



Awareness, Knowledge, and Influence of Health Information on Sedentary Lifestyle among Academic and Non-Academic Staff of Nnamdi Azikiwe University, Awka

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Abstract

A sedentary lifestyle is increasingly common globally and is associated with several adverse health outcomes. Educational work environments often reinforce sedentary behaviour, making academic and non-academic staff particularly vulnerable. This study examined exposure, knowledge, and behavioural responses to health information on sedentary lifestyle among academic and non-academic staff at Nnamdi Azikiwe University, Awka. Using a quantitative survey design, data were collected from 361 staff across the university's four campuses, and analysed with descriptive statistics. Findings indicate that staff exhibit low engagement with health information on sedentary lifestyle, with most accessing content primarily through hospitals, clinics, the internet, and colleagues, while traditional media, religious gatherings, and printed materials contribute minimally. Despite some access, knowledge levels were generally poor, with the majority expressing uncertainty regarding sedentary behaviour, associated health risks, and preventive measures. Behavioural responses were also limited, as staff rarely translated information into active practices such as taking breaks, exercising, or monitoring screen time. The findings underscore the need for integrated interventions, including interactive digital platforms, workplace adjustments such as standing or treadmill desks, regular health workshops, staff sports festivals, and formal policies mandating movement breaks. Such measures can enhance exposure, improve knowledge, and promote positive behavioural practices, ultimately mitigating the health risks associated with prolonged sedentary lifestyle and fostering a healthier university workforce.

Keywords: Sedentary Lifestyle, Health Information, Exposure, Knowledge, Behaviour

Introduction

A sedentary lifestyle refers to a pattern of living in which an individual does not exercise regularly and remains minimally active throughout the day (Chris, 2017). The term sedentary is derived from the Latin word *sedere*, meaning “to sit”. Sedentary behaviour involves prolonged periods of sitting in various settings such as at work, at home, in business centres, during social interactions with friends or colleagues, while driving or commuting, and during leisure time with little or no energy expenditure (Owen, 2010; Sparling, Healy, Dunstan & Mathews, 2010; Bushark, 2015). It also includes extended use of screen-based media such as computers, mobile phones and

television (Marshall & Ramirez, 2011). Individuals are therefore classified as sedentary due to physical inactivity or engagement in activities that require very low energy consumption. According to the Sedentary Behaviour Research Network (2012), sedentary behaviour is defined as “any waking behaviour characterised by energy expenditure ≤ 1.5 METs while in a sitting or reclining posture.” This definition incorporates both posture (sitting, reclining, or lying) and low energy expenditure, while excluding light-intensity activities such as quiet standing.

A sedentary lifestyle has been linked to numerous health risks and is recognised as one of the ten leading risk factors for non-communicable diseases, disability and premature death. Evidence shows that sedentary behaviour or insufficient physical activity is associated with the onset and progression of non-communicable diseases. It is correlated with heart disease (Baysel, Bilgin, Cantekin & Bilgin, 2014), cardiovascular complications (Ford & Caspersen, 2012), certain cancers (Boyl, 2012), overweight and obesity (Kandola, 2018), depression (Teychennem, Ball & Samon, 2010), musculoskeletal disorders of the neck and upper extremities, the development and progression of Parkinson’s disease (Melao, 2018), and increased risk of Alzheimer’s disease (Lerche, 2017).

Traditional educational institutions often contribute to sedentary living. Various factors account for the alarming trend of physical inactivity among staff in higher institutions. Both academic and non-academic staff typically undertake tasks that require sitting for long hours processing files and correspondence, grading papers, working on computers for research, preparing lecture materials, or performing administrative duties. Many do not meet the recommended 150–300 minutes of moderate-intensity activity or 75–150 minutes of vigorous-intensity activity or a combination of both per week, as advised by the Centres for Disease Control (CDC, 2015). Consequently, they are vulnerable to the health risks associated with prolonged sedentary behaviour.

Information on the health implications of a sedentary lifestyle is available across several communication platforms. Development agencies, health organisations, institutions and government bodies disseminate such information through intervention and public awareness campaigns. These channels include social and digital media tools such as YouTube, the World Health Organization (WHO) websites, newsletters, and community outreach events, as well as paid advertisements or public service announcements on television, radio, billboards and public transport. Academic and non-academic staff of Nnamdi Azikiwe University, Awka, regularly perform tasks that require long periods of sitting, thereby exposing themselves to the associated health risks. This study therefore aims to examine the awareness, knowledge and influence of health information on sedentary lifestyle among staff of Nnamdi Azikiwe University, Awka.

