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PROFESSOR JOSEPH AFOLAYAN ADEGBOYEGA

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EDITORIAL

With the consistent patronage of the Journal of Human Kinetics and Health Education Pedagogy (JOKHED) by various researchers and the reading public, we are compelled to publish this SPECIAL EDITION of the Journal (Vol, 6, No 1, 2024), dedicated to **PROFESSOR JOSEPH AFOLAYAN ADEGBOYEGA**.

The Editorial Board deployed appropriate logistics to screen and select articles with high quality and in conformity with the international standard of JOKHED.

This SPECIAL EDITION ascertains the publication of articles from diverse segments of Sport for Fitness, Wellness and Education pedagogy. We shall not relent in our avowed commitment to always put the journal in academic domain at least two times a year.

My profound appreciation goes to the members of the Editorial Board for their individual participation, and especially, the Ag.Head of Department and Assistant Editor in the successful publication of this SPECIAL EDITION of the Journal.

Professor Patrick Oladepo OYENIYI,
Editor- In- Chief

J oseph Afolayan Adegboyega is a Professor of Health Education in the Faculty of Education, Ekiti State University, Ado-Ekiti. He had his Master's and Ph.D degrees from the University of Ife (now Obafemi Awolowo University). He was the Head of Department of Human Kinetics and health Education (2011 – 2013).

Professor Adegboyega has attended many academic seminars, workshops and conferences at both local and international levels.

He was the lead paper presenter at the 2017 Nigerian School Health Association Conference held at Obafemi Awolowo University, Ile-Ife. A keynote address presenter at the World Red Cross Day at Ado-Ekiti, Ekiti State in 2017. A keynote address presenter at the Annual National Conference of the School of Science, Adeyemi College of Education, Ondo in 2023. A lead paper presenter at the Scientific Forum of West African University Games (WAUG) Championship at Obafemi Awolowo University, Ile-Ife in 2023. A Guest lecturer at the 2024 Zonal Conference of Special Marshals comprising Ekiti, Kwara and Kogi States in 2024. He is a well-grounded researcher nationally and internationally. He has authored, edited and published many books including 77 articles in both local and international recognized learned journals.

Professor Adegboyega has attended many training and capacity building programmes and served in numerous administrative capacities as a member or chairman of many committees and panels. He was an External Examiner to many Universities and a seasoned resource person and organizer of seminars, workshops and conferences at both State and University levels. His remarkable achievements while in the University as a lead organizer of conferences and capacity building training programmes included the following:

* The 1st National Conference on 'The Role of Education in Tackling Global Economic Recession in Nigeria- 2017.
* The 2nd National Conference on 'Emerging Global Trends in Education and Sustainable Development in 2018
* The 3rd National Conference on 'Educational Approaches to Combating Security Challenges in Nigeria- 2019
* One-day capacity building workshop for Academi Staff on 'Ethics in Academics'- 2019
* One-day capacity building workshop for Academic Staff on 'Advanced Research Designs, Methods of Writing Proposals to Attract Grants and Rules of Engagement of Academic Staff.

As an astute Lecturer and Professor, he taught and supervised many undergraduates and postgraduate courses and students. He successfully supervised 9 Ph.D holders.

Professor Adegboyega is a member of International Council for Health, Physical Education, Recreation, Sport, and Dance (ICHPER.SD); Nigerian Association of Physical,

Health Education, Recreation, Sport and Dance (APHERSD, Nigeria Chapter); Nigeria Association of Sports Science and Medicine (NASSM); Nigerian School Health Association (NSHA), (NJHE); Nigerian Association of Health Educators; Teachers Registration Council of Nigeria; to mention but view.

He held many duty posts in the university such as: Head of Department; Ag. Chairman, Ekiti State University Sports Council, Ado-Ekiti; Chairman, Fact-Finding Committee on Students Protest; Chairman, Faculty of Education Research Committee. He has presented papers and Lead Papers at various conferences in Nigeria and other countries globally.

He has received many awards amongst them are: Certificate of Honour by National Youth Soccer Clubs as Deputy Director of NAYSOC, Ekiti State; Certificate of Honour by Association of Physical, Health Education and Recreation, College of Education, Ikere Chapter, Ekiti State; Certificate of Honour by Ekiti State University Sports Council; Award of Honour as Icon of Efficiency by Faculty of Education, Ekiti State University, Ado-Ekiti; Award of Excellence by University Staff Sports Clubs; Letter of Commendation by College of Education, Ikere-Ekiti; Letter of Commendation by Federal Road Safety Corps, Zone 8, Zonal Headquarter, Ilorin; Letter of Commendation by Federal Road Safety Corps, Ekiti State Command; Award of Excellence by Federal Road Safety Corps, RS8.2 Ekiti Sector Command, Ado-Ekiti

His Service outside the University

(i)   Represented, University of Ife (Now Obafemi Awolowo University) Ile – Ife and won Medal in 4 by 100meters relay race at WAUG, 1977.

(ii)   Represented, University Ife (Now Obafemi Awolowo University) Ile – Ife at NUGA, Lagos 1978 and NUGA, Benin-City, 1980 won Medals in the sprints.

(iii)   Represented, Nigeria at the FISU Games in Nairobi, Kenya 1978 won bronze medal in the 4 by 100 metres relay

(iv)   Represented Oyo State at the National Sports Festival, Ibadan, Oluyole, 1979 in 100 metres and 4 by 100 metres relay

(v)   Participated in 100 metres and 200 metres at the European Southern County Athletics Competitions, Crystal Palace, London, 1979

(vi)   Member of Ekiti South Zonal Sports Committee 1996 to 2012

(vii)   Coordinator (Athletics) NICEGA Games, Katsina, 1992, Kano 1996, Ilesa, 2005

(viii)   Chairman, Technical/Venue/Talent Hunting Sub-Committee, 1st Ekiti State Sports Festival, 1998.

(ix)   Secretary, Federation of Youth Soccer Clubs, Ekiti State, 1997 – 1998

(x)   Vice-Chairman, Ekiti State Football Association, 1999 – 2003

(xi)   Athletics Official at the Nigeria Polytechnic Games (NIPOGA), Ado – Ekiti, 2008

(xii)   Unit Coordinator, RS 8.2 Federal Road Safety Corps, College of Education, Ikere – Ekiti 1995 – 2005

(xiii)   State Coordinator RS 8.2 Federal Road Safety Corps, Ekiti State, April 2005 to August, 2012.

(xiv)   Chairman, National Youth Soccer Clubs (NAYSOC), 2011-2018

(xv)   Member, Technical/Venue Sub-Committee, 3rd Ekiti State Sports Festival, 2012

(xvi)   Member, Ekiti State Athletics Federation of Nigeria, 2014.

(xvii)   Member of the Brain Trust Group set up by Ekiti State Government on Revenue Generation Drive for Sustainable Development, 2015.

(xviii) Member of National Association of Athletics Technical Officials (NAATO), Ekiti State Chapter.

Public Organised Programmes

　　　Major Public Programmes Organised by Adegboyega, J. A. between 2013 and 2019 as A Lead Consultant for the following Management Training Programmes sponsored by Local Government Service Commission, Ekiti State

➢ A 2-Day Management Training Programme on Effective Verbal Communication in the Public for Ekiti State Local Government Personnel from May 15-16, 2013 held at Pastoral Centre, Ado=Ekiti

➢ A 2-Day Management Training Programme on Corruption Alleviation and Enhance Effective Accounting and Auditing Practice at Local Government for Local Government Personnel from May 22-23, 2013 held at Royal Castles and Suites

➢ A 2-Day Management Training Programme on Skills and Competence Development for Effective Job Performance for Local Government Staff from June 10-11, 2013 held at Local Government Training School, Ilawe-Ekiti

➢ A 2-Day Management Training Programme on Control of Environmental Health Hazards at the Local Government level for Health Environmental Officers from July 2-3, 2013 held at Pastoral Centre, Ado-Ekiti

➢ A 2- Day Management Training Programme on Communication Skills and Report Writing for Effective Job Performance in Public Administration for Local Government Staff from August 22-23, 2013 held at Local Government Staff Training School, Ilawe- Ekiti, Ekiti State

➢ A 3-Day Management Training Programme on Mentoring of Supporting Personnel for Effective Management of Local Government Administration in Ekiti State from May 14-16, 2014 held at Royal Birds Hotels, Ijapo Estate, Akure, Ondo State

➢ A 2-Day Management Training Programme on Public Servants: An Unbiased Umpire in a Democratic Society for Local Government Personnel from June 4-6, 2014 held at Royal Birds Hotels, Alagbaka, Akure, Ondo State.

➢ A 2-Day Retreat on Strategies for Effective Administration in the Local Government Service for Top Management Staff of Ekiti State Local Government from November 10-11, 2015 held at Ikogosi Warm Spring Resort, Ikogosi-Ekiti, Ekiti State

➢ One-Day Management Training Programme on Ebola-the Ragging Scourge, Myth and Truth for Staff of Local Government on October 13, 2014 held at Local Government Staff Training School, Ilawe- Ekiti, Ekiti State

➢ A 2-Day Management Training Workshop on Computer Office Applications and Statistical Programming for Local Government Computer Operators from September 5-6, 2019 held at Local Government Training School, Ilawe- Ekiti, Ekiti State

➢ One -Day Training Workshop on Living a Healthy Life, Stress Management and Agribusiness for Sustainable Food Security for Staff of Ministry of Local Government and Community Development, Ekiti State on July 16, held at West Gate Hotel, Ajebamidele, Ado-Ekiti

　　　He retired meritoriously from the services of Ekiti State University Ado Ekiti having attained the mandatory retirement age.

　　　He is married with children.

