had significant trouble keeping a healthy work-study balance. The satisfaction balance (M = 18.08, SD = 3.19) had the highest mean score of all the subscales. After that came the time balance (M = 17.20, SD = 3.11) and the involvement balance (M = 16.85, SD = 2.97). All of the subscales exhibited variability within their respective ranges, which reflected variances in the participants' perceived balance across time, engagement, and satisfaction dimensions. The possible range for each subscale was between 8 and 20, and all of them indicated variability.

Table 3: Descriptive statistics for General Health Questionnaire (GHQ-28) scores (N = 220)

Subscale	Mean	SD	Min	Max
Somatic symptoms	5.42	1.78	0	7
Anxiety/Insomnia	6.13	1.92	0	7
Social dysfunction	5.67	1.83	0	7
Severe depression	4.92	1.71	0	7
Total GHQ-28 score	22.14	5.34	8	28

Table 3 presents descriptive statistics for the General Health Questionnaire (GHQ-28) scores of the 220 participants. There was a wide range of psychological distress levels among the sample, as indicated by the fact that the mean total score on the GHQ-28 was 22.14 (standard deviation = 5.34), with values ranging from 8 to 28. In terms of the subscales, the one with the highest mean score was anxiety/insomnia (M = 6.13, SD = 1.92), followed by social dysfunction (M = 5.67, SD = 1.83), and then somatic symptoms (M = 5.42, SD = 1.78). A mean score of 4.92, with a standard deviation of 1.71, was the lowest for severe depression. All subscales had a possible range of 0 to 7, indicating that some participants reported minimal symptoms, while others reached the maximum score in each category.

Tests of Hypotheses

Hypothesis 1: There is no significant relationship between mental health outcomes and balancing work and study.

Table 4: Pearson correlation showing the relationship between mental health outcomes and balancing work and study

Variables	Mean	SD	df	r	Sig.
Mental Health Outcomes	22.14	5.34	218		
Balancing Work and Study	41.963	11.82			

***. Correlation is not significant at the 0.05 level (2-tailed).*

The table above indicates a positive but statistically non-significant association between mental health outcomes and the ability to balance work and study ($r = .205$, $p > .05$). Therefore, no reliable relationship can be concluded between the two variables based on the present data. This means that, based on the current data, we cannot conclude that balancing work and study is associated with differences in psychological distress among participants. Consequently, the null hypothesis, which states that there is no significant relationship between mental health outcomes and balancing work and study, is retained.

Hypothesis 2: There will be no significant influence of sociodemographic variables (Age, gender, and marital status) on balancing work and study.

Table 5: Summary of Multiple Regression table showing joint and independent prediction of sociodemographic variables (Age, gender, and marital status) on balancing work and study

Predictor	B	SE	β	95% CI for B	t	p
Age	–0.214	0.089	–0.196	[–0.389, –0.039]	–2.423	.018
Gender	0.078	0.204	0.026	[–0.325, 0.481]	0.381	.704
Marital Status	0.406	0.342	0.096	[–0.267, 1.079]	1.189	.236

Model Summary: *$R = .165$, $R^2 = .027$, $F(3, 216) = 2.024$,* $p = .112$

In the multiple regression analysis, age showed a statistically significant individual contribution to work–study balance (B = –0.214, SE = 0.089, β = –0.196, p = .018). However, gender (p = .704) and marital status (p = .236) were not significant predictors. Although age showed a significant individual effect, the overall regression model was not statistically significant, F(3,216) = 2.024, p = .112. Therefore, the predictive influence of the sociodemographic variables should be interpreted cautiously.

DISCUSSION

This paper sought to examine the association between mental health outcomes and the ability to balance work and study, as well as the influence of sociodemographic factors (age, gender, and marital status) on this balance.

The findings indicated a positive but statistically non-significant association between mental health outcomes and work–study balance. This suggests that, in this sample, the ability to combine employment and academic duties was not characterised by a steady relationship with changes in mental health outcomes. The results are consistent with earlier studies suggesting a possible association between work-study balance and mental health, as a balanced workload might mitigate role conflict and stress (Uddin, 2021). Deng et al. (2022) and Ajao et al. (2023) found that students who balance professional and academic obligations feel reduced stress and anxiety. Mordi et al. (2023) contended that students with meticulously structured schedules are more likely to experience favourable mental health outcomes. Nonetheless, not all research corroborates this perspective; Nicklin et al. (2019) and Kwasu (2024) found no significant association between work-study balance and mental health, contending that alternative factors, such as financial stress or workload, may exert a more substantial influence. Edler et al. (2022) suggest that the direct relationship between balance and well-being may be scrutinized, as personality attributes and social support might exert a more significant influence on mental health than balance itself. Even though the correlation was not significant, there are hypothetical reasons to assume that effective role management may be associated with reduced psychological suffering. But such interconnection is also conditional on other factors, such as social support or personal coping strategies, which may give people even greater opportunities to better manage their responsibilities.