Research Problem

Sedentary lifestyle has become a global concern due to its associated health risks. Numerous studies have demonstrated its link with adverse health outcomes such as metabolic syndrome, obesity, diabetes, cardiovascular diseases and increased mortality (Patterson, McNamara, Tainio, Herick de Sá, Smith, Sharp, Edwards, Woodcock, Brage & Wijndaele, 2018; Lemes, Sui, Fernandes, Blair, Turi-Lynch, Codogno & Monteiro, 2019). Traditional educational institutions also contribute

significantly to the sedentary lifestyle of their staff (Cain, 2022). Academic and non-academic staff often engage in tasks that require prolonged sitting, including attending to files and correspondence, grading papers, using computers for research, preparing lecture materials and performing various administrative duties. Staff of Nnamdi Azikiwe University, Awka, fall within this category, thus underscoring the need for this study.

Despite increasing global research on sedentary lifestyle, most existing studies originate from foreign contexts, resulting in a notable gap in African particularly Nigerian literature. This study contributes to bridging this gap by examining the influence of health information on sedentary lifestyle among academic and non-academic staff in a Nigerian university setting.

Objectives of the Study

The specific objectives of the study are as follows:

1. To examine the level of exposure to health information on sedentary lifestyle among the academic and non-academic staff of Nnamdi Azikiwe University, Awka.
2. To identify the sources of health information on sedentary lifestyle available to the academic and non-academic staff of Nnamdi Azikiwe University, Awka.
3. To determine the level of knowledge of health information on sedentary lifestyle among the academic and non-academic staff of Nnamdi Azikiwe University, Awka.
4. To determine the extent to which health information on sedentary lifestyle influences the physical activity behaviour of academic and non-academic staff of Nnamdi Azikiwe University, Awka.

Sedentary Lifestyle

Sedentary lifestyle refers to patterns of behaviour characterised by prolonged sitting or lying down with minimal physical movement or energy expenditure. Chris (2017) defines it as a lifestyle in which individuals spend six or more hours per day in a sitting or lying position with little or no exercise. Similarly, Jose et al. (2003) describe sedentary behaviour in terms of the number of hours an individual remains seated during a typical day compared to time spent walking or engaging in physical activity. The rise of sedentary living has been closely linked to modernisation, technological advancement, and changes in work patterns. With the growth of office-based employment, mechanised transportation and digital entertainment, daily routines now require significantly less physical exertion. In African contexts such as Nigeria, these changes have been intensified by rapid urbanisation and economic development, shifting lifestyles from physically demanding activities to more sedentary occupations (Maiyaki, 2014).

Sedentary lifestyle is widely recognised as a major risk factor for numerous non-communicable diseases (NCDs). Marks (2021) defines a health risk as an adverse consequence resulting from particular behaviours or conditions. Prolonged physical inactivity contributes to metabolic dysfunction, reduced circulation and musculoskeletal problems, which collectively increase vulnerability to chronic diseases. Empirical evidence shows that sedentary behaviour is associated with heart disease (Baysel et al., 2014; Ford & Caspersen, 2012), certain cancers (Boyl, 2012), obesity (Kandola, 2018), depression (Teychennem, Ball & Samon, 2010),

musculoskeletal disorders, Parkinson's disease (Melao, 2018), and Alzheimer's disease (Lerche, 2017). Reports from the World Health Organization (WHO, 2025) indicate that sedentary living contributes to energy imbalance and rising global obesity levels. Likewise, prolonged inactivity negatively affects glucose metabolism, increasing diabetes risk (Cleveland Clinic, 2023). Sedentary behaviour has also been linked to cardiovascular diseases such as coronary artery disease, arrhythmia and heart failure (Felman, 2023), as well as vein-related disorders caused by reduced blood flow (Cleveland Clinic, 2023). Other conditions associated with sedentary living include reduced bone mineral density and osteoporosis (Mayo Clinic, 2023), various cancers (National Cancer Institute, 2021), and stroke linked to hypertension and arterial blockage (Cleveland Clinic, 2022).