GUIDELINES FOR PAPER SUBMISSION

Only manuscripts that adhere to the guidelines below will be accepted for publication in the Journal of Human Kinetics and Health Education Pedagogy:

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2. The title of article, author's name and affiliation and the full address, showing e-mail address and mobile phone number to which correspondence should be sent must be submitted on a separate sheet.
3. The abstract must not be more than 200 italicized words with focus on the purpose, methods, findings and recommendations; and a maximum of five key words.
4. Tables and figures are to be fixed appropriately in the manuscript. Tables should be in 2 decimal places and levels of significance clearly stated, where applicable.
5. Materials forwarded to the Journal for consideration should be original and not have been submitted to another publication or published elsewhere.
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CONTENTS

PRACTICE OF SELF-MEDICATION AND KNOWLEDGE OF PHYSICAL HEALTH EFFECTS AMONG STUDENTS OF TERTIARY INSTITUTIONS IN NORTH-CENTRAL, NIGERIA

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Abstract

The rise in self-medication due to health issues stemming from side-effects and drug resistance, as reported by various scholars, appears to be a global phenomenon. Although everyone is at some risk of self-medicated drug-related problems, students in tertiary institutions seem to be particularly vulnerable. This study focused not only on the risk-taking behavior involved in self-medicated drug use but also investigated the knowledge of physical health effects as related to the practice of self-medication. The study adopted the cross-sectional research design. The sample consisted of 1950 respondents who were sampled using multi-stage sampling procedure. A set of questionnaire developed and validated by the researchers was used to collect data for the study. The data collected were analyzed using descriptive statistics and inferential statistics of Pearson Product Moment Correlation (PPMC) and t-test were used to answer the research questions and the hypotheses, respectively. All the hypotheses were tested at 0.05 level of significance. The study revealed that a high percentage of respondents practiced self-medication. A, the study showed a significant difference between male and female in the knowledge of self-medication with a p-value of 0.0436. While there was no significant difference in knowledge of physical health effects of self-medication. The study revealed that a higher knowledge of physical health effects was associated with a lower practice of self-medication among the respondents. Based on the findings of this study, it was recommended that health educators should organize health campaign and sensitization programme on self-medication and its health-related hazards, and students should be encouraged on the need to make use of health care facilities.

Keywords: Practice, self-medication, knowledge, tertiary institution

Introduction

Self-medication has become a public health concern based on the various health problems arising from the side-effects and drug resistance that are presumed to arise from its high prevalence. The ancient trend in self-medication is as old as mankind. Man has from time immemorial used herbs, tree barks, roots, and drugs to treat self-diagnosed ailments without a prescription from health personnel. By the end of the 19th century, the emergence of new classes and groups of drugs owing to innovations and scientific discoveries in medicine and health also led to the emergence of new ways of self-medication. Jain et al. (2019).

Medicines are important for treating diseases, and they are responsible for improving the population's life quality. However, indiscriminate use of medicines might cause health risks. The practice of self-medication is worrisome because of the simple access to therapeutic products and potential damages to health caused by such practices. Reporting any disease to the physician at the hospital or clinic ensures correct medication, as they

diagnose and prescribe the necessary drugs to alleviate the condition. In some countries, pharmacies, drug outlets, and supermarkets sell non-prescription or over-the-counter (OTC) medicines without a doctor's prescription (Adeola et al., 2023).

Responsible self-medication entails using approved and available medicine in a safe and effective way as directed, though without a prescription. The types of drugs used are indicated for a self recognizable condition following an initial medical diagnosis, which means that users have previous knowledge of the dose, time, and side effect(s) of the overdose of the drug. In developed nations, responsible self-medication is possible due to factors such as high-quality education, accessibility to health information, safety, and quality health care. These factors also include government policies on health, health-seeking behavior, and sceptical expert knowledge (Awosusi & Konwe, 2015).

Non-responsible self-medication is the use of drugs in the treatment of self-diagnosed ailments or symptoms of diseases without supervision or prescription by a physician. It is characterized by the indiscriminate use of drugs for the management of ailments, many of which have resulted in intoxication. The primary issue with non-responsible self-medication is the absence of clinical evaluation by a medical professional, which can lead to incorrect diagnosis, delay in appropriate treatment, drug resistance, use of expired drugs, incorrect dosages, and prolonged usage. The act of non-responsible self-medication seems to be prevalent in the developing countries because of the poor level of literacy, scarcity of health information, and non-implementation of government policies on health issues (Awosusi & Konwe, 2015). For safe use of OTC medications, students are expected to have proper knowledge, attitude, and

practice (KAP) towards OTC medications and subsequent adverse drug reactions (ADRs).

Practice is the application of rules and knowledge that leads to action. Health practice involves individuals treating their ailments and conditions with approved, non-prescription medicines that are both safe and effective. Good practices of self-medication require that medicines used be of proven safety, quality, and efficiency. Self-medication practice is not restricted to a region or race; both developing and developed countries are experiencing significant prevalence of self-medication. (Ullah et al., 2021). Some countries such as the USA, Denmark, Spain, and Lithuania have very low rates of self-medication (17%, 3%, 11%, and 22%, respectively) (Widayati et al., 2016). These countries are well developed with advanced health care and adequate personnel compared with developing countries. This difference in prevalence may be attributed to the restricted legislative control of prescription-only drugs, over-the-counter drugs, and general sales drugs. The prevalence of self-medication from several Nigerian studies ranges between 60 and 90% (Osemene & Lanmikanra, 2012). In a Nigerian university, 67% of undergraduate students reported self-medication, while in Lagos, south-west Nigeria, 67.7% of infants receiving colic treatment reported self-medication (Bassi & Osakwe, 2021).

Knowledge deals with the awareness, understanding, or information or fact that has been obtained by experience or study. In health, knowledge influences the capacity to acquire, retain, and use information. It can also influence comprehension, experience, discernment, and skill in health. In public health practice, knowledge can significantly contribute to improving patient safety and reducing harm. It appears that the practice of self-medication itself is more popular than the knowledge of its hazardous

effects. It is assumed that having adequate knowledge of the risks associated with drug use for self-medication will reduce the rate at which students consume them. Lack of knowledge leaves students exposed to drug use without a prescription, while awareness of the relevant facts allows them to choose the proper way of medication (Sadiq & Salih 2018).

The greater the knowledge of harmful effects of drug use for self-medication, the lesser the consumption. Medication requires proper knowledge of dosing intervals, administration protocols, and possible side effects. Because of a lack of knowledge and information, many people take and use their medication incorrectly or inappropriately. This, in turn, results in a loss of efficacy and an inefficient use of the considerable resources spent annually on drugs (Vidyavati et al., 2016).

Students' high level of self-medication suggests that they are familiarizing themselves with medicines and their uses, partly due to their willingness to learn about them from the internet and social media networks. Most students lack the necessary knowledge to establish relevant diagnoses, leading them to take medications for symptomatic relief without necessarily treating the underlying cause. Another explanation for students' increased self-medication could be their low literacy, which leads to a lack of knowledge about the side effects of self-medication through media like magazines, radio, and TV (Kuku, 2017).

Medication has several types of effects on the body, including the following: desired effect, side effect, tolerance and dependence, interactions, no apparent effect, and paradoxical effect. Another term for the desired effect is the therapeutic effect. This indicates that the medication is fulfilling its intended purpose. Almost all medications that have a systemic effect on the body will cause side effects. Some medications that have a

localised effect on the body can also cause side effects. Side effects are the symptoms that result from a normal dose of a medication. Most side effects are not serious, and some may subside as the body adjusts to the medication.

The physical health effects of self-medication on individual students or on the institution as a whole cannot be over emphasized. Self-medication can lead to serious consequences, such as delayed diagnosis of illness, drug resistance, the development of co-morbidities, and, in some cases, death. Self-medication with drugs masks the signs and symptoms of underlying disease and hence complicates the problem, creating drug resistance and delaying diagnosis (Binta, 2016). According to a study conducted in coastal south Pakistan, the majority of individuals who self-medicate are females. This finding aligns with Goel's (2023) findings, which indicate that females self-medicate approximately 1.4 times more frequently than male respondents. This could be attributed to the reluctance of female students to visit the hospital or outpatient department for minor illnesses, as well as their perception of drugs as more potent and their belief in the effectiveness of prevention and treatment compared to men. A Lithuanian study revealed that women were more likely than men to use self-medicated drugs, a finding further reinforced by a study among first-year medical students at Arabian Gulf University Bahrain. On the other hand, in one Nigerian study, males seemed more prone to such medication than females (Zafar, 2018).Studies revealed a higher prevalence of self-medication among males than females, while some scholars found no strong association between gender.

Research Question
1.   What is the level of knowledge of physical health effects of self-medication among students of

tertiary institutions in North Central, Nigeria?

Research Hypotheses

The following hypotheses will be tested for in this study
1. There is no significant relationship between knowledge and practice of self-medication among students in North central, Nigeria.
2. There is no significant difference between male and female students knowledge of physical health effects of self-medication among students of tertiary institutions in North Central, Nigeria.

Research methods

The study adopts a descriptive research design of cross-sectional nature. The population of the study includes all students of tertiary institutions in North Central Nigeria. The sample of the study consists of 1,950 regular students that were selected from public tertiary institutions. Multistage sampling procedure was adopted to select the respondents for the study. The first stage involves using stratified random sampling techniques to select three categories of tertiary institutions from each state in north-central Nigeria, viz., colleges of education, polytechnics, and universities. The next stage involves using simple random sampling to select three states out of the six in north-central Nigeria. Therefore, we selected nine institutions, consisting of three universities, three polytechnics, and three colleges of education, for a total of nine institutions. The third stage involved the selection of one school from each institution of colleges of education, polytechnics, and one faculty from each university through the use of purposive random sampling techniques. This study sampled six schools from polytechnics, three schools from colleges of education, and three faculties from universities. Due

to the differences in school population, proportionate sampling technique was used to select 900 students from the three universities (300 each), 600 students from the three polytechnics (200 each), and 450 students from colleges of education (150 each), making 1,950 respondents.

Instrument for data collection

A pre-tested, structured questionnaire was used for the study. The questionnaire was in three sections. The first section sought information on demographic characteristics of the respondents such as gender, type and ownership of institution. The second section contains questions on knowledge of physical health effects of self-medication. Items on this section was measured using the four modified Likert scale of Strongly Agree (SA) - 4, Agree (A) - 3, Disagree (D) - 2 and Strongly Disagree (SD) - 1. The questionnaire was validated by two experts from Human Kinetics and Health Education Department of Ekiti State University, Ado-Ekiti. The validated questionnaire was tested for reliability and distributed to the students by the researcher with the help of 12 trained research assistants who administered the questionnaire to the students in their various institutions to gather information about their knowledge of physical health effects and practice of self-medication.

Data analysis

Data were analyzed by using descriptive statistics of mean and standard deviation to answer the research question, while the *t*-test statistics were employed to test the hypotheses at 0.05 level of significance. Any mean response score of 2.50 or above is regarded as positive, while any mean response score of or acceptable, while any mean response score of less than 2.50 is regarded as not acceptable.

