

Determinants Of Sedentary Behaviour Among Young Adults In Port Harcourt Local Government Area, Rivers State

¹Kpai, Tonubari & ²Ewere, Wonderful 

^{1&2}Department of Human Kinetics and Sports Science, Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt, Nigeria

Emails: tonubari.kpai@iaue.edu.ng & tonukpai@gmail.com

Keywords

Inactivity, Sedentary behaviour, young adults, Nigeria

Abstract

Sedentary behaviour characterised by prolonged sitting or low energy activities such as screen time has become increasingly common among young adults due to academic, occupational and social demands. This lifestyle is associated with negative health outcomes such as reduced physical fitness, increased risks of obesity and poor mental wellbeing. The study investigated the determinants of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. A descriptive survey design was adopted for the study and the population comprised of all young adults in Port Harcourt Local Government Area, Rivers State who were resident in the area as at the time of the study. Cochran formula was used to obtain a sample of 384 and a multistage sampling procedure was used to distribute the sample. The instrument for data collection was a self-structured questionnaire with 0.774 coefficient of reliability. Descriptive analysis was done using frequency counts, percentages, mean and standard deviation, while the hypotheses were tested using Analysis of Variance (ANOVA) at 0.05 alpha level of significance. The findings showed that 16.9% exhibited very high sedentary behaviour. 50.0% of respondents between 20 years and below exhibited high level of sedentary behaviour while 76.0% of those between ages 31 years and above exhibited low level of sedentary behaviours. More than half of the respondents (both males and females) exhibited high level sedentary behaviour. 63.3% of those who always succumb to negative peer pressure exhibited high level of sedentary behaviour while more than half of those who were poor as well as those who were in the upper exhibited high level of sedentary behaviour. More than half (63%) of the respondents with good health status exhibited low sedentary behaviour while more than half of those with very poor health status exhibited high sedentary behaviour. Furthermore, it was revealed that age ($F=13.065$; $p=0.000$), peer pressure ($F=18.140$; $p=0.000$), socio-economic status ($F=11.352$; $p=0.000$) and health status ($F=10.356$; $p=0.000$) were significant determinants of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. Parents and caregivers should organize family outings that involve physical activities such as hiking, biking, or team sports to encourage their wards participate in a more active lifestyle; in addition, Public Health Workers should run awareness campaigns through social media, television, and community programs to educate youth and their families about the importance of reducing sedentary behaviour and increasing physical activity.

Introduction

Modern life has been completely transformed by technological breakthroughs, which have altered the way people work, communicate and amuse themselves. However, in addition to these advantages, these developments have also brought about a rise in sedentary behaviour, which presents serious problems for public health and wellbeing. Sedentary behaviour can be described as the time spent in any waking behaviour that requires low levels of energy expenditure (Marconcin et al., 2021). It can also be described as any waking behaviour characterised by an energy expenditure that is less than or equal to 1.5 metabolic equivalents (METs) while in a sitting or reclining posture (Sedentary Behaviour Research Network, 2012; Tremblay et al., 2017). In simpler terms, it involves activities that require minimal physical movement and low levels of energy expenditure, such as sitting, watching television, using computers, or playing video games, for extended periods (World Health Organisation, 2010). Thus, sedentary behaviour could be due to leisure activities or occupation (Mohammed et al., 2020).

Globally, a high proportion of the adult population spend a lot of time being sedentary and not enough time being physically active. According to the World Health Organisation, (WHO, 2020), approximately 3.2 million deaths each year are attributable to insufficient physical activity. This trend, which has been increasing over the past decades, largely results from urbanisation, technologisation and the adoption of a 'Western lifestyle'. In many high-income countries, sedentary behaviour (amounts to more than half of adults' waking time (between 8 and 11 hours daily) (Chau et al., 2015; Chen et al., 2018), in particular it was observed that Americans spend 55% of their waking time (7.7 hours a day) engaged in sedentary behaviours whereas Europeans spend 40% of their leisure time (2.7 hours a day) watching television (Patterson et al., 2018) while 32% of men and 42% of women did not meet the World Health Organisation physical activity guidelines in 2016 (that is engaging in at least 150 min of moderate intensity physical activity per week) (WHO, 2020). The increasing availability of modern technology, transportation, and communication systems have not only decreased the demand for physical activity, but has also caused sitting to become one of the most common postures in today's workplace, recreational activities, and daily commuting thereby encouraging sedentary behaviour especially in low-income countries (Albawardi et al., 2017).