Several factors influence sedentary behaviour, including environmental, occupational and individual determinants. The increasing shift towards computer-based occupations has expanded sedentary exposure among office and academic workers, whose tasks often require long hours of sitting (U.S. Department of Labour, 2023). Individual psychological factors such as motivation, enjoyment and habitual screen use also reinforce inactivity. In addition, urban design and transportation structures can limit opportunities for physical activity. Restricted access to recreational spaces, lengthy commuting times, and cultural norms that associate sitting with professionalism contribute to sedentary tendencies (Owen et al., 2010).

Review of Empirical Studies

Empirical research across different regions consistently demonstrates that sedentary behaviour is a growing public health challenge, particularly among occupational groups whose work demands prolonged sitting. Studies from Nigeria, Africa, Europe, Asia, and the United States have shown that sedentary lifestyles are strongly linked to rising cases of non-communicable diseases (NCDs), including obesity, cardiovascular disorders, and musculoskeletal complications. These studies also highlight an essential dimension: the role of awareness, knowledge, and access to health information in shaping behavioural responses to sedentary risks. In Nigeria, where urbanisation and changing work patterns have contributed to increased inactivity, early research such as Shehu, Abdullahi and Adekeye (2010) emphasised significant urban–rural differences in sedentary living, establishing that urban residents exhibited higher levels of sedentary behaviour with corresponding health problems. This foundational evidence aligns with global literature showing that occupational and environmental factors significantly influence sedentary tendencies.

Several studies focusing on institutional and workplace populations further deepen the understanding of sedentary behaviour within academic environments. In the United States, Headley, Hutchinson and Matthews (2018) provided robust empirical evidence showing that different occupational groups within a college demonstrated varying patterns of sedentary behaviour, with administrators being the most sedentary. Their combination of subjective and objective measurements strengthens their findings and underscores the complexity of institutional sedentary patterns. Similarly, Ofili (2019) examined senior non-academic staff at the University of Nigeria, Nsukka, revealing high knowledge of sedentary lifestyle risks yet a striking gap between awareness and behavioural practice. This knowledge–practice gap highlights a persistent challenge: information alone does not guarantee behaviour change, especially

in environments that structurally reinforce prolonged sitting. Together, these studies indicate that while staff in academic settings may be aware of sedentary risks, translating knowledge into healthier practices remains limited an important empirical gap the present study aims to address.

Some international studies further illuminate the behavioural, perceptual, and environmental determinants of sedentary living. Landais, Jelsma and Damman (2022), in a qualitative investigation among Dutch office workers, identified key themes showing that perceptions of sedentary behaviour differ from those of physical activity, and that motivations, barriers, and supporting factors are shaped by personal values, workplace culture, and access to health information. Similarly, research in Malaysia by Kumareswaran (2023) emphasised the growing influence of technology, socioeconomic factors, and office-based work in promoting sedentary lifestyles, while documenting their health consequences such as Type 2 diabetes, hypertension, and hypercholesterolaemia. These international findings reinforce the multidimensional drivers of sedentary behaviour and the need for context-specific interventions. They also demonstrate that effective behavioural change requires more than awareness it demands targeted health information, enabling environments, and institutional support. This provides a strong empirical basis for the current study, which investigates how health information influences sedentary lifestyle among academic and non-academic staff at Nnamdi Azikiwe University, Awka.

Theoretical Framework

This study is anchored on Behavioural Choice Theory. The theory propounded by Howard Rachlin in 1989. The theory posits that human behaviour is shaped by the relative ease of access, availability, and perceived reinforcement value of competing behavioural options. In other words, individuals tend to choose behaviours that are more convenient, require less effort, and provide immediate or perceived rewards. Sedentary behaviours such as prolonged sitting, screen time, and passive transportation often offer high reinforcement value (e.g., comfort, reduced physical exertion, or enjoyment), making them more appealing than physically demanding alternatives.