Results
Table 1: Level of knowledge of physical health effects of self-medication among students

Items	Responses	Frequency	Percentage
Self-medication can leads to wrong treatment?	Yes	1413	72.44
	No	537	27.56
Self-medication leads to drug addiction?	Yes	1461	74.9
	No	489	25.1
Self-medication can cause organ damage e.g liver and kidney?	Yes	1550	79.5
	No	400	20.5
The main problem caused by self-medication include mixing medications that are not safe to mix, which may result in legal costs of health concerns?	Yes	1570	80.5
	No	380	19.5
Self-medication can lead to wrong diagnosis?	Yes	1515	77.7
	No	435	22.3

Table 1: presents the level of knowledge of physical health effects of self-medication among students of tertiary institutions in North Central Nigeria. The result shows that the majority of the study participants have some level of knowledge of physical health effects of self-medication, while few of the respondents do not. The majority of respondents indicated 'Yes'. This implies that the level of knowledge of physical health effects of self-medication among students of tertiary institutions in North Central Nigeria was high.

Table 2: Relationship between knowledge and practice of self-medication among students of tertiary institution in North central, Nigeria

Variables	N	Mean	Stand Dev	R	P	Remark
Knowledge	1950	48.98	4.46	0.436*	0.000	Significant
Practice	1950	40.05	5.05			

*$P<0.05$

Table 2 shows that the computed R-value (0.436) is significant at $p<0.05$ level of significance. The null hypothesis was rejected. This implies that there is significant relationship between knowledge and practice of self-medication among students of tertiary institutions in North Central Nigeria. The correlation between knowledge and practice of self-medication among students of tertiary institutions in North Central Nigeria is moderate and statistically significant in a positive direction. The positive or direct correlation implies that increased in knowledge will lead to proportionate increase in practices among students and vice versa.

Hypothesis 2: There is no significant difference between male and female students' knowledge of physical health effects of self-medication among students of tertiary institutions in North Central, Nigeria.

Table 3: t-test analysis of gender and practice of self-medication

Gender	N	Mean	SD	Df	t	P (Sig)	Rem.
Male	952	7.06	3.69	1948	1.977*	0.048	Significant
Female	998	7.52	4.32				

$P>0.05$

The result on table 3 shows that females had higher mean score (7.52) on the self-medication practices than their male counterparts (7.06). The result further shows that the computed t-value (1.977) with degree of freedom 1948 was statistically significant at $p<0.05$ level of significance for the groups. The null hypothesis was rejected. This implies that there is significant difference in the knowledge of physical health effects of self-medication among students of tertiary institutions in North Central Nigeria based on gender.

Discussion

Despite having a thorough understanding of the harmful consequences of self-medication, tertiary institution students continue to practice self-medication. This is similar to previous studies done among Nigerian undergraduates in different parts of the country, where a high proportion of students practice self-medication, ranging from 56.6% to 90% (Bassi & Osakwe, 2021). The present study revealed there is significant difference between male and female undergraduates in relation to their level of knowledge on physical health effects of self-medication. This finding contradicts previous research indicating that gender does not influence students' knowledge about the health consequences of self-medication (Sridher & Shariff, 2018). However, it aligns with a study conducted in coastal south Pakistan, which revealed that the majority of self-medicating individuals are female (Goel, 2023). This could be attributed to the reluctance of female students to visit the hospital or outpatient department for minor illnesses, as they tend to view drugs as more potent and believe that prevention and treatment are more effective than those of male students. The slightly higher mean among females recorded in the study, which shows that females practice self-medication more than males, negates the findings that showed a higher prevalence among males than females (Fadare, 2011; Al-Hussaani et al., 2022).

Conclusion

According to the study's findings, nearly all respondents engaged in poor self-medication practices, despite having a high level of knowledge about physical health effects. There was a cognitive discord between the respondents' knowledge and their practice of self-medication, indicating that knowledge did not necessarily translate into effective behavior.

Recommendations

Based on the conclusion of this study, it is therefore recommended that;
1. Health educators should organize health campaign and sensitization programme on self-medication and its health-related hazards that should be embarked upon by health practitioners at tertiary institutions.
2. Additionally, students should be encouraged on the need to make use of health care facilities.
3. Finally, the government should ensure regulation, control, and law enforcement of the sale of drugs by untrained personnel, as this will drastically reduce indiscriminate drug use and non-responsive self-medication.

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INFLUENCE OF PHYSICAL ACTIVITY LEVEL ON THE HEALTH STATUS OF ATHLETES AND NON-ATHLETES STAFF MEMBERS IN ADEYEMI COLLEGE OF EDUCATION, ONDO

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Adeyemi College of Education, Ondo

Abstract
This study investigated the influence of physical activity on the health status of staff members in Adeyemi College of Education, Ondo. Ex-post facto research design was used in the study. The population of the study comprised 1,112 staff members of Adeyemi College of Education, Ondo. A sample of 133 participants was selected for the study. Stratified sampling technique was used to categorise staff members into athlete and non-athlete categories. Purposive sampling technique was used to select 30 staff athletes, and random sampling was used to select 103 staff non-athletes. The physical activity questionnaire used for this study was adapted from the International Physical Activity Questionnaire (IPAQ). Standardized instruments of body weight scale, stadiometer, and non-elastic tape rule were used for measurements of body weight (kg), height (metre), waist circumference (cm), and hip circumference (cm). Inferential statistics of Independent sample t-test were used in testing the postulated hypotheses at .05 alpha level. The findings revealed a significant difference in the physical activity level between staff athletes and non-athletes at Adeyemi College of Education, Ondo. (The results indicate a significant difference in the health status markers (BMI, WHR, and WHtR) between staff athletes and non-athletes at Adeyemi College of Education, Ondo. MI (t(131) = -6.45, p(0.03) <.05), WHR (t(131) = -5.15, p(0.03) <.05), WHtR (t(131) = -6.48, p(0.04) <.05); there is no significant difference between the health status marker (WC) of staff athletes and non-athletes in Adeyemi College of Education, Ondo. (t(131) = -7.21, p(0.40) >.05). The study's findings revealed that staff athletes actively participated in physical activity within the WHO's (2010) recommended range, while the majority of non-athlete staff members had risky health conditions. Among other recommendations, we should develop a workplace culture and environment that supports and motivates employees to be physically active, and encourage regular engagement in physical activities at moderate to vigorous intensity to promote the health and fitness of all staff at Adeyemi College of Education, Ondo.

Introduction

An active lifestyle presents a myriad of potentials that end up benefiting the health of man. Undoubtedly, the maintenance of optimal health has consistently linked physical activity to major lifestyle behaviors. Umeifekwem (2011) defines physical activity as an informal yet well-structured form of sport, recreation, or hobby, unrelated to one's regular work duties. Physical activity, as defined by Umeifekwem (2011), is an endeavor that involves physical exertion, resulting in health benefits. (Joshua, 2012).

Regular physical activity brings about physical fitness, which is necessary for the growth and development of an individual and plays an important role in improving and preserving human health (Cordova, Gerarod, Antoni, Jose & Maria, 2012). Physical activity (PA) is associated with reduced risk of coronary heart disease and cardiovascular disease mortality in both men and women and in middle-aged and older individuals.

Okafor, Young, and Nwobi (2016) described cardiovascular diseases (CVDs) as diseases that involve the heart and the blood vessels, with the basic trigger of the disease being arteriosclerosis. Arteriosclerosis usually occurs following the presence of risk factors like high blood pressure, smoking, lack of exercise, and obesity, among others. Cardiovascular diseases are the leading cause of death globally, and in Nigeria, the World Health Organisation (WHO, 2018a) reported that they accounted for 108,578 deaths (5.6%) in 2018 alone.

The world is witnessing a significant increase in the global burden of non-communicable diseases (NCDs) such as stroke, cancer, hypertension, obesity, diabetes, and chronic respiratory diseases (Elendu & Akpan, 2012). Regular physical activity can reduce the risks of all these diseases, making them preventable. The World Health Organisation (WHO) (2018b) described physical activity as an important determinant of health associated with reduced risk of chronic diseases such as cardiovascular disease, diabetes, obesity, and certain forms of cancer and improved mental health and quality of life.

In Nigerian government establishments, including universities, the age and length of service of the workforce range from 18 to 65/70 years for academic staff and 18 to 60/65 years for non-academic staff. Elendu and Akpan (2012) have recommended certain physical activities to ensure employees' optimum health and wellness during and after active service. According to WHO (2010), the recommended PA for adults aged 18 to 64 years includes leisure time activities such as walking, dancing, gardening, hiking, and swimming; transportation activities such as walking and cycling; occupational activities such as work; household chores, play, games, sports, or planned exercise, all within the context of daily, family, and community activities.

To prevent diseases such as cardiovascular disease, diabetes, and obesity among tertiary institution staff, schools provide a conducive environment for sporting activities, encouraging staff and students to engage in regular physical activity. Tertiary institutions provide various facilities and equipment such as tennis courts, volleyball courts, soccer pitches, and athletic track and field, among others. As individuals age, their participation in physical activity decreases, and only those who integrate into an active lifestyle continue to participate as they age. Taking part in sports can be an important motivator for physical activity for older people even in tertiary institutions leading to a greater number of people being physically active both in leisure and in organized sports (Baker, Fraser-Thomas, Dionigi & Horton, 2010).

Metabolic Equivalent Task (MET) is a measure of energy expended during physical activity. One MET is defined as the amount of oxygen or calories consumed while sitting quietly. Light-intensity physical activities have only minor effects on heart and breathing rates. It is measured as 1.6 to < 3 METs. Moderate-intensity physical activities elevate the heart and breathing rate to between 50.0% and 70.0% of their maximum levels. Aerobic metabolism typically meets its energy requirement by using the body's stores of glycogen and subsequently fats. It is measured as 3 to < 6 METs. Anaerobic metabolism is required to provide energy during vigorous-intensity physical activities, which increase heart and breathing rates to values greater than 70.0% of their maximum. Researchers measure it at approximately 6 METs (McKinney, Lithwick, Morrison, Nazzari, Isserow, Heilbron & Krahn, 2016).

The resulting reduction in social participation and physical activity (PA) as a result of COVID-19 home confinement was of serious concern for older adults in

all walks of life, as they were typically less active when compared to younger aged individuals and more prone to chronic diseases (Roschel, Artioli & Gualano, 2020). Ritchie (2019) asserts that an increase in non-communicable diseases (NCDs) like cardiovascular disease, diabetes, and cancer closely correlates with an increase in obesity, given that obesity is a significant risk factor for most NCDs. According to recent reports, obesity poses a significant risk for morbidity and mortality from COVID-19, and the lockdown has led to an increased incidence of obesity due to inactivity (Abbas, 2020).