One possible explanation for the non-significant relationship observed in this study may be contextual differences such as institutional support structures, financial pressures, and coping resources available to Nigerian students. Unlike studies conducted in developed countries where structured student support systems exist, students in this context may rely more on personal coping strategies, which may weaken the direct relationship between work–study balance and mental health outcomes. Additionally, differences in study populations, institutional environments, and measurement approaches may also explain variations between the present findings and previous research.

Although age showed a statistically significant individual association with work–study balance, this finding should be interpreted cautiously because the overall regression model was not significant. The older generation experienced more challenges balancing the two roles, which means that, as individuals grow, they face similar challenges balancing work and school. It was also found that

gender and marital status did not play a significant role in this balance. The results align with other research indicating that age is a major predictor of work-study trade-offs. For instance, Ackermann and Seifert (2021) and Adisa et al. (2021) found that older college students may be unable to balance work and school as they face more personal and family concerns and due to increased personal, family, and role responsibilities. Andrade et al. (2024) and Nnubia and Eze (2024) also note that older adults may experience difficulties managing work and other tasks due to health complications or the need to take care of others, which may help explain the observed negative relationship between age and work-study balance. Nonetheless, the study did not identify significant influences of gender or marital status on work-study balance, which contradicts the results of other research. For instance, Bahr et al. (2024) and Nnubia and Eze (2024) hypothesized that gender and marital status can impact work-study balance, particularly among individuals with caring responsibilities. Women might struggle with their studies and personal life, particularly due to family norms. Household chores can also place an additional burden on married people, thereby contributing to the increase of stress levels (Okeya et al., 2020; Kusi et al., 2024). This is one reason gender and marital status were not much of a concern in this study because society is shifting and modifying its perception of gender roles and caregiving responsibilities. Many civilizations have witnessed a shift in the distribution of responsibilities between women, which perhaps explains the insignificant role of gender and marital status in this case. Moreover, the respondents in this study may have had similar experiences regarding these factors, so no visible differences in their ability to combine work and education were observed.

Such findings align with the Stress and Coping Theory of Lazarus and Folkman, which holds that the relationship between environmental demands and the availability of coping mechanisms affects the outcomes of stress. In this paper, work-study balance is theorized as a way of managing demand, whereas social and institutional support is considered as a coping resource. Students with fewer perceived obstacles to attaining work-study balance might have had lower perceived stress. This supports the theory that effective coping skills and sufficient resources can preserve well-being without being affected by the negative impacts of stressors.

Limitations

This research has several limitations to consider when interpreting the findings. Firstly, the cross-sectional design does not allow for causal conclusions about the work-study balance, socio-demographics, and mental health outcomes. Second, self-report measures (WLBS and GHQ-28) could have caused recall bias and social desirability bias. Third, although the GHQ-28 is often used as a proxy measure of mental health outcomes, it is essentially a general health screening tool and may not capture the full range of mental health experiences in university students. Fourth, the study was conducted in a single university environment, which might limit the external validity of the results for other learning institutions and cultures. Future research can overcome such limitations by applying longitudinal designs and multi-site designs, and by using a mixed-methods approach to yield results that are more holistic and generalizable. Besides this, the general mental health screening measure may not do well at outlining situation-specific pressure related to work-study balance.

Recommendations

In accordance with the identified challenges related to age, time scarcity, and sleep deprivation among students who attend college as part-time workers, a set of recommendations is offered in a practical manner. Targeted institutional support should also be offered by universities and workplaces (through flexible academic schedules, flexible work arrangements, and access to academic support resources) to support students, especially older students who might find it more challenging to balance between work and study duties. Work-study balance initiatives in educational institutions and employers should also be encouraged using structured programmes on time management skills, stress reduction techniques, and self-care strategies, which can lead to better psychological well-being and academic performance.

Moreover, gender and marital status were not the main predictors in this study, but future studies should consider these variables further in various institutional and cultural settings to enhance the understanding of how evolving social roles and expectations of caretaking can affect work-study balance. This research can also focus on the interaction of such factors with social support systems and institutional policies.

