Physical Activity and Sports Involvement Before and After Covid-19 Pandemic Among University Students of Ebonyi State

Nkiru Edith Obande-Ogbuinya[1], Ezeji Chika L.[1], Eunice N. Afoke[2], Christian Okechukwu Aleke[2*], Lois Nnenna Omaka-Amari[2], Ben N. Ohuruogu[2], Chinedu Victor Osuoha[2], Henry Ikechukwu Imah[3], Jacinta Ejiaka Ugbelu[4], Anthonia Ogechukwu Nnubia[5], and Ogueri Emmanuel obinna[6]

[1]Science Education, Faculty of Education, Alex Ekwueme Federal University, Ndufu Alike, Ebonyi State Nigeria.

[2]Department of Human Kinetics and Health Education, Ebonyi State University, Abakaliki, Ebonyi State, Nigeria.

[3]Department of Science Education (Physical and Health Education), University of Delta State, Nigeria

[4]Department of Human Kinetics and Health Education, University of Nigeria, Nsukka, Enugu Nigeria

[5]Alex Ekwueme Federal University Teaching Hospital Abakaliki

[6]Alvan Ikoku Federal University of Education, Owerri, Imo State, Nigeria

*Corresponding Author**

Christian Okechukwu Aleke,
Department of Human Kinetics and Health Education,
Ebonyi State University
Ebonyi State, Nigeria.
E-mail: Christian.aleke2020@gmail.com

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Abstract

Physical activity and sports is a substantial part of a healthy lifestyle especially among university students. This study determined physical activity and sports involvement before and after COVID-19 pandemic among university students of Ebonyi state. A cross-sectional descriptive survey design was used for the study. The study population consisted of 24,000 university students out of which the sample size of 400 students was drawn. A structured questionnaire was the instrument used for data collection. The data was analyzed using frequencies, percentages, mean and standard deviation. The results shows that 183 ($\bar{x}$ =2.6) students engage in physical activity before the outbreak of COVID-19 pandemic, whereas after COVID-19 pandemic, only 155 ($\bar{x}$ =1.4) students engage in physical activity. This shows that there was a serious decline in physical activity after COVID-19 pandemic. The result further indicated notable differences in the sports involvement among the students before COVID-19 pandemic (58.8%), and after COVID-19 pandemic (42.2%). Moreover, one of the main reason for the serious decline in the university sporting activity after COVID-19 was fear of unknown (60.3%), followed by lack of interest (30.1%). The study concluded that the government and other concerned stakeholders should designing a new programmes or strengthening the existing ones to motivate students and alleviate fear in sports and physical activities involvement especially among university students.

Keywords: Physical activity • Sports involvement • Before COVID-19 • After COVID-19 • University students

Introduction

In the year 2020, the outbreak of coronavirus disease (COVID-19), which spreads rapidly to almost all the countries of the world was in March 2020, declared by World Health Organisation as a disease of international concern due to high fatality rate [1]. The novel COVID19 has impacted negatively on physical activities, sports, social connection and health [2]. Due to the COVID-19 impact, it attracted special attention and concern globally [3]. In order to attenuate the spread of the disease, WHO enacted policies and highlighted the preventive protocols to limit person to person contact of the virus. This COVID-19 protocols includes social and physical distancing measures, lockdowns of schools and overall social life, community centres, parks, athletic and fitness facilities and halting physical activities and sports [1,4]. All these have become commonplace to curtail the spread of the disease and for future outbreak [5]. Some authorities provided guidelines to maintain physical activity safely, which includes engaging people from the same household or small groups in home exercise programs (yoga, online fitness classes) while maintaining physical distancing [6]. (Shepherd, Evans, Gupta et al., 2021). Despite all these measures, COVID-19 pandemic impact on physical activities and sports is quite daunting and of a high significant effect to the students especially university students [7].

Physical Activity (PA) and sports is a substantial part of a healthy lifestyle, which includes engagement in physical exercise and movement habits. Study has reported that regular engagement in PA and sports can control several health problems such as non-communicable diseases and associated risk factors [8]. However, recent research has reported that more than 85% of students have reduced participation in physical activity levels during the pandemic, but however increased screen time and sitting hours [9]. During the pandemic the amount and type of physical activity and sport decreased with only 30% of university students achieving a "sufficient" level of activity [10]. In a study with students from the United States it was shown that the total minutes of physical activity were related to positive affect before and during the stay- at-home orders [9].