According to Florencio, Moreira, Silva, and Almeida (2016), obesity is a chronic metabolic disease characterized by abnormal or excessive accumulation of body fat, which forms the adipose tissue and directly contributes to the onset of other chronic diseases. The World Health Organization (WHO, 2018c) estimates that 1.9 billion adults worldwide, or approximately 40% of the adult population, are overweight, with 650 million (13%) classified as obese. WHO (2011) affirmed that different anthropometric measurements can predict cardiovascular disease risk, such as hypertension, with Body Mass Index (BMI), waist circumference (WC), waist-to-hip ratio (WHR), and waist-to-height ratio (WHtR) being the commonly used anthropometric screening tools.

Heyward (2006) described anthropometry as the measurement of body size and proportions. The measurements include body height, weight, circumference, skinfold thicknesses, and bony widths and lengths. Anthropometric characteristics, particularly the body composition variables, play a crucial role in assessing health status. Even a slight deviation in these parameters can predict or trigger silent killer diseases like hypertension, diabetes, stroke, and obesity (Ajayi,

Sowemimo, Akpan & Ossai, 2019). Studies have reported an increased risk for hypertension, diabetes, cancer, and other diseases in individuals with heavy weight. Use of anthropometry markers is essential for obtaining relevant information that aids in the description of an individual's health status (Dominic, Etchie, Seidina, Niyi-Odumosu & Owolabi, 2018).

Reicherte, Menezes, Hallal, Ekelund, and Wells (2012) opined that there is a strong relationship between physical activity and body composition. Studies have reported that regular physical activity or exercise improves body weight control and body composition, thereby reducing the prevalence of chronic diseases. The body composition of individuals who are physically active is better and has fewer health problems. Consequently, among elderly people, a greater proportion of the physical activity occurs within the context of sport (Ratzla et al., 2010). Therefore, we expect individuals who regularly participate in PA to have improved health and body composition, particularly among institutional athletes across all levels.

Statement of the Problem

Adeyemi College of Education, Ondo, has various sporting facilities and equipment on the ground for both students and staff to make use of. It has, however, been observed to be underutilized by most staff members, with few staff members actively engaging in the usage of such sporting facilities. Following the outbreak of the COVID-19 pandemic, social and physical distancing measures, such as lockdowns of schools, among others, of which sporting activity is a significant inclusion, to curtail the spread of this virus also ended up being disrupted.

During this period, the researcher observed that people who were earlier active have been forced to engage in a less physically active lifestyle, have longer screen time, and have irregular sleep

patterns, resulting in weight gain and corresponding loss of physical fitness, thereby causing them not to meet the weekly recommendations for physical activity and health stated by the World Health Organization's (2010) recommendation of indulging in 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity physical activity.

Over time, some staff members of the college have resumed a physically active lifestyle due to their return to sporting activities, but the turnout is still on the low side. Also, there has not been any quantifiable data on the physical activity level of staff members in recent times. Hence, this paper sought to assess the physical activity level and its resultant influence on the health status of Adeyemi College of Education staff members.

Objectives of the Study

The objectives of the study were to:
i. examine the differences between the physical activity levels among staff athletes and non-athletes of Adeyemi College of Education, Ondo; and
ii. examine the differences between the health status markers among staff athletes and non-athletes of Adeyemi College of Education, Ondo.

Research Questions

The following research questions were raised:
1. Will there be any difference between the physical activity level of staff athletes and non-athletes in Adeyemi College of Education, Ondo?
2. Will there be any difference between the health status markers of staff athletes and non-athletes in Adeyemi College of Education, Ondo?

Research Hypotheses

$H_{o1:}$ There is no significant difference between the physical activity level of staff athletes and non-athletes in Adeyemi College of Education, Ondo.

H_{o2}: There is no significant difference between health status markers (BMI, WC, WHR, WHtR) of staff athletes and non-athletes in Adeyemi College of Education, Ondo.

Methodology

Ex-post facto research design was used for this study. This research design was adopted because the possession of the pre-existing values to be measured in the players interests the researcher, and as such, no manipulation would be effected on the existing values. The population of the study comprised 1,112 staff members in Adeyemi College of Education, Ondo.

A sample of 133 participants was selected for the study. Stratified sampling technique was used to categorise staff members into athlete and non-athlete categories. Purposive sampling technique was used to select 30 athletes who were regular at training schedules out of 79 registered staff athletes, and random sampling technique was used to select 103 non-athletes out of 1,033 staff non-athletes. The physical activity questionnaire used for this study was adapted from the International Physical Activity Questionnaire (IPAQ) to assess the physical activity level of the respondents. Test re-test method of reliability was used, and results were analysed using Pearson product moment correlation (PPMC). A reliability coefficient of 0.73 was obtained, which suggested high internal consistency.

The standardised instruments used for data collection were calibrated before use. These included a body weight scale calibrated in kilogrammes (*kg*) for measuring body weight, a height scale calibrated in metres for body height and non-elastic tape rule calibrated in centimetres for measuring waist circumference and hip circumference.

Data collection procedure required the participants to wear light clothes, be bare footed and stand in anatomical position during the measurements of height and weight. Data obtained from measurements of body weight and height were used to calculate BMI using the formulae: BMI = .

Waist Circumference (WC) was measured to the nearest 0.1cm using non-flexible tape rule at the narrowest point between the bottom rib and the iliac crest in the mid-axillary plane and hip circumference was measured to the nearest 0.1cm around the widest portion of the buttock above the gluteal fold using non-flexible tape rule. The tape was snug around the body parallel to the floor at the level at which the measurement was taken for both the waist and the hip. Waist-to-hip ratio (WHR) was calculated as the waist circumference divided by the hip circumference, and Waist-to-height ratio (WHtR) was calculated as the waist circumference divided by the height. The standard cut-off point of 0.5 was used for the evaluation of WHtR, which denotes keeping the WC less than half of the height.

Descriptive statistics of mean and standard deviation were employed, and data were analysed using Independent sample t-test for testing the hypotheses at 0.05 alpha levels. The Statistical Package for Social Sciences (SPSS) version 25.0 was used for the analyses. Ex-post facto research design was used for this study. This research design was adopted because the possession of the pre-existing values to be measured in the players interests the researcher, and as such, no manipulation would be effected on the existing values. The population of the study comprised 1,112 staff members in Adeyemi College of Education, Ondo.

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standard cut-off point of 0.5 was used for the evaluation of WHtR, which denotes keeping the WC less than half of the height.

Descriptive statistics of mean and standard deviation were employed and the data were analysed using Independent sample t-test for testing the hypotheses at 0.05 alpha levels. The Statistical Package

for Social Sciences (SPSS) version 25.0 was used for the analyses.

Hypotheses Testing

Ho_1: There is no significant difference between the physical activity level of staff athletes and non-athletes in Adeyemi College of Education, Ondo?

Table 1: Independent Sample T-test analysis showing the differences between the physical activity level of staff athletes and non-athletes in Adeyemi College of Education, Ondo.

Category	Mean ± SD(*MET-min/week*)	Mean Difference	Standard Error Diff	df	t	Sig	Decision
Athlete	2945.52 ± 523.54	2169.72	130.45	131	14.73	0.03	H_0 Rejected
Non-Athlete	775.80 ± 267.04						

p < .05

Table 9 shows the t-test analysis of difference between the physical activity level of staff athletes and non-athletes in Adeyemi College of Education, Ondo. From the table, t(131) = 14.73, p(0.03) < .05. This implies that there is a significant difference between the physical activity level of staff athletes (2945.52 ± 523.54 *MET-min/week*) and non-athletes (774.80 ± 267.04 *MET-min/week*). Hence, the null

hypothesis which was stated thus; "there is no significant difference between the physical activity level of staff athletes and non-athletes in Adeyemi College of Education, Ondo", was rejected

Ho_2: There is no significant difference between health status markers (BMI, WC, WHR, WHtR) of staff athletes and non-athletes in Adeyemi College of Education, Ondo?

Table 2: Independent Sample T-test analysis showing the differences in health status markers between staff athletes and non-athletes in Adeyemi College of Education, Ondo

Variable	Category	Mean ± SD	Mean Diff	Standard Error Diff	df	t	Sig	Decision
BMI *(kg/m²)*	Athlete	24.12 ± 1.41	-4.45	0.58	131	-6.45	0.03	H_0 Rejected
	Non-Athlete	28.57 ± 2.82						
WC *(cm)*	Athlete	80.82 ± 5.68	-.9.93	1.89	131	-7.21	0.40	H_0 Not Rejected
	Non-Athlete	90.75 ± 7.34						
WHR *(cm)*	Athlete	0.90 ± 0.03	-0.06	0.01	131	-5.15	0.03	H_0 Rejected
	Non-Athlete	0.96 ± 0.05						
WHtR *(cm)*	Athlete	0.49 ± 0.04	-0.08	0.01	131	-6.48	0.04	H_0 Rejected
	Non-Athlete	0.57 ± 0.06						

p < .05

Table 2 shows the t-test analysis of difference between the health status markers (BMI, WC, WHR, WHtR) of staff athletes and non-athletes in Adeyemi College of Education, Ondo. From the table, differences in BMI indicates t(131) = -6.45, p(0.03) < .05. This implies that there is a significant difference between

the BMI of athletes (24.12 ± 1.41 *kg/m²*) and non-athletes (28.57 ± 2.82 *kg/m²*). Hence, the null hypothesis which was stated thus; "there is no significant difference between the health status marker (BMI) of staff athletes and non-athletes in Adeyemi College of Education, Ondo", was rejected.

From Table 2, differences in WC indicates $t(131) = -7.21$, $p(0.40) > .05$. This implies that there is no significant difference between the WC of athletes (80.82 ± 5.68 *cm*) and non-athletes (90.75 ± 7.34 *cm*). Hence, the null hypothesis which was stated thus; "there is no significant difference between the health status marker (WC) of staff athletes and non-athletes in Adeyemi College of Education, Ondo", was rejected.

Differences in WHR indicates $t(131) = -5.15$, $p(0.03) < .05$. This implies that there is a significant difference between the WHR of athletes (0.90 ± 0.03 *cm*) and non-athletes (0.96 ± 0.05 *cm*). Hence, the null hypothesis which was stated thus; "there is no significant difference between the health status marker (WHR) of staff athletes and non-athletes in Adeyemi College of Education, Ondo", was rejected (Table 2).

Differences in WHtR indicates $t(131) = -6.48$, $p(0.04) < .05$. This implies that there is a significant difference between the WHtR of athletes (0.49 ± 0.04 *cm*) and non-athletes (0.57 ± 0.06 *cm*). Hence, the null hypothesis which was stated thus; "there is no significant difference between the health status marker (WHtR) of staff athletes and non-athletes in Adeyemi College of Education, Ondo", was rejected (Table 2).