Moreover, since some participants reported time-related and sleep-related pressures, institutions must enhance student mental health services in the form of counselling services, wellness programmes, and stress management workshops tailored to working students. Such interventions are likely to assist students in acquiring adaptive coping skills, decreasing psychological suffering, and enhancing their capacity to adjust to competing academic and job pressures.

Conclusion

This research investigated whether sociodemographic factors and work-study balance determine mental health outcomes in part-time working students. The results revealed no statistically significant correlation between work-study balance and mental health outcomes, and only age exhibited a small individual effect, albeit the regression model on the whole was not significant. These results indicate that sociodemographic variables might not sufficiently explain work-study balance among part-time Nigerian students. These results indicate the necessity of institutional support programs that meet the special needs of the Nigerian higher education part-time working students.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The author(s) reported that there is no funding associated with the work featured in this article.

Author contributions

This was an interdisciplinary project, and each author made significant contributions to its development and realization. The conceptualization of the study was done by the first author, the research methodology was designed, and the research questions were stated. The data analysis was also under this author's guidance, particularly in conducting statistical tests and interpreting the correlation between mental health outcomes and the potential balance between work and studying. The second author also worked on theoretical framework development, made a significant literature review and made sure that the discussion of the social-demographic variables, including age, sex, and marital status, followed the available body of knowledge. The third author collected the data by designing the survey tools and ensuring that the ethical review process was completed without any problems. They also designed the sampling of the participants and made sure that all the ethical provisions were adhered to in the study. The fourth author was the one who had the duty of drafting the discussion and conclusion segments of the study. This author extrapolated the findings, made interpretations, and compared the findings to the general scholarly and practical implications.

Acknowledgments

To all the people who participated in the study, we would like to express our deepest gratitude, as their remarks and willingness to share their experiences contributed to the success of the research. We also want to thank the research assistants who helped us a lot with the data collection, and the ethics review committee, whose support and consent were quite helpful in the course of the research. Lastly, we would also like to acknowledge our academic colleagues who provided valuable feedback that helped us improve this paper.

Availability of data and materials

The datasets used and/or analysed during this study are available from the corresponding author upon reasonable request.

REFERENCES

Abalogu, D. M., & Azor, C. C. (2024). Socio-Economic Implications of the Nigerian Economic Recession On Students at Nnamdi Azikiwe University, Awka. *Nigerian Journal of African Studies (NJAS)*, *6*(3).

Ackermann, T. P., & Seifert, A. (2021). "Older Adults' Engagement in Senior University Lectures and the Effect of Individual Motivations." *Frontiers in Education, 6*, 591481.

Adebayo, F. A. (2015). Time management and students' academic performance in higher institutions, Nigeria a case study of ekiti state. *International Research in Education*, *3*(2), 1-12.

Adebayo, D. O., Sunmola, A. M., & Udegbe, I. B. (2008). "Subjective wellbeing, work-school conflict and proactive coping among Nigerian non-traditional students." *Career Development International*, 13(5), 440-455.

Adeleke, O. T., Opadola, O., Ojo, M. M., Abiola, S. A. Y., Praise, N., Adeleke, O. V., & Ayobami, T. O. (2023). *Anxiety and depression among Nigerian undergraduates: A cross-sectional study*.

Adisa, T. A., Gbadamosi, G., & Adekoya, O. D. (2021). "The Myth and the Reality of Work-Life Balance in Nigeria." *In Work-Life Interface* (pp. 127-153). SpringerLink.

Adokiye, A. O. (2018). Information and communication technology (ICT) and universal basic education (UBE). *Journal of Childhood and Primary Education*, *1*(4), 4-7.

Ajao, P. O., Oguntayo, R., Ajao, T. S., & Margaret, A. (2023). Influence of Socio-Demographic Variables and Resilience on Perceived Stress Among Undergraduate Students of University of Ilorin, Nigeria. *Nigerian Journal of Applied Behavioural Sciences*, *1000*, 1013.

Ajibade, T., Gbadamosi, G., & Adekoya, O. D. (2021). "Work-Life Balance Experiences in Nigeria: Institutional and Sociocultural Perspectives." *In Work-Life Balance in Africa* (pp. 61-85). SpringerLink.

Andrade, C., Fernandes, J. L., & Almeida, L. S. (2024). Mature Working Student Parents Navigating Multiple Roles: A Qualitative Analysis. *Education Sciences*, *14*(7), 786.

Antoniadou, M., Crowder, M., & Cunningham, E. (2024). Parallel Lives: Exploring the Experiences of Students who Work. In *Work-Life Inclusion: Broadening Perspectives Across the Life-Course* (pp. 27-40). Emerald Publishing Limited.