Sedentary behaviour has become a growing concern among young adults. There appears to be relatively high levels of sedentary behaviour among this demographic group, typically aged between 18 to 35 years, that may be due to a wide range of factors which may include environmental factors such as accessibility to sedentary pursuits, societal norms favouring prolonged sitting, and technological advancements promoting screen-based activities (Rhodes et al., 2012). In addition to these, individual-level factors such as the sedentary pursuits of family and friends, societal norms and expectation, social support networks, occupation, education level, and psychological traits may influence sedentary behaviour patterns among this demographic group (Wijtzes et al., 2014; Larson et al., 2015; Bauer et al., 2018).

Gender is one factor that influences sedentary behaviour. Men tend to engage in higher levels of moderate-to-vigorous physical activity compared to women. A study by Hallal et al. (2012) found that globally, men are more likely to meet physical activity guidelines than women, with variations observed across countries and regions. Societal norms and gender expectations influence these differences, with men often encouraged to participate in sports and vigorous activities from a young age (Hartley et al., 2011). Conversely, women tend to spend more time engaged in sedentary behaviours, such as sitting or screen-based activities, compared to men. A study by Edwardson et al., (2012) reported that women spend more time sitting during leisure time and are less likely to meet recommendations for reducing sedentary time compared to men.

Physical activity and sedentary behaviour are strongly influenced by socioeconomic status with

notable disparities observed across different socioeconomic groups. Individuals from higher socioeconomic backgrounds tend to engage in higher levels of physical activity compared to those from lower socioeconomic groups. A study by Beenackers et al., (2012) found that higher household income and education levels were positively associated with higher levels of leisure-time physical activity. In addition, access to resources, such as recreational facilities, parks, and sports programs, varies by socioeconomic status, with individuals from higher socioeconomic groups often having greater access to physical activity opportunities (Giles-Corti et al., 2015).

Family, friends, and peers play pivotal roles in shaping the physical activity and sedentary behaviour patterns of young adults. According to Loprinzi et al., (2012), familial support and encouragement can greatly influence physical activity engagement among young adults. Positive parental modelling of an active lifestyle has been associated with higher levels of physical activity and lower levels of sedentary behaviour in young adults (Wijtzes et al., 2014). Similarly, peer influence has been identified as a key determinant of physical activity behaviour, with social support from friends positively impacting activity levels (Määttä et al., 2016). Conversely, peer pressure and social norms favouring sedentary behaviours can contribute to increased sedentary behaviour among young adults (Pearson et al., 2014).

Health status, disability, and chronic conditions are factors that may significantly impact activity levels among young adults. Individuals with chronic health conditions or disabilities may face barriers to physical activity participation, such as physical limitations or pain (Hoare et al., 2017; Heath & Levine, 2022). Moreover, poor health status or the presence of chronic conditions may lead to increased sedentary behaviours as individuals may be less inclined or able to engage in physical activities (Tremblay et al., 2017). Furthermore, personal preferences, interests, and past experiences with physical activity also shape activity behaviours. Young adults are more likely to engage in activities they enjoy and find meaningful (Hallal et al., 2012). Positive past experiences with physical activity, such as participation in organized sports or recreational activities, may foster a lifelong commitment to active lifestyles (Bauman et al., 2012).

Port Harcourt Local Government Area is a rapidly growing urban area, with increasing levels of urbanization and industrialization. Urban environments are often associated with higher levels of sedentary behaviour due to increased access to technology, office-based jobs, and reduced opportunities for physical activity (Sallis et al., 2016). Furthermore, rising rates of non-communicable diseases such as hypertension, diabetes, and cardiovascular disease are linked to sedentary lifestyles (WHO, 2018) thus Port Harcourt Local Government Area, being an economic hub with a growing population, is likely experiencing increased levels of sedentary behaviour, contributing to these health issues. It is on this premise that the researchers sought to investigate the determinants of sedentary behaviour among young people in Port Harcourt Local Government Area, Rivers State.

Statement of the Problem

Throughout history, individuals have continuously sought to innovate and adopt new technologies to streamline daily tasks, making them less physically demanding and more efficient. Consequently, this has led to a shift towards more sedentary lifestyles. In addition, there are more sedentary pursuits like screen-based activities like movies, computer games and social media platforms that do not require physical activity participation hence encourage sedentary behaviour. It is said that an idle body invites ailments hence one ought to keep moving for a life of vitality. These sedentary behaviours and physical inactivity tend to begin in the earlier years of life, through young adulthood and become established in adulthood as actions that are consistently taken over time form habits that are not easily or readily changed.