Within the context of the present study, Behavioural Choice Theory provides a robust lens for explaining why academic and non-academic staff may gravitate toward sedentary lifestyles. The modern university environment is characterised by widespread access to computers, digital communication tools, office-based tasks, and transport systems that minimise physical activity. These conditions increase the availability and attractiveness of sedentary options while reducing opportunities or incentives for active choices such as walking or engaging in structured physical activity. Thus, the theory helps to illustrate how environmental convenience, occupational demands, and reinforcing outcomes collectively influence staff behaviour, ultimately shaping patterns of sedentary living. It also underscores the importance of targeted health information and environmental restructuring to shift behavioural choices toward healthier, more active alternatives.

Methodology

This study adopted a quantitative research approach using the survey design method. The area of study was Nnamdi Azikiwe University, Awka, located in Anambra State, Nigeria. The university comprises four campuses: Awka, Nnewi, Ifite-Ogwari, and Agulu. The population for the study included both academic and non-academic

staff across all four campuses. A total sample of 381 respondents was determined using Taro Yamane's formula (1967) with a 5% margin of error and a 95% confidence level. This formula provides an accurate estimate of an appropriate sample size for large populations while maintaining a reasonable level of precision. For data collection, a structured questionnaire was administered to the sampled staff. Out of the distributed questionnaires, 361 valid responses were returned and subsequently used for analysis. The survey focused on assessing the level of exposure, sources of information, knowledge, and behavioural responses related to health information on sedentary lifestyle among the academic and non-academic staff of the university. Data collected were analysed using descriptive statistics, including frequencies and percentages, to provide clear insights into respondents' awareness, knowledge, and behaviour regarding sedentary lifestyle.

Data Presentation

Table 1. Respondents' Demographic Information

Items	Responses	Frequency	Percentage (%)
Gender	Male	210	58.2
	Female	151	41.8
Age (years)	20–29	45	12.5
	30–39	120	33.2
	40–49	130	36.0
	50 and above	66	18.3
Staff Category	Academic	198	54.8
	Non-Academic	163	45.2
Campus	Awka	180	49.9
	Nnewi	70	19.4
	Ifite-Ogwari	56	15.5
	Agulu	55	15.2

Source: Field Survey (2025)

Table 1 above presents the demographic profile of the respondents. The data indicate a balanced representation across key characteristics. The majority of participants are male, with a substantial proportion within the 30–49 years age bracket, reflecting a workforce primarily in mid-career stages where occupational responsibilities may predispose them to prolonged sedentary behaviour. Academic staff constituted a slightly higher proportion of the sample compared to non-academic staff, suggesting that research, teaching, and administrative duties likely influence patterns of exposure to sedentary lifestyle risks. Geographically, the largest share of respondents was drawn from the main Awka campus, with significant representation from the Nnewi, Ifite-Ogwari, and Agulu campuses.

Table 2. Frequency of Exposure to Health Information on Sedentary Lifestyle

Responses	Number of Respondents	Percentage (%)
Always	10	2.8
Very Often	25	6.9
Often	50	13.9
Occasional	85	23.5
Rarely	120	33.2
Never	71	19.7
Total	361	100

Source: Field Survey (2025)

The analysis of respondents' frequency of exposure to health information on sedentary lifestyle indicates that the majority exhibit low levels of engagement. Specifically, over half of the participants (52.9%) reported encountering such information either "Rarely" (33.2%) or "Never" (19.7%), while only a small proportion accessed it regularly, with 2.8% "Always," 6.9% "Very Often," and 13.9% "Often." An additional 23.5% reported occasional exposure. These findings suggest that despite the availability of health information, consistent engagement with content on the risks and management of sedentary behaviour is limited among academic and non-academic staff. The predominance of low-frequency exposure underscores a critical gap in awareness and highlights the need for more targeted, frequent, and accessible dissemination of health information within university settings to foster informed behavioural change and mitigate the adverse health effects associated with prolonged sedentary lifestyle.