Discussion of Findings

The objectives of this study were to determine the physical activity level, examine the body composition indicators of health status as well as to examine the differences between the physical activity levels and health status markers among staff athletes and non-athletes of Adeyemi College of Education, Ondo. Generally, the findings of this study suggest that level of physical activity has an inverse relationship with the body composition indicators of health status. This tallied with findings stated by Dominic, Onifade and Lajide (2010) that, there is an inverse

relationship between the physical activity level of individuals and their body weight, size and fat level.

Hypothesis one which states that "there is no significant difference between the physical activity level of staff athletes and non-athletes in Adeyemi College of Education, Ondo" was rejected (*p-value < 0.05*). Active participation in physical activity within the recommended range of values stated by WHO (2010) as noticed among the staff athletes, have been reported by Katzmarzyk and Lear (2012) to reduce obesity and risk of chronic disease in obese individuals, with a decreased risk of metabolic syndrome from 30-40% in general populations.

Hypothesis two, which states that "there is no significant difference between health status markers of staff athletes and non-athletes in Adeyemi College of Education, Ondo" was rejected on (BMI, WHR, WHtR) levels (*p-value < 0.05*) and not rejected on (WC) level (*p-value > 0.05*). Majority of the staff athletes were found to be within the healthy range of values serving as indicators of health. This buttresses Talabi's (2016) notion of physical activity being the cheapest, easiest and most reliable means towards achieving optimum health and wellness. The risky body composition indicators of health status possessed by the non-athletes has been stated to be a predisposing factor leading to arthritis, hypertension, type II diabetes and premature mortality from all causes (Dominic, Ibraheem, Seidina & Niyi-Odumosu, 2017)

Results on WC and WHtR further corroborated the statement of Ashwell & Gibson, (2016) about WHtR being a simple primary risk assessment tool that could be used to further identify more subjects at cardio-metabolic risk than the combination of BMI and WC.

Conclusion

Based on the findings of this study, the conclusion below was drawn:

1. Staff athletes engaged actively in physical activity within the recommended range of values stated by WHO (2010).
2. Majority of the staff non-athletes possessed risky health status.

Recommendations

Based on the conclusion of this study, the following recommendations were made:

1. A workplace culture and environment that supports and motivates employees to be physically active should be developed.
2. Workshop and seminars should be organised in order to raise awareness of individuals regarding the benefits of physical activity.
3. Periodic assessment of health status should be further encouraged.
4. Regular engagement in physical activity at moderate to vigorous intensity should be encouraged to promote health and fitness.

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PREVALENCE OF CANDIDIASIS INFECTION IN RURAL AREA OF EKITI STATE, NIGERIA

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Abstract

Candidiasis is a yeast infection (a type of fungus) called Candida. Some species of Candida can cause infection in people; the most common is Candida albicans. Candida albicans is an organism that normally makes a quiet home for itself on the skin, mouth, gastrointestinal tract, vagina, and penis. It may also infect the bloodstream or internal organs such as the liver or spleen. Occasionally the yeast multiplies uncontrollably, causing pain and inflammation. If it reaches the bloodstream or heart, candidiasis can kill. This study aimed to determine the prevalence of candidiasis in rural areas of Ekiti State, Nigeria. A retrospective descriptive study was conducted using simple random technique to select one thousand five hundred and fifty (1550) patients attending Federal Teaching Hospital, Ido-Ekiti, Ekiti State, Nigeria, from January to December 2020 tested for Candidiasis. Medical records of suspected patients tested for Candidiasis infection were collected from the medical records of the Health Information Management department. SPSS was used to analyze data. Data were expressed in frequencies, percentages, and bar charts. Statistical significance was set at p<0.05. 605 (39.03%) of the patients were male while 945 (60.97%) were female. Out of a total of 1550 patients, 55 were identified as positive, resulting in an overall prevalence of 3.55%. 18 (2.96%) of the male subjects were positive while 38 (3.92%) of the female subjects were positive. Age group 41-50 had highest prevalence of candidiasis infection of 1.42%. The tests for all subjects in the age group 1-20 years were negative. The prevalence of candidiasis was low. Diagnosed candidiasis was higher in females than males. Nutrition, lifestyle, poor hygiene, and self-medication differences may have contributed to the higher prevalence of candidiasis among females than males. Therefore, people should be sensitized on how to prevent candidiasis in rural areas of Ekiti State.

Key Words: Candidiasis, Infection, Rural, Yeast, Oropharyngeal

Introduction

A yeast (a type of fungus) known as Candida causes the fungal infection known as candidiasis. Some species of *Candida* can cause infection in people; the most common is *Candida albicans*. *Candida* normally lives on skin and inside the body, such as the mouth, throat, gut, and vagina, without causing problems. Candida can cause infections if it grows out of control or if it enters the body deeply (CDC, 2022).

There are various types of candidiasis. Thrush (Oropharyngeal Candidiasis) is the Candida yeast infection that develops in the mouth and spreads to the throat. Oral thrush most often occurs in infants and toddlers. It causes white or yellowish bumps to form on the inner cheeks and tongue (Karen, 2019). It is also common in the elderly and people with weakened immune systems. Adults undergoing cancer treatment, taking medications such as corticosteroids and wide-spectrum antibiotics, wearing dentures, and suffering from diabetes are also at a higher risk of contracting it (Neha,

2021). When thrush occurs in males, it can affect the head of the penis and the foreskin. It can lead to inflammation of the head of the penis, known as balanitis. Symptoms include an itchy rash, red skin; swelling, irritation, and itching around the head of the penis; lumpy discharge under the foreskin; or pain when urinating and during sex (Daniel, 2018). It is fairly common and affects approximately 3–11% of males during their lifetime. Balanoposthitis involves both the glans and the foreskin and occurs in approximately 6% of uncircumcised males. Balanoposthitis occurs only in uncircumcised males (Wray et al., 2023).

Vaginitis is an infection of the female genitals often caused by yeasts and other fungi. The overgrowth of Candida in the vagina is known to stimulate it, making it a common infection of the female genital tract (Emeribe et al., 2015; Mbakwem-Aniebo et al., 2020). Trichomonas vaginalis, Gardnerella vaginalis, and Chlamydia trachomatis, or a combination of these various microorganisms, may also cause it. Candida spp. often cause vulvovaginal candidiasis (VVC), characterized by itching, erythema, and curd-like vaginal discharge (Rathod et al., 2012; Nelson et al., 2013; Mbakwem-Aniebo et al., 2020).

Some parts of the world have documented an increase in the prevalence of serious fungal infections. For instance, a survey of the epidemiology of sepsis in the USA revealed a threefold increase in the incidence of fungal sepsis between 1979 and 2000 (Oladele and Denning, 2014; Rhee and Klompas, 2020). Oropharyngeal colonization is found in 30%–55% of healthy young adults, and *Candida* species may be detected in 40%–65% of normal faecal flora. At least one bout of VVC affects three out of every four women during their lifetime (Jose, 2020), with postmortem diagnosis often leading to a low index of suspicion and treatment. According to estimates, invasive aspergillosis and invasive candidiasis account for 4% and 2% of all hospital deaths, respectively. According to estimates, invasive aspergillosis and invasive candidiasis account for 4% and 2% of all hospital deaths, respectively (Oladele et al., 2014; Ocansey et al., 2019). The reviewed articles published from 1991 to 2019 showed that one hundred forty-four out of 287 patients were identified with Candida infection, of which 151 isolates were obtained. Patients isolate Candida albicans 109 (72.1%), Candida glabrata 21 (13.9%), Candida krusei 8 (5.2%), Candida tropicalis 5 (3.3%), Candida africana 3 (1.9%), Candida parapsilosis 3 (1.9%), and C. dubliniensis 2 (1.3%). One hundred and fifteen (40.6%) of patients with *C. africana* candidiasis were from seven African countries (Fakhim et al., 2020). Few researchers have studied vulvovaginal candidiasis in Ekiti State, but they have not explored the prevalence of candidiasis infection in the same state.

Methods

This study used a retrospective descriptive design. Simple random sampling technique was adopted to select one thousand five hundred and fifty (1550) patients who attended the Federal Teaching Hospital, Ido-Ekiti, Ekiti Stste, Nigeria, from January to December 2020. Medical records of suspected and confirmed patients for candidiasis were collected from the health information management unit of the Federal Teaching Hospital, Ido-Ekiti. Data collected was analysed by imploring the use of the SPSS 19.0 software for Windows (SPSS, Inc., Chicago, IL, USA). Results were represented in percentages, frequencies, and charts. Statistical significance was set at $P<0.05$.

Results

A total of 1550 patients tested positive, resulting in an overall prevalence of 3.55%. This is illustrated in Table 1. A total of 605 (39.03%) of the patients were

male, while 945 (60.97%) were female. This is illustrated in Table 2. Eighteen (2.96%) of the 605 male subjects were positive, while thirty-seven (3.92%) of the 945 female subjects were positive. Table 3 and Graph 1 illustrate this. The candidiasis infection did not affect the age group 41-50 (1.42%). None of the subjects in the age range of 1–20 years tested positive. The table below illustrates this.

Table 1: Test Results for Candidiasis Infection

	HVS	URINE	WOUND	SPUTUM	TOTAL	PERCENT
POSITIVE	21	5	22	18	55	3.55
NEGETIVE	584	220	480	240	1524	

The Table 1 above represented test result of candidiasis infections from different samples. 3.55 % was identified positive.

TABLE 2: Gender Distribution of respondents

	No of Patients	Percent (%)
MALE	605	39.03
FEMALE	945	60.97

Table 2 revealed that 39.03% were man and 60 .97% were female

TABLE 3:   Incidence of Candidiasis infection among sex

SEX	High Vagina Swabs	Urine	Wound	Sputum	TOTAL
Male	O	O	6	12	18
Female	21	5	5	6	37

The Table 3 above represented incidence of Candidiasis infection among Sex. Female were more infected than male.

TABLE 4: Distribution of Candidiasis Infections among Age Groups

AGE	HVS	URINE	WOUND	SPUTUM	TOTAL	PERCENT
1-10 Years	Nil	Nil	Nil	Nil	Nil	0.0
11-20Years	Nil	Nil	Nil	Nil	Nil	0.0
21-30 Years	1	Nil	Nil	2	3	5.5
31-40 years	6	1	3	6	16	29.0
41-50Years	9	2	2	9	22	40.0
51-60 years	5	2	6	1	14	25.5
Total					55	100

The above Table 4 represented distribution of Candidiasis infections among age groups. Age group of 41-50 years had the highest infection while age groups 1-20 were not infected from candidiasis.