Studies have also revealed that active individuals are becoming less active as a result of the outbreak of Covid19 pandemic and WHO pandemic protocols [11]. According to Kaur et al., COVID-19 lockdown has affected the closure of public areas including sports facilities, fitness and physical activity facilities and general social life, thus, has hindered several aspects of people's lives including regular scheduled fitness activities [12]. This has impacted various psychological issues as well as serious fitness and health concern of the people especially university students [5]. Further, a study also reported a significant decline in physical activity and an increased stress level during the pandemic in students from a northeastern university in the United States [13]. Physical inactivity is the fourth most common risk factor for death worldwide and WHO estimates that 1.9 million deaths occur each year due to insufficient physical activity. To counter this trend, the WHO has implemented a global plan for physical activity from 2018 to 2030 to increase the number of active people and the health threshold worldwide: "Global action plan on physical activity 2018-2030: more active people for healthier world" [14]. These are

policies to support physical activity for a healthier world and aim to reduce physical inactivity by 10% by 2025 and 15% by 2030 [15].

The present study attempt like other studies [5,12,13], to examine the physical activity and sports involvement before and after covid-19 pandemic among university students of Ebonyi State. This is because despite the benefits of sports and physical activities to health, Covid-19 pandemic has affected student's participation in sports and physical activity globally including university students in Ebonyi State. To the best knowledge of the current researchers, no studies has been conducted among university students of Ebonyi state with regard to physical activity and sports involvement before and after covid-19 pandemic. Therefore, the main objective of this study was to assess physical activity and sports involvement before and after Covid-19 pandemic among university students of Ebonyi state. Specifically, the study determined: Physical activity involvement before and After COVID-19 pandemic; sports activity involvement before and after COVID-19 pandemic among the students..

Materials and Methods

Research design

A cross-sectional descriptive survey design was used for the study. The study was carried out in Alex Ekwueme Federal University Ndufu Alike Ikwo (AE-FUNAI) and Ebonyi State University (EBSU) all Ebonyi State. AE-FUNAI is sited in Ikwo local government area of Ebonyi state which is 25 kilometers from Abakiliki, the state capital. EBSU is however, located in Abakiliki capital. Both are located in Ebonyi state, southeast geopolitical zone of Nigeria. The study population consisted of 24,000 university students.

Sample and sampling techniques

The Taro Yamane 1967 method of sample size calculation was adopted by the researchers to determine the sample size as follows:

N=N

1+N (e) 2

Where

N=signifies the sample size

N=signifies the population under study

E=signifies the margin error (0.05)

n=24,000

(1+24000 (0.05)2

n=399.98=400

n=400.

Therefore, the total sample size of the study is 400 students. The sample was drawn from the two universities in the state. This includes 200 students from each university making it 400 students..

Sampling technique

A non-probability sampling method known as Conveniences Sampling Technique was used for data collection. The method was used to get data conveniently from a larger population. The respondents were accessed from different faculties and department in the school. The inclusion criteria included regular undergraduate students studying in AE-FUNAI and EBSU, the exclusion criteria included staffs, non regular undergraduate and postgraduate students of AE-FUNAI and EBSU. A structured questionnaire was used for data collection. The researcher sought permission to conduct the research in AE-FUNAI and EBSU. On the appropriate date, the researcher administered the questionnaire to the respondents on agreement with the respondent. There was an informed consent note to let the respondent feel free to participate. Questions that were not clear to the respondent were clarified. The questionnaires were retrieved from the respondents after completion.

Method of data analysis

The data was collected and cross-checked for completeness of the information. Out of four hundred questionnaires shared, three hundred and thirty four (334) were recovered. However, out of this number, sixty-two were not properly filled while two hundred and seventy two (272) were properly filled and used for the data analysis. The data was analyzed using frequencies, percentages, mean and standard deviation to find answers to the researcher question. The findings were interpreted and presented using Tables 1.