Table 3. Sources of Health Information on Sedentary Lifestyle among Respondents

Source	Frequency	Percentage (%)
Radio	64	10.41
Television	71	11.54
Internet (social media, websites, apps etc.)	105	17.07
Magazine	14	2.28
Books	34	5.52
Fliers	8	1.30
Billboards	0	0.00
Religious meetings (e.g., church programmes)	4	0.65
Health workshops and outreaches	64	10.41
Hospitals and clinics	126	20.49
Family members	11	1.79
Workplace colleagues and friends	98	15.93
Others	16	2.60

Source: *Field Survey (2025)*

The data on sources of exposure to health information on sedentary lifestyle reveal that respondents predominantly access information through hospitals and clinics (20.5%), the internet including social media and websites (17.1%), and workplace colleagues and friends (15.9%). Television (11.5%) and radio (10.4%) also serve as notable channels, while magazines, books, fliers, religious meetings, family members, and other sources collectively account for a smaller proportion of exposure. These findings indicate that formal healthcare settings, digital platforms, and interpersonal networks are the primary conduits through which academic and non-academic staff obtain health information. The prominence of the internet as a key source underscores the increasing reliance on digital media for health education, while the significant role of hospitals and clinics highlights the continuing importance of direct professional guidance. On the contrary, the result indicate low engagement with traditional print media, religious gatherings, and flyers suggests that these channels have limited reach or influence in promoting awareness of sedentary lifestyle risks among the university staff.

Table 4. Respondents' Knowledge of Health Information on Sedentary Lifestyle

Knowledge Items	True	False	Can't Say
Sedentary lifestyle is defined as engaging in less than 150 minutes of moderate-intensity physical activity per week.	80 (22.2%)	70 (19.4%)	211 (58.5%)
Prolonged sitting increases the risk of cardiovascular diseases.	90 (24.9%)	80 (22.2%)	191 (53.0%)
Regular physical activity can reduce the health risks associated with sedentary behaviour.	100 (27.7%)	70 (19.4%)	191 (53.0%)
The recommended daily physical activity for adults to prevent sedentary lifestyle-related health issues is 30–60 minutes.	60 (16.6%)	90 (24.9%)	211 (58.5%)
Watching television or using a computer for more than 4 hours a day is considered a sedentary behaviour.	70 (19.4%)	90 (24.9%)	201 (55.7%)

Source: Field Survey (2025)

The analysis of respondents' knowledge of health information on sedentary lifestyle indicates a generally poor knowledge level among the academic and non-academic staff of Nnamdi Azikiwe University, Awka. As shown in Table 4, a substantial proportion of respondents selected demonstrated uncertainty across all items, with percentages ranging from 53.0% to 58.5%, suggesting that the majority were uncertain about fundamental aspects of sedentary behaviour, its health risks, and recommended preventive measures. Correct responses ("True") were provided by only 16.6% to 27.7% of respondents, while incorrect responses ("False") accounted for 19.4% to 24.9%. This pattern highlights a pronounced knowledge gap, indicating that while some staff possess basic understanding of the health implications of sedentary lifestyle, the majority lack adequate awareness to make informed behavioural choices.

Table 5. Behavioural Responses to Health Information on Sedentary Lifestyle

Behavioural Items	Always	Very Often	Often	Occasional	Rarely	Never
I take breaks from sitting after prolonged desk work	15 (4.2%)	20 (5.5%)	30 (8.3%)	50 (13.9%)	120 (33.2%)	126 (34.9%)
I engage in physical exercises to counteract sedentary behaviour	10 (2.8%)	15 (4.2%)	25 (6.9%)	40 (11.1%)	135 (37.4%)	136 (37.7%)
I adjust my work environment based on information about sedentary lifestyle	8 (2.2%)	12 (3.3%)	20 (5.5%)	35 (9.7%)	140 (38.8%)	146 (40.4%)
I reduce screen time after learning about health risks	12 (3.3%)	18 (5.0%)	22 (6.1%)	38 (10.5%)	135 (37.4%)	136 (37.7%)
I encourage colleagues to engage in physical activity	5 (1.4%)	10 (2.8%)	18 (5.0%)	30 (8.3%)	140 (38.8%)	158 (43.8%)
I monitor my daily sitting time or physical activity level	6 (1.7%)	12 (3.3%)	20 (5.5%)	35 (9.7%)	140 (38.8%)	148 (41.0%)
I participate in health workshops or seminars	4 (1.1%)	8 (2.2%)	15 (4.2%)	25 (6.9%)	150 (41.5%)	159 (44.0%)

Source: Field Survey (2025)

The table indicates that the behavioural response of academic and non-academic staff to health information on sedentary lifestyle is generally poor. The majority of respondents predominantly selected rarely or never adhere to precautionary information against sedentary lifestyle. Very few respondents reported actively engaging in positive behaviours such as exercising, taking breaks from prolonged sitting, or monitoring screen time, reflecting limited translation of health knowledge into practice. This

suggests that while staff may have some awareness of sedentary lifestyle risks, it is not effectively influencing their day-to-day behaviours.