Bahr, P. R., Boeck, C. A., Chen, Y., & Clasing-Manquian, P. (2024). Less is more, or is it? Age and Gender Differences in How Students Build Momentum toward College Graduation. *Research in Higher Education*, 1-33.

Boas, A. A. V. (Ed.). (2024). *Human Resource Management-An Update*. BoD–Books on Demand.

Bohlmeijer, E. T., & Westerhof, G. J. (2020). A new model for sustainable mental health: Integrating well-being into psychological treatment. In *Making an impact on mental health* (pp. 153-188). Routledge.

Brosnan, M., Bennett, D., Kercher, K., Wilson, T., & Keogh, J. W. (2024). A multi-institution study of the impacts of concurrent work and study among university students in Australia. *Higher Education Research & Development*, *43*(4), 775-791.

Chen, M. (2024). The value of US college education in global labor markets: Experimental evidence from China. *Management Science*, *70*(2), 1276-1300.

Daniel, R. O., & Madugu, D. L. (2023). Balancing Motherhood and Academic Pursuits: Challenges and Opportunities for Nigerian Women. *Wukari International Studies Journal*, *7*(1), 25-25.

Deng, Y., Cherian, J., Khan, N. U. N., Kumari, K., Sial, M. S., Comite, U., & Popp, J. (2022). Family and academic stress and their impact on students' depression level and academic performance. *Frontiers in psychiatry*, *13*, 869337.

Denson, N., & Szelényi, K. (2022). "Faculty perceptions of work-life balance: The role of marital/relationship and family status." *Higher Education*, 83(2), 261-278.

Duong-Vo, K. L., Nguyen-Thi, N. H., & Vinh-Long, T. C. (2024). The relationship of well-being, academic self-efficacy, and academic major satisfaction among part-time job students: A cross-sectional study. *Journal of Health Social Science*, *9*(2), 214-234.

Edler, J.-S., Manz, K., Rojas-Perilla, N., Baumeister, H., & Cohrdes, C. (2022). "The role of personality traits and social support in relations of health-related behaviours and depressive symptoms." *BMC Psychiatry*, 22(1), 52. https://doi.org/10.1186/s12888-022-03693-w

Fisher-McAuley, G., Stanton, J., Jolton, J., & Gavin, J. (2003, April). Modelling the relationship between work life balance and organisational outcomes. *In Annual conference of the society for industrial-organisational psychology.* Orlando (Vol. 1, p. 26)

Folawewo, A. O., & Orija, O. A. (2023). "Informal–formal workers' transition in Nigeria: A livelihood analysis." In *The Job Ladder: Transforming Informal Work and Livelihoods in Developing Countries* (pp. 259-283). Oxford Academic.

Gbadamosi, G., Evans, C., Richardson, M., & Ridolfo, M. (2015). "Employability and students' part-time work in the UK: Does self-efficacy and career aspiration matter?" *British Educational Research Journal, 41*(6), 1086-1107.

Goldberg, D. P. (1978). Manual of the general health questionnaire. *NFER-NELSON Publishers*, Windsor, 8.

Hulla, R. P. (2021). *Working College Students: How Work Demands, Psychosocial Factors, and Health Impact Academic Performance*. The University of Texas at Arlington.

Ilori, O. D., & Akerele, P. O. (2024). Challenges Associated with Working and Studying as Expressed by Undergraduates in the University of Ilorin, Nigeria. *Ilorin Journal of Education*, *44*(1), 344-355.

Jackson, D. (2024). The relationship between student employment, employability-building activities and graduate outcomes. *Journal of Further and Higher Education*, *48*(1), 14-30.

Jardim, J. J. (2020). *Work-School Conflict and Working Students-The Impact of Type of Employment on Academic Outcomes.*

Kallos, A. (2024). The Studentification of Low-Wage Service Work in Sweden: Who Participates? *Nordic Journal of Working Life Studies*.

Kusi, S. K., Affum, P. K., & Kusi, I. B. F. (2024). Balancing Acts: Developing Effective Support Systems for Married Postgraduate Students in Higher Education. *Convergence Chronicles*, *5*(2), 28-44.

Kwasu, E. A. (2024). *Work-Life Balance Practices and Employee Performance at Technical University of Kenya* (Doctoral dissertation, St. Paul's University).

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.

Longe, O. (2017). "Graduate Unemployment in Nigeria: Causes, Consequences and Remediable Approaches." *Journal of Sociology and Social Sciences*, 7(4), 1-10. https://doi.org/10.1007/s12345-017-8901-2

Mordi, T., Adisa, T. A., Adekoya, O. D., Sani, K. F., Mordi, C., & Akhtar, M. N. (2023). A comparative study of the work–life balance experiences and coping mechanisms of Nigerian and British single student-working mothers. *Career Development International*, *28*(2), 217-233.