Result

Table 1. Baseline and disease characteristics.

Sociodemographic characteristics	Frequency	Percentage
University of study		
AE-FUNAI	185	68.0
EBSU	87	32.0
Level of study		
100Level	30	11.0
200Level	100	36.8
300Level	98	36.0
400Level	38	14.0
500Level	6	2,2
Faculty of study		
Faculty of Agricultural studies	16	5.9
Faculty of Arts	10	3.7
Faculty of Management Studies	30	11.0
Faculty of Engineering	30	11.0
Health Science & Technology	23	8.5
Faculty of Medica Sciences	14	5.1
Faculty of Social Sciences	93	34.2
Other (Law, Education, etc)	56	20.6
Age Group (Years)		
≤ 18	32	11.8
18-23	154	56.6
24-29	79	29.0
≥ 29	7	2.6
Gender		
Male	111	40.8
Female	161	59.2

The data in Table 1 consisted of 40.8% male and 59.2% female, 68% were AE-FUNAI students and 32% EBSU students. The questionnaire was completed by age group <18 (11.8%), 19-23(56.6%), 24-29(29%), >29(2.6%). Base on educational level 11% were 100level students, 36.8% were 200level students, 36% were 300level students, 14% were 400level and 2.2% 500 level students.

Table 2. Physical Activity Before and After COVID-19 Pandemic among the Students.

Physical Activity Before and After COVID-19	N	Minimum	Maximum	Mean	Std.
Days per week on vigorous activities After Covid-19	75	1	5	2.83	1.14
Days per week on vigorous activities before covid19	125	2	5	3.56	2.25
Time usually spent doing vigorous physical activities After Covid-19	75	1	60	28.79	20.09
Time usually spent doing vigorous physical activities before covid19	125	5	120	40.67	28.62
Days per week on moderate activities After Covid-19	175	1	7	2.82	1.04
Day per week on moderate activities before covid19	201	3	5	3.65	2.55
Time usually spent doing moderate physical activities After Covid-19	175	1	60	26.18	15.81
Time usually spent doing moderate physical activities before covid19	201	10	150	45.67	30.36
Days walked for at least 10 minutes at a time per week After Covid-19	215	1	7	5.22	6.96
Days walked for at least 10 minutes at a time per week before Covid-19	224	3	7	5.86	4.26
Time usually spent walking After Covid-19	215	2	60	21.02	12.27
Time usually spent walking before covid19	224	10	180	55.34	38.27
Over-all Mean x	**Number**	**Days**	**Minutes**		

Before COVID.19	183	4	47	2.6	17.72
After COVID-19	155	3	25	1.4	9.55

Data in Table 2 shows physical activity before and after COVID-19 pandemic among the students. The Table shows that a total number of 183 students with the overall mean of (=2.6), engage in physical activity before the outbreak of COVID-19 pandemic, whereas after COVID-19 pandemic, only 155 students with an overall mean of (=1.4), engage in physical activity. This shows that there was a serious decline in physical activity and sports involvement after COVID-19 pandemic.

Table 3. School Sports Involvement Before and After COVID-19 (N=272).

School sports involvement	n	Frequency	Percentage
Involvement in School sports activities			
Before Covid19 Pandemic	272	160	58.8
After Covid19 Pandemic	272	112	41.2
Reason for not engaging in school sporting activity after Covid-19			
Fear of unmown	186	114	61.3
Health related issues	186	16	8.6
Lack of interest	186	56	30.1
Times of engagement in school sports			
Any time	272	133	48.9
Daily	272	18	6.6
Weekends	272	113	41.5
Others (Monthly, Rarely, Not too sure)	272	8	2.9
Forms of physical activities involved			
Dancing	133	57	42.8
Gaming and sports	133	25	18.8
Yoga	133	34	25.6
Playing football	133	46	34.6
Skipping	133	7	5.3
Jogging	133	36	27.1

Data in Table 3 shows school sports involvement before and after COVID-19 pandemic among students in the universities in Ebonyi state. Specifically, the Table shows notable differences in the sports involvement among the students as follows. Before COVID-19 pandemic (58.8%), after COVID-19 pandemic (42.2%). One of the main reason for not engaging in school sporting activity after Covid-19 was fear of unknown (60.3%), followed by lack of interest (30.1). Times of engagement in school sports were anytime (48.9%), followed by the weekend (41.5%). Forms of physical activities involved includes: Dancing (42.8%), Gaming and spots (18.8%), yoga (25.6%), football (34.6%), skipping (5.3%), Jogging (27.1%).