Childhood and early adulthood are considered to be the ideal target periods for effective

preventive interventions as children and young adults are far more amenable to intervention strategies than grown adults. Furthermore, advancements in medical technology over time have significantly extended human life expectancy. The confluence of prolonged periods of sedentary behaviour and longer lifespans has contributed to a notable rise in chronic conditions and diseases related to overweight and obesity. While individuals may now live longer lives, they often experience diminished physical function and a lower overall quality of life as a result of a lifetime of physical inactivity and sedentary behaviour patterns.

These are avoidable adverse outcomes that may be avoidable if interventions are sought at the appropriate time however there may be certain determining factors that may contribute to these patterns of physical inactivity and sedentary behaviour making it difficult to change. Influence of family and friends may be one of these determining factors as young people who have friends and family that pursue active lifestyles tend to mimic and copy these lifestyles. Societal expectation, affluence and access to convenience tasks such as booking cab rides (Bolt) instead of taking a walk for relatively short distances, ordering food/shopping online with option for delivery to one's doorstep seen by many people as enjoying the good life may contribute to physical inactivity and sedentary behaviour hence there is a need to investigate these and other factors that may determine sedentary behaviour especially among young people using Port Harcourt Local Government Area, Rivers State as a case study.

Research Questions

The study was guided by the following research questions;

1. What is the level of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State?
2. Does age determine sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State?
3. Does gender determine sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State?
4. Does peer pressure determine sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State?
5. Does socio-economic status determine sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State?
6. Does health status determine sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State?

Hypotheses

The following hypotheses were stated and tested at 0.05 level of significance.

1. Age is not a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State.
2. Gender is not a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State.
3. Peer pressure is not a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State.
4. Socioeconomic status is not a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State.
5. Health status is not a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State.

Materials and Methods

The design of the study was a descriptive survey design. The study was carried out in Port Harcourt Local Government Area, one of the 23 local government areas in Rivers State, Nigeria. Port Harcourt Local Government Area is situated in the southern part of Nigeria, along the Bonny River and the Gulf of Guinea coast. The area is a bustling economic hub and serves as a major centre for trade, commerce, and industry in Nigeria. The presence of multinational oil companies and the Port Harcourt Refining Company (PHRC) contributes significantly to the local economy. The study population comprised of all young adults in Port Harcourt Local Government Area, Rivers State who were resident in the area as at the time of the study. The exact number could not be ascertained by the researcher due to paucity of current statistics on the population of residents in Port Harcourt Local Government Area, Rivers State. A sample size of three hundred and eighty four (384) was determined using the Cochran formula. Data was collected using a structured questionnaire titled “determinants of sedentary behaviour among young people questionnaire (DSBYPQ) with a reliability coefficient of 0.774. Copies of the questionnaires was administered by google forms shared on WhatsApp social media platform. Duration of administration was six weeks. Data was analysed on SPSS version 26 using mean and standard deviation to answer the research questions while the hypotheses were answered using analysis of Variance (ANOVA) at 0.05 alpha level of significance.

Results

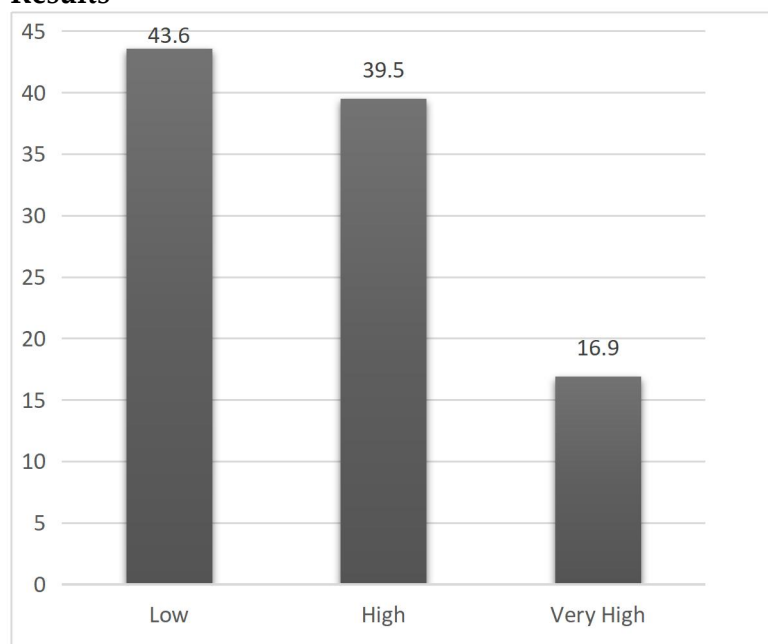


Figure 1: Level of sedentary behaviour among young adults in Port Harcourt LGA

Figure 1 presented result on the level of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The level of sedentary behaviour was determined by the mean and standard deviation of the aggregated sedentary behaviour statements scores. Respondents with scores below the mean were categorised as “Low”, those with scores between the mean plus standard deviation were categorised as “High”, while those with scores above the mean plus standard deviation were categorised as “Very High”. The result as presented showed that 43.6% of the respondents exhibited low sedentary behaviour, 39.5% exhibited high sedentary behaviour, and 16.9% exhibited very high sedentary behaviour in the study area.