Discussion

The study was done in Federal Teaching Hospital, Ido-Ekiti. The Federal Teaching Hospital Ido-Ekiti received patients from rural areas or those referred from general hospitals and primary health centers. In this study, a prevalence of 3.55% of candidiasis in the patients attending Federal Teaching Hospital, Ido-Ekiti, was reported. Females had a prevalence of 3.92%, while males were 2.95%. Vulvovaginal candidiasis is the primary

cause of candidiasis in females (Mbakwem-Aniebo et al., 2020). The prevalence of vaginal candidiasis reported by different studies was 16.5%, 21.31%, 19%, and 14% (Emeribe et al., 2015; Michael, et al., 2022). According to Okwelle and Bara-Hart (2022), adequate knowledge, excellent personal hygiene, and normal levels of oestrogens and corticoids may contribute to the low prevalence of this result compared to other studies. Thrush, which occurs in males, is known as balanitis (Daniel, 2018). The prevalence of candidiasis in males is similar to previous studies, which stated that it is fairly common and affects approximately 3-11% of males during their lifetime (Anton, et al., 2022). However, the study by Lisboa et al. (2010) reported a prevalence of candida balanitis of 18%. The prevalence of Candida species infection was higher in females than in males. This may be due to high sexual activity, poor personal hygiene, and the use of contraceptives among females.

Candida species were observed mostly among the age-group 41-50 years (22 [40%]), followed by 31-40 years {16 (29%)} and least among those less than 20 years. The high prevalence seen in people aged 41 to 50 is similar to what was found in a previous study, which found that the growth was stronger in the female group than in the male group, showing microbiologically as intermediate, intense, and abundant yeast growths. The youngest group of patients, those under 50 years old, frequently experienced these growths (Jolanta et al., 2016). The finding of this study is different from the previous study by Micheal, et al., who stated that candida-positive cultures were observed mostly among those aged 20–30 years, at 36 (45.0%) and lowest among those less than 20 years, at 2 (1%).

Conclusion

The prevalence of candida infection was low compared to other states in Nigeria. The findings also revealed the highest prevalence of candida infection among patients aged 41–50 years.

Recommendations

1. The prevalence of candida infection is higher in females than males. Therefore, this study recommends that medical practitioners, through various channels such as conferences, workshops, and seminars, should prioritize laboratory diagnosis of candida infection to identify the fungal isolate before initiating treatment.
2. Furthermore, health educators should raise awareness about routine screening procedures; both men and women of reproductive age should strive for perfection.

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HARNESSING THE MOVEMENT SCIENCE ELEMENTS IN ADVANCING HEALTH AND OPTIMIZING HUMAN POTENTIAL FOR NATIONAL PROSPERITY

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Abstract

This paper discusses the concept, goals, and benefits of movement science and its role in optimization human potential through participation in physical activities. Discussion equally catered on how human potential serves the capacity for humans to improve themselves through studying, training, and practice to reach the limit of their ability to develop aptitudes and skills. To achieve national prosperity, all the available resources must be put to use. Human resources are the active resources that move other resources to action. However, people who are responsible for putting plans into action must themselves be physically fit. This can be achieved through participation in physical activities that promote health. Regular exercise improves cognitive function, concentration, and mood, leading to higher productivity and efficiency in the workplace. Employees who engage in physical activities are less likely to experience burnout and absenteeism. It was recommended that by fostering a culture of physical activity and leveraging advancements in movement science, nations can build healthier, more productive, and more cohesive societies, ultimately driving sustainable economic growth and prosperity.

Keywords: Movement, Human Potential, National, Prosperity

Introduction

For every notion, human potential is a prerequisite for engineering its resources in order to achieve an overall level of prosperity. One reason why national prosperity is hinged on the combination of human potentials is that humans are the active national resources that put plans into action; they use their potential by putting into use other resources to achieve the stated goals. For a nation to achieve prosperity, its citizens and people must have the opportunity and freedom to thrive. Prosperity is underpinned by an inclusive society with a strong social contract that protects the fundamental liberties and security of every individual. It is difficult to prosper in the face of a poor state of health and constant medication. Research has established a correlation between sedentary or inactive living and hypokinetic diseases, such as high blood pressure and cardiovascular.

Thus optimizing human potential and advancing health movement science for national prosperity involves a multi-faceted approach that encompasses health, education, social cohesion, economic development, and innovation. By fostering a culture of physical activity and leveraging advancements in movement science, nations can build healthier, more productive, and more cohesive societies, ultimately driving sustainable economic growth and prosperity. Human potential is the possibilities human beings are capable of accomplishing (Lacroix, 2014). Human potential is well understood as a process of human resource development to match the needs, vision, and ideology of an organization to achieve the set of goals. Human potential is our ability to express

our inner selves and become the best version of ourselves. It is very closely related to intelligence, learning, cognition, and training. Because everyone is good at something they don't realize it, learning and cognition are intrinsic. Human potential is the capacity for humans to improve themselves through studying, training, and practice to reach the limit of their ability to develop aptitudes and skills. This paper discusses the concept, goals, and benefits of movement science and its role in optimization human potential through participation in physical activities. The article equally discussed how optimization human potential can contribute to national prosperity.

Concept of Movement science

The study of human movement from the perspective of physical science is known as kinesiology and is practiced in physical education therapy, orthopaedics, and physical medicine. The three main fields of study of mechanics, anatomy, and physiology, most specifically biomechanics, musculoskeletal anatomy, and neuromuscular physiology, formed the basis of the study of the human body as a machine for performing work. There are numerous dimensions in elements of kinesiology. Biomechanics, exercise physiology, motor control and motor learning, motor development sports, and exercise physiology and sociology of exercise

The major goal of movement science (MOVESCI), also known as kinesiology, is to fully develop the intellectual abilities of humans during their learning experiences through participation in physical activity. (MOVESCI) emphasizes the study of human movement from biological and behavioural perspectives. Movement science/ kinesiology is the study of human movement. It encompasses the physiological, biomechanical, and psychological dynamic principles and

mechanisms of movement. Movement science aims to understand how people move, the factors that influence movement, and how to improve performance and prevent injury through movement analysis and intervention. Optimizing human potential and movement science for national prosperity involves harnessing the full capacity of individuals through physical activity, sports, and exercise to enhance productivity, health, and economic growth. Participation in physical activity provides significant benefits.

Promoting Physical Health

Human movement science (HMS) is an interdisciplinary field that aims to understand the mechanisms and processes involved in human movements. Areas such as sports and exercise medicine, sport and exercise science, health promotion, and sports and exercise pedagogy, among others, interrelate with the broad spectrum of HMS. The HMS is a specialized area of study that focuses on the application of knowledge related to the mechanisms and techniques for restoring and optimizing human functional capacity and well-being throughout the lifespan (Elliott, 1999).

According to the World Health Organization (WHO), physical activity is any bodily movement produced by skeletal muscles that requires energy expenditure. Physical activity refers to all movement, including during leisure time, for transport to and from places, or as part of a person's work. Both moderate- and vigorous-intensity physical activity improve health. Promoting regular physical activity and sports can lead to a healthier population, reducing the prevalence of chronic diseases such as obesity, diabetes, and cardiovascular conditions. This translates to lower healthcare costs and increased savings for the government and individuals. Physical well-being contributes to better mental health, higher energy levels, and improved quality of life,

enabling individuals to contribute more effectively to the economy. The above expression underscores the role of human movement in sustaining and maintaining human health, which makes it possible to strive toward national prosperity. Knowledge acquired through exercise can be used and applied in the workplace; this therefore enhances human potential in many areas.

In addition, this area of study contributes significantly to optimal physical functioning in sports and health. The objective of this field is to improve our understanding of human movement and to support physical activity in all aspects of daily life, including occupational and recreational activities (Malm et al., 2019). The study of human movement offers valuable insights into the physiological, neural, and psychological adaptations that occur as a result of exercise. Additionally, it sheds light on the role of regular physical activity in preventing and managing chronic diseases (Matheson et al., 2011) and the mechanisms by which the brain controls and coordinates everyday movements (Sallis, 2009). Nutrition, psychology, occupational health, and physical therapy are just a few of the areas where human movement scientists are crucial. Understanding and resolving a range of health concerns and enhancing people's quality of life depends on their experience and knowledge of human movement. Human movement scientists are important because they bring their knowledge of movement analysis, biomechanics, and exercise physiology to other fields. Their contributions enhance the health and well-being of people and communities, and their multidisciplinary approach may result in ground-breaking fixes for difficult medical problems and also help in Optimization of human potential.

The Impact of Physical Activity on Work Performance

This is another major contribution of MOVESCI to optimize human potential participation. Aaron (2024) noted that. In today's fast-paced and demanding work environment, finding ways to enhance productivity and performance is crucial. While many individuals turn to time management techniques and productivity hacks, one often overlooked factor that can significantly impact work performance is exercise. Engaging in regular physical activity not only improves physical health but also has numerous positive effects on mental well-being, cognitive function, and overall work performance. Regular exercise improves cognitive function, concentration, and mood, leading to higher productivity and efficiency in the workplace. Employees who engage in physical activities are less likely to experience burnout and absenteeism.

Research has consistently shown that physical activity has a profound impact on various aspects of work performance. Studies have found that employees who engage in regular exercise are more likely to experience higher job satisfaction, increased energy levels, improved concentration, and enhanced creativity. Additionally, studies have linked regular physical activity to reduced stress levels, improved time management skills, and increased resilience to work-related challenges.

Motivation and Physical Activity

One important factor to consider is the role of motivation in maintaining a regular exercise routine. Intrinsically motivated individuals, who find physical activity enjoyable and personally rewarding, are more likely to adhere to their exercise regimen. On the other hand, those who view exercise as a chore or obligation may struggle to maintain consistency. Therefore, finding physical activities that you genuinely enjoy and that

align with your interests and preferences is key to staying motivated and reaping the benefits of exercise.

Physical Activity and Cognitive Function

Regular exercise improves cognitive function, including memory, attention, and decision-making skills. Exercise increases blood flow to the brain, which promotes the growth of new neurones and enhances neural plasticity. This, in turn, leads to improved cognitive performance and greater mental clarity. By incorporating physical activity into your routine, one can enhance their ability to focus, problem-solve, and make sound decisions, ultimately boosting their work performance.