Discussion of Findings

The findings of this study indicate that academic and non-academic staff at Nnamdi Azikiwe University, Awka, exhibit low levels of exposure to health information on sedentary lifestyle, with the majority rarely or never encountering relevant content. This aligns with global empirical evidence showing that limited engagement with health information is a significant barrier to addressing sedentary behaviour, particularly in occupational settings where prolonged sitting is the norm (Headley, Hutchinson & Matthews, 2018; Ofili, 2019). Despite the availability of multiple channels for health communication, such as digital platforms, healthcare facilities, and interpersonal networks, engagement remains low, suggesting that accessibility alone is insufficient to drive awareness and behaviour change.

The study further reveals that respondents primarily access health information through hospitals, clinics, the internet, and colleagues, whereas traditional media, religious gatherings, and printed materials play a minimal role. These findings resonate with international studies highlighting the prominence of digital media and formal healthcare settings as key sources of health knowledge, while less formal channels often have limited influence (Landais, Jelsma & Damman, 2022; Kumareswaran, 2023). In the Nigerian context, this pattern reflects ongoing urbanisation and the increasing reliance on technology and institutionalised health systems, which shape both exposure and comprehension of sedentary lifestyle risks (Shehu, Abdullahi & Adekeye, 2010).

Despite some access to health information, the study indicates generally poor knowledge among staff, with many respondents uncertain about fundamental aspects of sedentary behaviour, associated health risks, and recommended preventive measures. This knowledge gap mirrors prior research at the University of Nigeria, Nsukka, where high awareness did not necessarily translate into effective behavioural practices (Ofili, 2019). Corroborating, the behavioural responses observed in the current study were predominantly poor, with staff rarely engaging in positive practices such as taking breaks, exercising, or monitoring screen time. Behavioural Choice Theory (Rachlin, 1989) offers a compelling explanation: the convenience, ease, and perceived reinforcement of sedentary activities in a university environment make active alternatives less attractive. Thus, occupational structures, environmental convenience, and the reinforcing value of sedentary behaviour collectively limit the translation of health knowledge into practice.

Conclusion

The findings of this study suggest that low engagement with health information on sedentary lifestyle among academic and non-academic staff is not merely a reflection of limited access, but also indicates underlying behavioural and cognitive barriers that hinder effective knowledge translation into practice. The predominance of passive exposure through certain media and interpersonal channels, coupled with widespread uncertainty regarding sedentary health risks, reflects an institutional environment where sedentary behaviour is reinforced by convenience, occupational demands, and the immediate gratification of low-effort activities. Analytically, this implies that awareness alone is insufficient to drive behavioural change; the interaction between environmental affordances, personal motivation, and perceived reinforcement

plays a decisive role in shaping lifestyle choices. Moreover, the consistent pattern of poor behavioural responses demonstrates that structural and motivational factors, rather than lack of information per se, are primary determinants of sedentary practices among university staff. Thus, interventions aimed at mitigating sedentary lifestyle must address not only information dissemination but also the contextual and behavioural constraints that influence daily choices.

Recommendations

1. Given that staff predominantly access health information through the internet and colleagues, the university should implement an interactive digital platform that delivers short, engaging microlearning modules on sedentary lifestyle risks. The university websites and social media pages, including the UNIZIK FM social media platforms, can also be leveraged to amplify awareness of the issue.
2. Since most staff rarely or never engage in physical activity, university management should introduce adjustable standing desks and treadmill desks, which would make active behaviour more convenient and attractive within the office environment.
3. There is a need for regular health workshops across the university to educate staff about the risks associated with sedentary behaviour and effective prevention strategies.
4. Additionally, the university should organize staff sports festivals. Such festivals can raise awareness about health issues, including sedentary lifestyle, while providing an opportunity for staff to engage in physical activities that promote health and mitigate the risks associated with prolonged inactivity.
5. Formal policies should be established to mandate short movement breaks during long meetings or administrative tasks, complemented by scheduled wellness sessions. This would provide structural support to counteract the environmental and occupational factors that promote sedentary behaviour.

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