Discussion

This study investigates physical activity and sports involvement before and after covid-19 pandemic among university students of Ebonyi state, The findings of the study shows that participation to physical activity before COVID-19 pandemic was high than after COVID-19 pandemic by the students. Therefor there was a serious decline in physical activity and sports involvement after COVID-19 pandemic. The outcome of the study is quite encouraging as it presents crucial information about the impact of COVID-19 pandemic on physical activity and sports among the students of Ebonyi State. The findings of the present study is in line with study who reported that the types of sport or physical activity as well as the motives for physical activity have changed during the COVID-19 pandemic [9]. The present study also supports the study of Eime, Harvey, Charity, et al. who revealed that despite all the measures and efforts taken to reduce the spread of the pandemic and its effect on the students, the pandemic has impacted physical activities and sports involvement among the university students [7]. The study concluded that the effect of COVID-19 pandemic is quite daunting and of a high significant effect to the students especially university students [7].

The present study further shows notable differences in the sports involvement among the students. Thus, good number of students engage more in sports activitirs before COVID-19 pandemic outbreak (58.8%), than after COVID-19 pandemic (42.2%). The finding is not a surprise because the outbreak of COVID-10 pandemic in Nigeria has led to the declaration of lockdown including closing of schools and social events by the government especially in Ebonyi where the lockdown orders were strictly carried out. The present study is however consistence with the study who observed that the number of U.S. adolescents meeting MVPA guidelines decreased from 16.1% pre-pandemic to 8.9% during the pandemic [16]. The decrease was caused mainly by the restrictions on team and racket PA; for example, in the UK, the likelihood of pursuing these types of PA decreased up to 76% [17].

Inconsistence with the present study, data from a comparable study on German university student's show that half of the students indicated a decrease and one-third of students reported an increase in PA level during the pandemic; however, a general decrease in their daily walking time was found [18]. This contradiction may highlight that sedentary time (which is associated with the current sharp increase in usage of online platforms) is not necessarily translated to daily PA levels. In this regard, a study reports that although university students' sedentary behaviour (in terms of daily sitting hours) increased during COVID-19 restrictions, a considerable number of them experienced an increase in PA level [19].

The study found that the pandemic also led to the decrease in physical activity among students and an increase in sedentariness. The findings can be attributed to several reasons like time factors, health issues, busy school activities, unavailability of sports and fitness resources. All this may have contributed to students' demotivation in physical activity and school sports. However, the findings of the present study is in line with a study who examined the impacts of COVID-19 on physical activities and sedentary behaviour and found that the COVID-19 had resulted in substantial and negative changes to physical activities and sedentary behaviours among adolescents and adults [20].

Conclusions

The present study determined physical and sports activity involvement before and After COVID-19 pandemic among the students. The findings of the study shows a serious decline in physical activity and sports involvement after COVID-19 pandemic. It was also found that the main reason for not engaging in school sporting activity after Covid-19 was fear of unknown, followed by lack of interest in sports after COVID-19. This is evidence that the pandemic has impacted student's participation in physical activity and sports due to school lockdown and for long time sitting at home. The study found that Students were made to focus more on television, gadgets, social media and other sitting down activities more than they do physical activity and sports thereby increasing student's sedentary life styles. Based on the findings the study recommended as follows.

- That, more efforts are needed to increase university students' physical activity now that the era of pandemic is almost over thus the ease of lockdown and other measures that restrict university students active participation in physical activity and sports is over.
- The government and other concerned stakeholders should designing a new programmes or strengthening the existing ones to encourage student's involvement in sports and physical activities.
- The government at all levels should design a new strategies to educate the population on the positive impact of active sports participation, so as to encourage students to practice physical activity and sport to achieve a healthy lifestyle.
- The WHO 2020 guidelines on physical activities and sedentary behaviour of adolescents and adults which suggest the important of limiting the time spend being sedentary and replace sedentary behaviour with physical activity of any intensity should be applied among university students, especially the student's population of this study.