Table 1: Age as a determinant of sedentary behaviour among Young Adults in Port Harcourt Local Government Area

Age (Years)	Level of Sedentary Behaviour					
	Low		High		Very High	
	Freq	%	Freq	%	Freq	%
≤ 20	18	21.4	42	50.0	24	28.6
21-30	123	47.7	103	39.9	32	12.4
≥ 31	19	76.0	0	0.0	6	24.0
Total	160	43.6	145	39.5	62	16.9

Table 1 presented the result on age as a determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The result as presented showed that among respondents between 20years of age and below, 21.4% exhibited low sedentary behaviour, 50.0% exhibited high sedentary behaviour, and 28.6% exhibited very high sedentary behaviour. The result among respondents between 21-30years showed that 47.7% exhibited low sedentary behaviour, 39.9% exhibited high sedentary behaviour, and 12.4% exhibited very high sedentary behaviours; while among respondents between ages 31years and above, 76.0% low sedentary behaviour and 24.0% exhibited very high sedentary behaviours, respectively.

Table 2: Gender as a determinant of sedentary behaviour among Young Adults in Port Harcourt Local Government Area

Gender	Level of Sedentary Behaviour					
	Low		High		Very High	
	Freq	%	Freq	%	Freq	%
Male	73	45.9	61	38.4	25	15.7
Female	87	41.8	84	40.4	37	17.8
Total	160	43.6	145	39.5	62	16.9

Table 2 presented the result on gender as a determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The result as presented showed that among male respondents, 45.9% exhibited low sedentary behaviour, 38.4% exhibited high sedentary behaviour, and 15.7% exhibited very high sedentary behaviour; while among their female counterpart, 41.8% exhibited low sedentary behaviour, 40.4% exhibited high sedentary behaviour and 17.8% exhibited very high sedentary behaviour, respectively.

Table 3: Peer pressure as a determinant of sedentary behaviour among Young Adults in Port Harcourt Local Government Area

Peer Pressure	Level of Sedentary Behaviour					
	Low		High		Very High	
	Freq	%	Freq	%	Freq	%
Never	11	56.6	66	33.7	19	9.7
Sometimes	37	30.3	48	39.3	37	30.3
Always	12	24.5	31	63.3	6	12.2
Total	160	43.6	145	39.5	62	16.9

Table 3 presented result on peer pressure as a determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. It was observed from the result that among respondents who never succumb to negative peer influence, 56.6% exhibited low sedentary behaviour, 33.7% exhibited high sedentary behaviour, and 9.7% exhibited very high sedentary behaviour. The

result also revealed that among respondents who sometimes succumb to negative peer influence, 30.3% exhibited low sedentary behaviour, 39.3% exhibited high sedentary behaviour, and 30.3% exhibited very high sedentary behaviour. In addition, among those who always succumb to negative peer influence, 24.5% exhibited low sedentary behaviour, 63.3% exhibited high sedentary behaviour, and 12.2% exhibited very high sedentary behaviour, respectively.

Table 4: Socio-economic status as a determinant of sedentary behaviour among Young Adults in Port Harcourt Local Government Area

Socio-economic Status	Level of Sedentary Behaviour					
	Low		High		Very High	
	Freq	%	Freq	%	Freq	%
First Quartile	36	37.1	43	44.3	18	18.6
Second Quartile	42	35.0	66	55.0	12	10.0
Third Quartile	31	44.9	6	8.7	32	46.4
Fourth Quartile	51	63.0	30	37.0	0	0.0
Total	160	43.6	145	39.5	62	16.9

Table 4 presented result on socio-economic status as a determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The result as presented showed that among the respondents in the first quartile, 37.1% exhibited low sedentary behaviour, 44.3% exhibited high sedentary behaviour, and 18.6% exhibited very high sedentary behaviour. The result also showed that among the second quartile, 35.0% exhibited low sedentary behaviour, 55.0% exhibited high sedentary behaviour, and 10.0% exhibited high sedentary behaviour. In the third quartile, 44.9% exhibited low sedentary behaviour, 8.7% exhibited high sedentary behaviour, and 46.4% exhibited very high sedentary behaviour; while in the fourth quartile, 63.0% of the respondents exhibited low sedentary behaviour and 37.0% exhibited high sedentary behaviour, respectively.