Physical Activity and Mental Well-being

Exercise is not only beneficial for physical health but also plays a crucial role in promoting mental well-being. Studies have linked regular physical activity to reduced symptoms of anxiety and depression, increased self-esteem, and improved overall mood. By releasing endorphins, the body's natural feel-good chemicals, exercise acts as a natural antidepressant and stress reliever. This can significantly impact work performance by reducing the risk of burnout, increasing resilience, and fostering a positive mindset.

Physical Activity and Energy Levels

Maintaining high energy levels throughout the workday is essential for optimal performance. Regular physical activity boosts energy levels and fights fatigue. Exercise improves cardiovascular health, increases oxygen flow, and enhances metabolism, resulting in improved energy levels and stamina. By incorporating physical activity into one daily routine, individuals can boost their energy levels, stay alert and focused, and

perform at their best throughout the workday.

Physical Activity and Stress Management

The demands of work can often lead to high levels of stress, which can negatively impact both mental and physical well-being. Research has proven that exercise serves as an effective stress management tool, assisting individuals in managing work-related pressures and mitigating the risk of stress-related illnesses. Physical activity stimulates the production of endorphins, which act as natural stress relievers and promote relaxation by reducing the levels of stress hormones in the body. By incorporating exercise into your routine, you can effectively manage stress, improve your resilience, and maintain a healthy work-life balance.

Movement Science Educational Outcomes and Cognitive Development

Movement Science, through structured physical education programs, enhances cognitive development in children and adolescents. This leads to better academic performance and the development of critical thinking skills. Physically active children have greater motor competence and a faster maturation compared with their sedentary peers. Recent research also suggests that physical activity during childhood may also promote cognitive development and therefore improve academic performance. Research by Birkbeck analysing the impact of physical activity on children's cognitive and academic outcomes has found that physical activity improves on-task behaviour, creativity, problem solving, and memory in typically developing primary school-aged children. (Fotini, 2023)

Two theories propose cognitive explanations for the beneficial effects of PA. First, the skills acquisition theory

postulates that the motor and cognitive complexity of PA influence cognitive processes (Omporowski & Pesce, 2019). Exercise, sports, and performance arts have a positive impact on cognition. For example, PA can be considered cognitively engaging when it requires complex movement patterns rather than simple repetitive movements. Research suggests that the response to practicing complex tasks may interact with the level of physical effort required. Second, the theory of embodied cognition underscores the significance of establishing a connection between the body, the brain, and the external environment to support mental processes (Wilson & Foglia, 2017). Two meta-analyses have investigated the hypothesis that cognitively engaging PA leads to greater cognitive benefits than other types of PA by comparing randomized controlled trials (RCTs) of (a) aerobics, (b) motor skills, and (c) cognitively engaging PA interventions (Luftig, 2000). Both studies found that physical activities with greater cognitive engagement—for example, those requiring greater attention, remembering rules, and constantly thinking of action plans—involving academic content or frequent rule changes, emphasizing variability, and/or integrating social and emotional skills—have a greater positive effect on executive functions than those with lower cognitive engagement.

Some physical activities include components that engage specific cognitive skills in addition to the physical exercises (Vazou, Pesce, Lakes, & Smiley-Oyen, 2019; Pesce *et al., 2016*). For example, activities like dance incorporate a creativity element. Research suggests that creativity plays a crucial role in achieving success in life (Sternberg, 2002). Frey and Osborne (2017) assert that creativity is crucial for our future society (Florida, 2007). Creativity can help students solve problems and challenges outside an educational context. Creativity will be vital for jobs in the future as a result of rapid technological advancement (Lucas, Bridgers, Griffiths & Gopnik, 2014). Today's children will likely work in roles that don't exist, utilizing new technologies like artificial intelligence. Creating an education environment that harnesses children's capacity to innovate will help in their journey to navigate this uncertainty. Some have shown that younger children perform better than college students on a creative problem-solving task (Lucas, Bridgers, Griffiths & Gopnik, 2014). While creativity has been studied in children, in particular with regards to play, there is currently no clear-cut pattern of changes in creativity over the school of childhood and adolescence (Alfonso-Benlliure & Santos, 2016). (Alfonso, Santos, 2016) (Runco & Aossey, 1996). Russ, 2003; Sali, 2015; Urban, 1991). Some argue that life experiences and/or environmental factors influence these mixed results (Runco & Aossey, 1996).

An embodied approach to creativity emphasizes movements and interactions with the environment (Wyrick, 1968), while also promoting exploration and originality (Kozbelt, Beghetto, & Runco, 2010). Creative practice as a means to train cognition has also been studied through non-physical interventions for primary school-aged children. Specifically, different art interventions, including music drama (Costa, 1999; Roden, Grube, Bongard, & Kreutz, 2014; Joronen, Rankin, & Astedt, 2008). Luftig, 2000). Visual art has shown evidence of promise. Therefore, we suggest that incorporating creativity into a PA intervention could enhance positive impacts on cognitive and metacognitive processes, either through additive or moderating effects. Interest in the effects of physically creative practices on outcomes is recent; a few studies applying creative dance interventions on children have indicated positive influence between dancing and a range of cognitive measures (D'Souza & Wiseheart, 2018);

Neville & Makopoulou, 2020; Santos, Jiménez, Sampaio & Leite, 2017; Santos, Jiménez, Sampaio, & Leite, 2017).

Creative movement

According to Oppici, Frith, and Rudd (2020), creative movement is a "functional and original movement solution to achieve a task goal." As architects of the learning environment, teachers are in a position to promote the exploration of movement (Kozbelt, Beghetto, & Runco, 2010). Teachers have the ability to provide children with significant problem-based activities within genuine movement environments (Chow, 2007; Windschitl, 2002). The opportunities in their environment support children's pathways to creativity in movement (Renshaw, IDavids, Shuttleworth, & Chow, 2009; Rudd, 2020). What we teach, where we teach it, and how we teach it shapes the motor learning environment. Tools such as improvisation and active open-ended problem-solving instructions in relation to movement, using a non-judgemental approach, open the window to experimentation and thus creativity (Kirsh, Muntanyola-Saura, & Jao, 011). Creative movement in an educational context puts the child "in charge of the task they are performing" (Oppici, Frith, & Rudd, 2020). This could foster cognitive involvement and self-control, crucial components that underpin embodied learning (Diamond & Ling, 2016).

Social Cohesion and Community Development of Social Capital

A physical education curriculum can equip youth with the necessary knowledge, skills, behaviors, and confidence to engage in physical activity throughout their lives. Similarly, engaging in physical activity correlates with academic benefits such as enhanced concentration, memory, and classroom behavior. The World Health Organisation (2001) states that physical activity encompasses the development of physical abilities and conditioning, motivating students to continue sports and physical activity, and providing recreational activities. A global, lifelong, and democratized education must certify the contribution of physical activity and sports practice throughout life. It contributes to the preservation and enhancement of mental and physical health, gives a nourishing leisure-time activity, and also helps an individual to overcome the drawbacks of present stressful living. At the community level, it fosters the development of social qualities, social relations, and fair play, all of which are crucial not only for sport but also for life in society (Ravi & Kumar 2017). This builds social capital, which is essential for social cohesion and community development. Engaging youth in sports programs can deter them from negative activities and promote positive behavior, leadership skills, and community involvement. It helps in imparting important social values among the youth, such as fairness, self-discipline, solidarity, team spirit, tolerance, and fair play (Bailey, 2005). Thus, as an integral part of movement science, sports and physical activities foster social interactions, community spirit, and teamwork. This will go a long way in enhancing productivity, cooperation, creativity, and hard work, thereby optimising human potential toward achieving the desired goal of national sustainable development and prosperity.

Economic Development through Sports Industry

We have established the relationship between sustainable developments, national prosperity, and economics. Sports is an important component in movement science, and the sports industry itself can be a significant economic driver, creating jobs in coaching,

sports management, sports medicine, and related fields. Tourism and events Hosting sports events can boost tourism, generate revenue, and enhance a country's international reputation. According to Dahiru (2022), sports have emerged as the single most influential factor in uniting the global human race. This has led to its unprecedented global acceptance and sponsorship. Thus, sport has become a phenomenon of influence on world peace, the economy, and the development of social relationships. Sports provide a multi-dimensional avenue for economic diversification. Sports training and the application of principles and theories of movement science optimize an individual's potential, enabling him to become the batter required by the sports team. Thus, apart from providing job opportunities, sports are used to generate money through hosting of completion, tourism, and other sports entrepreneurial activities. This is why almost every country in the world recognizes the developmental role of sports and invests significant financial resources in them.

Conclusion

Physical fitness, achieved through regular exercise and/or spontaneous physical activity, confers resilience by inducing positive psychological and physiological benefits, blunting stress reactivity, protecting against the potentially adverse behavioral and metabolic consequences of stressful events, and preventing many chronic diseases. Monument science is a vital tool for building human potential. The benefit to sustainable development and national property is not restrictive; therefore, any attempt at discussion on the topic cannot be exhaustive. Physical fitness, achieved through regular exercise and/or spontaneous physical activity, confers resilience by inducing positive psychological and physiological benefits, blunting stress reactivity, protecting

against the potentially adverse behavioral and metabolic consequences of stressful events, and preventing many chronic diseases. Implementing policies that encourage physical activity, such as building public sports facilities, parks, and promoting active transportation (walking, cycling), can support a more active and healthier population. Integrating physical education into the national curriculum ensures that children and adolescents develop physical literacy and understand the importance of maintaining an active lifestyle. Optimizing human potential and movement science for national prosperity involves a multi-faceted approach that encompasses health, education, social cohesion, economic development, and innovation.

Recommendations

Therefore, a nation seeking to enhance sustainable economic growth and national prosperity should prioritize the physical and psychological fitness of its leaders. Therefore, nations can build healthier, more productive, and more cohesive societies by fostering a culture of physical activity and leveraging advancements in movement science through the study and application of its elements.

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A REVIEW OF NOVEL APPROACHES TO ASSESSMENT IN EDUCATION: INNOVATIONS, IMPLEMENTATION AND IMPACT

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Abstract
Assessment in the field of education holds significant importance in monitoring the advancement of learners. The review centred on innovative assessment approaches within the educational sector. Criticisms have been raised regarding conventional assessment techniques, which many scholars have characterized as being excessively focused on content knowledge, offering limited feedback and growth opportunities, and lacking alignment with 21st-century competencies. Consequently, novel assessment methods have been introduced, lauded for their ability to cultivate critical thinking skills, enhance student engagement and motivation, promote fairness and inclusivity, and produce individuals capable of meeting the demands of the modern workforce. Project-based assessment strategy enables students to apply their acquired knowledge in authentic real-world situations. Digital portfolios afford learners the opportunity to demonstrate their achievements and work in a multimedia format, thus presenting a comprehensive overview of their learning journey. Game-based assessment entails the utilization of educational games and simulations to assess students' competencies, while multimodal assessment strategies involve employing diverse evaluation methods to gauge students' performance. Given the benefits associated with these assessment approaches, it is evident that their implementation is vital in ensuring that students acquire the requisite knowledge, skills, and proficiencies needed to excel in contemporary society.