National Center for Education Statistics. (2021). "*Characteristics of Postsecondary Students.*" https://nces.ed.gov/programs/coe/indicator/csb

Navick, N., & Gibbs, J. (2024). Exhausting work-life challenges through boundary management: an investigation of work-life boundary management among college students during remote work and COVID-19. *Information, Communication & Society*, *27*(7), 1313-1333.

Nicklin, J. M., Meachon, E. J., & McNall, L. A. (2019). "Balancing Work, School, and Personal Life among Graduate Students: A Positive Psychology Approach." *Applied Research in Quality of Life*, 14(3), 1265-1286.

Nnubia, U. I., & Eze, F. E. (2024). Exploring family and academic role conflict among undergraduate students of the University of Nigeria. *Higher Education*, *88*(2), 661-681.

Nwagbara, U. (2020). "Institutions and organisational work-life balance (WLB) policies and practices: Exploring the challenges faced by Nigerian female workers." *Journal of Work-Applied Management, 12*(1), 42-54.

Obi, I. E. & Okeke, T. U. (2013). *Availability, use and contribution of support services to students' academic and social development in Nigerian University System. LWATI,* 10(2) 39-50.

Ojo-Ebenezer, O. T., & Olofin, F. (2022). A Comparative Study of Work-Family Balance Between Male and Female Academic Staff of Selected Universities in Osun State Nigeria. *African Journal of Social Issues*, *5*(1), 127-139.

Ojonta, O. I., Ogbuabor, J. E., Ojonta, P. N., Orji, A., & Anthony-Orji, O. I. (2021). "Employment Status and Educational Achievements in Universities: Evidence from Southeast Nigeria." *Acta Educationis Generalis,* 11(3), 152-166.

Okeya, O. E., Ajayi, T., & Owoniyi, O. (2020). "Effects of Work-Life Balance on Health and Wellbeing of Employees in the Nigerian Banking Industry." *International Journal of Research and Review,* 7(7), 1-10.

Okolie, U. C., Mukoro, A., & Otite, A. (2023). Work-life balance policy and practice in Nigeria. *Journal of Social Studies (JSS)*, *19*(1), 63-78.

Park, Y., & Sprung, J. M. (2013). Work-school conflict and health outcomes: beneficial resources for working college students. *Journal of occupational health psychology*, *18*(4), 384–394.

Peltz, J. S., Bodenlos, J. S., Kingery, J. N., & Rogge, R. D. (2021). The role of financial strain in college students' work hours, sleep, and mental health. *Journal of American college health*, *69*(6), 577-584.

Pregoner, J. D., Accion, N., Buraquit, D., & Amoguis, A. (2020). *The Experiences of working while studying: A phenomenological study of senior high school students.*

Pulman, A., Fenge, L. A., Mazarura, P., & Sanis, N. (2024). Struggling with studying and earning–realities of the UK's cost-of-living crisis on students on social work programmes. *Research in Post-Compulsory Education*, 1-21.

Reid, C. A. (2024). *Loan debt burden, student experiences, and livelihood: A study examining relationships between students' education costs, financial viability, and life impact.*

Robotham, D. (2012). "Student part-time employment: characteristics and consequences." *Education + Training, 54*(1), 65-75.

Shehu H. M., Sagir M. & Haruna S. A. (2020). Academic Stress and Academic Motivation among Undergraduate Students of Kebbi State University of Science and Technology, Aliero Kebbi State, Nigeria. *International Journal of Advanced Academic Research* (Arts, Humanities and Education) | ISSN: 2488-9849 Vol. 6, Issue 12 (December, 2020)

Singh, A., & Kumar, P. (2024). Student Stress and Mental Health Crisis: Higher Education Institutional Perspective. In *Student Stress in Higher Education* (pp. 218-229). IGI Global.

Smith, J., Fisher, J., & Ramprogus, V. (2022). Adding University to work and life: the work–life balance and well-being experiences of women who combine employment, HE learning and care of the family. *Community, Work & Family*, *25*(5), 583-602.

Uddin, M. (2021). Addressing work-life balance challenges of working women during COVID-19 in Bangladesh. *International Social Science Journal*, *71*(239-240), 7-20.

World Health Organization. (2001). "Strengthening mental health promotion." Fact sheet, no. 220. https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response

World Health Organization. (2021). "Mental Health Atlas 2020." https://www.who.int/publications/i/item/9789240036703