Table 5: Health Status as a determinant of sedentary behaviour among Young Adults in Port Harcourt Local Government Area

Health Status	Level of Sedentary Behaviour					
	Low		High		Very High	
	Freq	%	Freq	%	Freq	%
Good	43	63.2	18	26.5	7	10.3
Poor	99	44.0	90	40.0	36	16.0
Very Poor	18	24.3	37	50.0	19	25.7
Total	160	43.6	145	39.5	62	16.9

Table 5 presented the result on health status as a determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The result showed that among respondents with good health, 63.2% exhibited low sedentary behaviour, 26.5% exhibited high sedentary behaviour, and 10.3 exhibited very high sedentary behaviour. The result also revealed that among those with poor health, 44.0% exhibited low sedentary behaviour, 40.0% exhibited high sedentary behaviour, and 16.0% exhibited very high sedentary behaviour; and among those with very poor health, 24.3% exhibited low sedentary behaviour, 50.0% exhibited high sedentary behaviour, and 25.7% exhibited very high sedentary behaviour, respectively.

Table 6: ANOVA on Age as a determinant of sedentary behaviour among Young Adults in Port Harcourt Local Government Area

	Sum of Squares	Df	Mean Square	F	p-value	Decision
Between Groups	13.117	2	6.558	13.065	0.000	Significant
Within Groups	182.715	364	0.502			
Total	195.831	366				

Table 6 presented the summary of Analysis of Variance (ANOVA) on age as a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The result as presented revealed that age ($F = 13.065$; $p = 0.000$) is a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. Therefore, the null hypothesis was rejected at 0.05 alpha level of significance.

Table 7: Independent Samples t-test on Gender as a determinant of sedentary behaviour among Young Adults in Port Harcourt Local Government Area

Gender	N	Mean	Std Dev.	Df	t-value	p-value	Decision
Male	159	1.6981	0.72701	365	-0.798	0.426	Not Significant
Female	208	1.7596	0.73551				
Total	367						

Table 7 presented the summary of independent samples t-test on gender as a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The result as presented revealed that gender ($t = -0.798$; $p = 0.426$) is not a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. Therefore, the null hypothesis was accepted at 0.05 alpha level of significance.

Table 8: ANOVA on Peer pressure as a determinant of sedentary behaviour among Young Adults in Port Harcourt Local Government Area

	Sum of Squares	Df	Mean Square	F	p-value	Decision
Between Groups	17.749	2	8.875	18.140	0.000	Significant
Within Groups	178.082	364	0.489			
Total	195.831	366				

Table 8 presented the summary of Analysis of Variance (ANOVA) on peer pressure as a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The result as presented revealed that peer pressure ($F = 18.140$; $p = 0.000$) is a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. Therefore, the null hypothesis was rejected at 0.05 alpha level of significance.

Table 9: ANOVA on Socio-economic status as a determinant of sedentary behaviour among Young Adults in Port Harcourt Local Government Area

	Sum of Squares	Df	Mean Square	F	p-value	Decision
Between Groups	16.797	3	5.599	11.352	0.000	Significant

Within Groups	179.034	363	0.493
Total	195.831	366	

Table 9 presented the summary of Analysis of Variance (ANOVA) on socio-economic status as a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The result as presented revealed that socio-economic status ($F= 11.352$; $p= 0.000$) is a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. Therefore, the null hypothesis was rejected at 0.05 alpha level of significance.

Table 10: ANOVA on Health Status as a determinant of sedentary behaviour among Young Adults in Port Harcourt Local Government Area

	Sum of Squares	Df	Mean Square	F	p-value	Decision
Between Groups	10.543	2	5.272	10.356	0.000	Significant
Within Groups	185.288	364	0.509			
Total	195.831	366				

Table 10 presented the summary of Analysis of Variance (ANOVA) on health status as a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The result as presented revealed that health status ($F= 10.356$; $p= 0.000$) is a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. Therefore, the null hypothesis was rejected at 0.05 alpha level of significance.

Discussion of Findings

The study investigated the determinants of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. Findings revealed low sedentary behaviour was 43.6% among the respondents while high sedentary was 39.5% and very high sedentary behaviour accounted for 16.9% in the study area. The findings implied that more that high sedentarism pervade respondents in the study area, and this aligned with previous study by Igwebuike and Onyezere (2023) who reported high sedentary lifestyle among workers in public universities in Rivers State. In addition, a recent study by World Health Organisation revealed that about 60-85% global currently population live sedentary lifestyle with increasing comorbidity associated with sedentary behaviour (Shams et al., 2021), and Ezezue et al. (2020) reported that sedentary behaviour is increasingly becoming issues of public health concern especially among young people.