References

1. Mohamed, Ibthisam. "Impact of COVID-19 Pandemic on Physical Activity and Sedentary Behaviors among Young Adults of G Dh. Thinadhoo, Maldives." *Open J Soc Sci.* 10.7(2022):216-238.
2. Shepherd, Heather A., et al. "The impact of COVID-19 on high school student-athlete experiences with physical activity, mental health, and social connection." *Int J Environ Res Public Health.* 18.7(2021):3515.
3. Elflein, J. "Coronavirus (COVID-19) cases, recoveries, and deaths worldwide as of Mar."
4. Bas, Daniela, et al. "The impact of COVID-19 on sport, physical activity and well-being and its effects on social development." (2020).
5. Lopez-Valenciano, Alejandro, et al. "Impact of COVID-19 pandemic on university students' physical activity levels: an early systematic review." *Front psychol.* 11 (2021): 3787.
6. Keshkar, Sara, & Gholam Ali Karegar. "Effect of the COVID-19 pandemic on the sports industry." *COVID-19 Sustain Dev Goals, Elsevier.* (2022):123-157.
7. Eime, Rochelle, et al. "The impact of COVID-19 restrictions on Australians' frequency and duration of participation in different types of sport and physical activity." *BMC Sports Sci Med Rehabil.*14.1(2022):42.
8. Motevalli, Mohamad, et al. "Changes in physical activity during the COVID-19 lockdown based on the sociodemographic profile of 5569 students and academic staff of Austrian universities." *Public Health.* 219 (2023): 102-109.
9. Pietsch, S., Stefanie L., et al. "Sport und körperliche Aktivität von Studierenden während der Corona-Pandemie–Beziehungen zum Wohlbefinden." *Ger J Exerc Sport Res.* (2022): 1-8.
10. Gallo, Linda A., et al. "The impact of isolation measures due to COVID-19 on energy intake and physical activity levels in Australian university students." *Nutrients* 12.6 (2020): 1865.
11. Spraul, Tyler. "Reasons Why People Don't Exercise." Exercise. Com. (2020).
12. Kaur, Harleen, et al. "Physical fitness and exercise during the COVID-19 pandemic: A qualitative enquiry." *Front psychol.* (2020): 2943.
13. Wilson, Oliver WA, et al. "The impact of the COVID-19 pandemic on US college students' physical activity and mental health." *J Phys Act Health* 18.3 (2021): 272-278.
14. Bertocchi, Lucia, et al. "Impact of the COVID-19 pandemic on physical activity among university students in Pavia, Northern Italy." *Acta Bio Med: Atenei Parm.* (2021).
15. World Health Organization. Global action plan on physical activity 2018-2030: more active people for a healthier world. *World Health Organization.* (2019).
16. Cortez, Catherine A., et al. "Moderate-to-vigorous intensity physical activity among US adolescents before and during the COVID-19 pandemic: Findings from the Adolescent Brain Cognitive Development Study." *Prev Med Rep.* 35 (2023): 102344.
17. Strain, Tessa, et al. "Population level physical activity before and during the first national COVID-19 lockdown: A nationally representative repeat cross-sectional study of 5 years of Active Lives data in England." *Lancet Reg Health–Eur.* 12 (2022).
18. Huber, Bruno C., et al. "Alteration of physical activity during COVID-19 pandemic lockdown in young adults." *J Transl Med.* 18.1 (2020): 1-3.
19. Romero-Blanco, Cristina, et al. "Physical activity and sedentary lifestyle in university students: changes during confinement due to the COVID-19 pandemic." *Int j environ Res public health.* 17.18 (2020): 6567.
20. Bozzola, Elena, et al. "Physical Activity in the COVID-19 Era and Its Impact on Adolescents' Well-Being." *Int J Environ Res Public Health.* 20.4 (2023): 3275.

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