Findings also revealed that sedentary behaviour was more prominent among respondents between ages 20years and below and was followed by those between ages 21-30years, and was least among respondents ages 31years and above in the study area. The findings implied that sedentary behaviour is more pronounced among younger people as observed in this study area. Furthermore, the tested hypothesis revealed that age ($F= 13.065$; $p= 0.000$) is a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The finding is in harmony with Wan-Fei Khaw et al., (2022) who reported higher sedentary behaviour among younger respondents compared to their adult counterpart. Similarly, Igwebuike and Onyezere (2023) found that age of respondents significantly influenced sedentary behaviour among workers. Studies have also shown that sedentary behaviour was higher among people in the first and fourth age quartile while people in the median age group were observed to be very physically active (Oyeyemi et al., 2017; Edelmann et al., 2022).

Results from the study showed that sedentary behaviour was higher among female respondents

that their male counterpart although difference was not pronounced. It was observed from the finding that more than half of both genders exhibited high sedentarism in the study area. Furthermore, the tested hypothesis revealed that gender ($t = -0.798$; $p = 0.426$) is not a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The finding was at variance with Cabanas-Sánchez et al., (2020) who reported significant difference in sedentary behaviour between male and female. The difference could be attributed the variables in which the used in assessing sedentary behaviour between the two genders; while male sedentary behaviour was significantly associated with videogaming, the female sedentary behaviour was significantly associated surfing the internet. Igwebuike and Onyezere (2023) suggested the implementation of comprehensive health educational intervention programme for workers that promotes exercise participation.

Findings from the study revealed that sedentary behaviour was higher among respondents who succumbed to negative peer pressure. It was observed that three-quarter of the respondents who succumb to negative peer influence at any exhibited high sedentary behaviour when compared to those who never succumb to peer pressure. Furthermore, the tested hypothesis also revealed that peer pressure ($F = 18.140$; $p = 0.000$) is a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The findings concurred with previous that reported that peer influence and social support from friends could positively or negatively favoured and contributed sedentary behaviour among young adults (Pearson et al., 2014; Määttä et al., 2016; Suprpto et al., 2019). It has also been found that co-participation in activities that promote sedentary behaviour especially among siblings would significantly increase sedentary lifestyle among young people (Cabanas-Sánchez et al., 2020).

The study further revealed the impact of socio-economic status on sedentary behaviour. It was observed that sedentary behaviour decreases as respondents move higher in the socio-economic status. Findings revealed that about two-third of the respondents in the first quartile of the socio-economic status exhibited high sedentary behaviour, and this reduced to about half in the third quartile, and to one-third in the fourth quartile. In addition, the tested hypothesis revealed that socio-economic status ($F = 11.352$; $p = 0.000$) is a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. The finding was at variance with Motuma et al., (2021) who reported higher sedentary among respondents with white collar jobs and those with higher income. The disparity in the findings could be attributed to broader age group that participated in their study. However, the study agreed with that of Albawardi et al., (2017) who reported that young adults spent much times sitting down in office while executing their various responsibility at work; and this significantly increase their sedentary time per weekdays.

In addition, the study revealed that the highest sedentary behaviour was found among respondents with very poor health status and was followed by those with poor health status. It was observed that three-quarter of the respondents with very poor health status exhibited high sedentary behaviour while about two-third of those with good health exhibited low sedentary behaviour in the study area. The tested hypothesis revealed that health status ($F = 10.356$; $p = 0.000$) is a significant determinant of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. Studies have shown that having frail health due to chronic disease reduces physical activity and physical capacity, possibly through a limited energy supply and encourage a sedentary lifestyle (Westerterp, 2013). Health status and chronic conditions may influence an individual's ability to engage in physical activity or increase their susceptibility to sedentary behaviours, emphasizing the importance of tailored interventions and lifestyle modifications (Guthold et al., 2018).

Conclusion

Based on the findings of the study and the discussions made, it was concluded that there was

high level of sedentary behaviour among young adults in Port Harcourt Local Government Area, Rivers State. Age, peer pressure, socio-economic status and health status were significant determinants of sedentary behaviour among young adults in the study area.

Recommendations

Based on the findings of the study, the following recommendations were made;

1. Government and Public Health Workers should run awareness campaigns through social media, television, and community programs to educate youth and their families about the importance of reducing sedentary behaviour and increasing physical activity.
2. Youths should join Sports Clubs and Youth Organizations that actively promote fitness and healthy living among their participants.
3. Parents and caregivers should organize family outings that involve physical activities such as hiking, biking, or team sports to encourage their wards participate in a more active lifestyle.
4. Employers should encourage their young workers to stand, stretch, or walk every 30–60 minutes, especially in sedentary environments like offices environment.
5. Local governments, in collaboration with communities in their domain, should organize recreational sports leagues and events that encourage physical activities. Furthermore, Local Governments authorities could build or upgrade parks, sports complexes, and public gyms in youth-dense areas, ensuring they are affordable or free to access to the teeming youths in their domain.

References

- Albawardi, N. M., Jradi, H., Almalki, A. A., & Al-Hazzaa, H. M. (2017). Level of sedentary behaviour and its associated factors among Saudi women working in office-based jobs in Saudi Arabia. *International Journal of Environmental Research and Public Health*, 14(6), 659. [10.3390/ijerph14060659](https://doi.org/10.3390/ijerph14060659)
- Bauer, K. W., Nelson, M. C., Boutelle, K. N., Neumark-Sztainer, D., & Story, M. (2018). Parental influences on adolescents' physical activity and sedentary behaviour: Longitudinal findings from Project EAT-II. *International Journal of Behavioural Nutrition and Physical Activity*, 5(1), 12.
- Bauman, A. E., Reis, R. S., Sallis, J. F., Wells, J. C., Loos, R. J., Martin, B. W., & Lancet Physical Activity Series Working Group. (2012). Correlates of physical activity: why are some people physically active and others not? *The Lancet*, 380(9838), 258-271.
- Beenackers, M. A., Kamphuis, C. B., Giskes, K., Brug, J., Kunst, A. E., Burdorf, A., & van Lenthe, F. J. (2012). Socioeconomic inequalities in occupational, leisure-time, and transport related physical activity among European adults: a systematic review. *The International Journal of Behavioural Nutrition and Physical Activity*, 9, 116. <https://doi.org/10.1186/1479-5868-9-116>
- Chau, J. Y., Daley, M., Dunn, S., Srinivasan, A., Do, A., Bauman, A. E., & van der Ploeg, H. P. (2014). The effectiveness of sit-stand workstations for changing office workers' sitting time: results from the Stand@Work randomized controlled trial pilot. *The International Journal of Behavioural Nutrition and Physical Activity*, 11, 127. <https://doi.org/10.1186/s12966-014-0127-7>
- Chen, M., Wu, Y., Narimatsu, H., Li, X., Wang, C., Luo, J., Zhao, G., Chen, Z., & Xu, W. (2015). Socioeconomic Status and Physical Activity in Chinese Adults: A Report from a Community-Based Survey in Jiaxing, China. *PloS one*, 10(7), e0132918. <https://doi.org/10.1371/journal.pone.0132918>
- Edelmann, D., Pfirrmann, D., Heller, S., Dietz, P., Reichel, J. L., Werner, A. M., Schäfer, M., Tibubos, A.

- N., Deci, N., Letzel, S., Simon, P., & Kalo, K. (2022) Physical Activity and Sedentary Behavior in University Students–The Role of Gender, Age, Field of Study, Targeted Degree, and Study Semester. *Front. Public Health*, 10, 821703. doi: 10.3389/fpubh.2022.821703
- Edwardson, C. L., Yates, T., Biddle, S. J. H., Davies, M. J., Dunstan, D. W., Esliger, D. W., Gray, L. J., Jackson, B., O'Connell, S. E., Waheed, G., & Munir, F. (2018). Effectiveness of the Stand More AT (SMArT) Work intervention: cluster randomised controlled trial. *BMJ (Clinical research ed.)*, 363, k3870. <https://doi.org/10.1136/bmj.k3870>
- Oyeyemi, A. L., Muhammed, S., Oyeyemi, A. Y., & Adegoke, B. O. A. (2017). Patterns of objectively assessed physical activity and sedentary time: Are Nigerian health professional students complying with public health guidelines?. *PloS one*, 12(12), e0190124. <https://doi.org/10.1371/journal.pone.0190124>
- Hallal, P. C., Andersen, L. B., Bull, F. C., Guthold, R., Haskell, W., & Ekelund, U. (2012). Global physical activity levels: surveillance progress, pitfalls, and prospects. *The Lancet*, 380(9838), 247-257.
- Heath, G. W., & Levine, D. (2022). Physical activity and public health among people with disabilities: research gaps and recommendations. *International Journal of Environmental Research and Public Health*, 19(16), 10436. <https://doi.org/10.3390/ijerph191610436>
- Heath, G. W., Parra, D. C., Sarmiento, O. L., Andersen, L. B., Owen, N., Goenka, S., ... & Lancet Physical Activity Series Working Group. (2012). Evidence-based intervention in physical activity: lessons from around the world. *The Lancet*, 380(9838), 272-281.
- Hoare, E., Stavreski, B., Jennings, G. L., & Kingwell, B. A. (2017). Exploring motivation and barriers to physical activity among active and inactive Australian adults. *Sports (Basel, Switzerland)*, 5(3), 47. <https://doi.org/10.3390/sports5030047>
- Larson, N., Laska, M. N., Story, M., & Neumark-Sztainer, D. (2015). Predictors of fruit and vegetable intake in young adulthood. *Journal of the Academy of Nutrition and Dietetics*, 112(8), 1216-1222.
- Loprinzi, P. D., Cardinal, B. J., Loprinzi, K. L., & Lee, H. (2012). Parenting practices as mediators of child physical activity and weight status. *Obesity*, 20(10), 2253-2262.
- Määttä, S., Ray, C., Roos, E., & Roos, G. (2016). Applying cluster analysis to study patterns of physical activity in adolescents: A study with a sample from three continents. *Journal of Exercise Science & Fitness*, 14(1), 16-22.
- Mohammed, O. Y., Tesfahun, E., & Mohammed, A. (2020). Magnitude of sedentary behaviour and associated factors among secondary school adolescents in Debre Berhan town, Ethiopia. *BMC Public Health*. 20, 86. 10.1186/s12889-020-8187-x
- Motuma, A., Gobena, T., Roba, K. T., Berhane, Y., & Worku, A. (2021). Sedentary Behaviour and Associated Factors Among Working Adults in Eastern Ethiopia. *Frontiers in Public Health*, 9, 693176. <https://doi.org/10.3389/fpubh.2021.693176>
- Patterson, R., McNamara, E., Tainio, M., de Sá, T. H., Smith, A. D., Sharp, S. J., Edwards, P., Woodcock, J., Brage, S., & Wijndaele, K. (2018). Sedentary behaviour and risk of all-cause, cardiovascular and cancer mortality, and incident type 2 diabetes: a systematic review and dose response meta-analysis. *European Journal of Epidemiology*, 33(9), 811–829. <https://doi.org/10.1007/s10654-018-0380-1>
- Pearson, N., Braithwaite, R., & Biddle, S. J. H. (2015). The effectiveness of interventions to increase

physical activity among adolescent girls: a meta-analysis. *Academic Pediatrics*, 15(1), 9-18.

Sallis, J. F., Bull, F., Guthold, R., Heath, G. W., Inoue, S., Kelly, P., Oyeyemi, A. L., Perez, L. G., Richards, J., Hallal, P. C., & Lancet Physical Activity Series 2 Executive Committee (2016). Progress in physical activity over the Olympic quadrennium. *Lancet (London, England)*, 388(10051), 1325–1336. [https://doi.org/10.1016/S0140-6736\(16\)30581-5](https://doi.org/10.1016/S0140-6736(16)30581-5)

Sedentary Behaviour Research Network. (2012). Letter to the editor: standardized use of the terms “sedentary” and “sedentary behaviours”. *Applied Physiology, Nutrition, and Metabolism*, 37(3), 540-542. doi:10.1139/h2012-024

Tremblay, M. S., Aubert, S., Barnes, J. D., Saunders, T. J., Carson, V., Latimer-Cheung, A. E., Chastin, S. F. M., Altenburg, T. M., Chinapaw, M. J. M., & SBRN Terminology Consensus Project Participants (2017). Sedentary Behaviour Research Network (SBRN) - Terminology Consensus Project process and outcome. *The International Journal of Behavioural Nutrition and Physical Activity*, 14(1), 75. <https://doi.org/10.1186/s12966-017-0525-8>

Westerterp K. R. (2013). Physical activity and physical activity induced energy expenditure in humans: measurement, determinants, and effects. *Frontiers in Physiology*, 4, 90. <https://doi.org/10.3389/fphys.2013.00090>

Wijtzes, A. I., Jansen, W., Jansen, P. W., Jaddoe, V. W., Hofman, A., Raat, H., & Franco, O. H. (2014). Social inequalities in young children's sports participation and outdoor play. *International Journal of Behavioural Nutrition and Physical Activity*, 11(1), 1-9.

World Health Organization. (2010). Global recommendations on physical activity for health. Geneva:

World Health Organization. <https://www.who.int/publications/i/item/9789241599979>