Keywords: Innovative, assessment, project-based, multimodal, portfolio

Introduction

Assessment exercises influence and impact on the curriculum, pedagogical approaches, students' academic performance, and ultimately, the field of education as a whole. Throughout history, it has been a pivotal element of the educational framework, sparking intense discussions regarding its role, significance, and methods of implementation. The assessment process has a consequential effect on the teaching and learning dynamics by determining the expected knowledge and skills that students should acquire by the end of a study unit. Consequently, it shapes the teaching strategies employed by educators and the educational content delivered during instructional sessions. This process facilitates the monitoring and enhancement of the quality of both teaching practices and student learning outcomes. The impact of assessment is evident on both educators and learners across various educational environments, including formal, nonformal, informal, and lifelong learning contexts.

The evaluation of student learning is described as "the systematic gathering of data on student academic progress, utilizing available time, knowledge, expertise, and resources to guide decisions aimed at enhancing learning outcomes" (Zacharis, 2010). Through the assessment process, educators gain insights into students' academic achievements, the effectiveness of their performance on assigned tasks, and the efficiency of the educational materials, strategies, and

methodologies employed in the learning process (Zacharis, 2010).

Assessment encompasses formative, diagnostic, and summative approaches. Formative assessment involves the continuous collection of data on students' progress to inform adjustments in teaching strategies based on students' specific needs (Black & Wiliam, 1998). Diagnostic assessment focuses on evaluating students' prior knowledge and identifying misconceptions that hinder learning, aiming to address the root causes of their challenges (Dega, 2019) and is considered an integral part of formative assessment. Summative assessment evaluates students' learning outcomes at a specific point in time (e.g., the conclusion of a study unit or course) in comparison to predetermined objectives or standards (Siarova, Sternadel & Mašidlauskaitė, 2017).

Innovative assessment is the amalgamation of diverse methods and techniques, encompassing new, contemporary, and traditional approaches, with the aim of enhancing the quality of students' educational experience. It is defined as any evaluative process that seeks to enrich students' learning outcomes by employing various strategies to cater to the individual needs of learners more effectively (Vincent-Lancrin, Kärkkäinen, Pfotenhauer, Atkinson, Jacotin & Rimini, 2014). Additionally, it embraces a range of methodologies designed to meet the diverse expectations of learners (Boud & Associates, 2010).

Innovative assessment strategies in education have been a topic of growing interest in recent years. These strategies aim to move beyond traditional paper-and-pencil tests and provide more diverse, engaging, and meaningful ways to assess students' learning. Innovative assessment strategies in education play a crucial role in enhancing student learning outcomes and promoting academic success. Traditional forms of assessment, such as tests and quizzes, may not always accurately reflect students' knowledge and skills. Therefore, educators are constantly seeking new and innovative ways to assess students' understanding and mastery of content. By incorporating diverse assessment strategies into their teaching practices, teachers can better meet the needs of all learners and provide more effective feedback to support their growth and development.

Innovative assessment strategies are important in the field of education, as evidenced by recent research (Heitink, et al, 2016), which highlights their positive impact on students' academic performance and learning outcomes. These strategies include a range of techniques that have been used to improve learning in both formal and informal educational settings. Additionally, the implementation of creative evaluation techniques such as problem-based learning, blended learning, and gamification has shown improvements in student engagement, motivation, and critical thinking skills, which in turn has led to the development of a more effective learning environment. Furthermore, research has shown that training teachers in cutting-edge evaluation techniques is crucial to the effective implementation of these strategies and the promotion of academic performance (Tai et al, 2018).

This review focused on novel assessment approaches in the field of education. Through an analysis of the limitations of conventional assessment techniques and the importance of innovative assessment approaches, this study will enhance comprehension regarding the necessity of integrating these methods into assessments that align with the requirements of contemporary society.

Shortcomings of Traditional Assessment Methods in Education

The shortcomings of traditional assessment methods in education have been well-documented. While traditional

assessment such as standardized test and summative exams have been the predominant approach in many educational systems, they have been increasingly criticized for their limitations. Some of the shortcomings are discussed below:

Narrow focus on content knowledge: Traditional assessments often focus primarily on the memorisation and regurgitation of factual knowledge, rather than assessing the application of skills and the development of deeper understanding. This narrow focus has been criticised by Bould and Falchikov (2006), who argue that it fails to capture the full breadth of student learning.

Lack of alignment with 21st century skills: The skills and competencies required for success in the 21st-century workplace, such as critical thinking, problem-solving, and collaboration, are often not adequately assessed by traditional methods. A study by Ananiadou and Claro (2009) found that traditional assessments often fail to measure these essential skills, which are increasingly valued in the modern economy.

Limited feedback and opportunities for growth: Traditional assessments, particularly summative exams, typically provide limited or delayed feedback to students, which can hinder their ability to identify areas for improvement and engage in meaningful learning (William, 2011). This lack of timely and actionable feedback can undermine the potential for assessment to support student growth and development.

Negative impact on teaching and learning: The high-stakes nature of traditional assessments can lead to teaching and learning practices that prioritize 'teaching to the test' rather than fostering genuine understanding and the

development of critical skills. This can narrow the curriculum and discourage more engaging and innovative instructional approaches (Shepherd, 2000).

Issues of equity and accessibility: Traditional assessments can perpetuate inequities in education as they may not adequately accommodate the diverse learning needs and background of students. Study by Darling-Hammond (2014) has shown that traditional assessments can disadvantage students from marginalised communities, contributing to achievement gaps and limiting educational opportunities.

Lack of validity and reliability: Concerns have been raised about the validity and reliability of traditional assessment methods, particularly in their ability to accurately measure student learning and growth over time. A study by Brookhart (2013) found that traditional assessment can be influenced by factors unrelated to student learning, such as test anxiety and socioeconomic status. These limitations highlight the need for a shift towards more innovative, holistic and equitable assessment strategies that can better support student learning, development and preparation for demands of the 21st century.

Significance of Innovative Assessment Strategies
The significance of innovative assessment strategies in education cannot be overstated as they have the potential to transform the way we evaluate and support student learning. The following are the significance of innovative assessment strategies in education:

Promoting deeper learning and critical thinking: Innovative assessment such as performance-based and portfolio-based evaluation, have been shown to better capture students' ability to apply their

knowledge and skills to complex, real-world scenarios. A study by Darling-Hammond et al (2020) found that these assessment strategies can foster the development of deeper learning, problem-solving, and critical thinking skills, which are essential for the success of 21st century workforce.

Enhancing student engagement and motivation: Innovative assessment strategies often involve more engaging, interactive and personalised approaches, which can increase student motivation and investment in the learning process. Becker et al. (2021) suggests that the integration of digital technologies and competency-based assessments can enhance student engagement and make the assessment experience more meaningful and relevant to their lives.

Providing more comprehensive and accurate data: Traditional assessments, such as standardized tests often provide a limited snapshot of student learning. Innovative assessment strategies like formative assessments and data-driven learning analytics, can generate more nuanced, timely and actionable data to inform instructional decisions and support personalized learning (Briggs & Rowe, 2019).

Fostering equity and inclusivity: Innovative assessment approaches can help address issues of equity and accessibility in Education. By offering diverse modes of assessment, these strategies can better accommodate the diverse learning needs and strengths of students, including those with special needs or from marginalised backgrounds (Schlutz, 2021).

Supporting student growth and self-regulation: Innovative assessments such as portfolio-based and competency-based evaluations can empower students to take

an active role in their learning and development. This can foster self-reflection, goal-setting and self-regulation which are essential skills for lifelong learning (Black & William, 2018).

Overall, the significance of innovative assessment strategies lies in their ability to transform the educational landscape, moving away from narrow focus on standardized test scores and towards a more comprehensive, engaging and equitable evaluation of student learning and growth. As education continues to evolve, the adoption and implementation of these innovative approaches can have far-reaching implications for student success and the preparation of the next generation.

Types of Innovative Assessment Strategies

Project-Based Learning: The use of project-based assessment strategies is gaining popularity in education as a means of evaluating students' knowledge and skills in a more holistic and authentic manner. This approach to assessment requires students to apply what they have learned in a real-world context by completing a project or task that demonstrates their understanding and proficiency. One key aspect of project-based assessment is its focus on students' ability to think critically and creatively. By engaging students in hands-on projects that require problem-solving and decision-making skills, educators are able to assess their ability to apply knowledge in novel situations. This challenges students to demonstrate a deeper level of understanding than traditional assessment methods, such as multiple-choice tests.

Project-based assessment also allows students to showcase their talents and interests in a way that traditional assessments cannot. By giving students the freedom to choose topics or projects that align with their passions, educators can tap into their intrinsic motivation and foster a

sense of ownership and pride in their work. This can lead to greater engagement and outcomes in terms of learning and skill development.

Furthermore, project-based assessment encourages collaboration and teamwork among students. By working on group projects that require communication and cooperation, students learn valuable skills that are essential for success in the real world. Additionally, students have the opportunity to learn from each other's strengths and weaknesses, fostering a sense of community and support within the classroom.

In addition, project-based assessment can be tailored to meet the needs of diverse learners. Teachers can provide multiple options for projects that cater to different learning styles and preferences, allowing students to showcase their knowledge and skills in a way that best suits them. This individualized approach to assessment promotes inclusivity and equity in the classroom, ensuring that all students have the opportunity to succeed.

Another benefit of project-based assessment is that it promotes higher-order thinking skills, such as analysis, evaluation, and synthesis. By engaging students in complex tasks that require them to analyze information, make connections, and draw conclusions, educators can assess their ability to think critically and creatively. This type of assessment goes beyond memorization and regurgitation of facts, providing a more comprehensive picture of students' capabilities.

Moreover, project-based assessment can promote mastery learning by allowing students to revise and improve their work based on feedback from their peers and educators. This interactive process of refinement and reflection encourages students to strive for excellence and continuous improvement. By encouraging students to take ownership of their learning and development,

educators can foster a growth mindset and resilience in the face of challenges.

Additionally, project-based assessment can enhance students' motivation and engagement with learning. By connecting classroom concepts to real-world applications, students see the relevance and significance of their education, increasing their intrinsic motivation to learn. This can lead to higher levels of engagement and perseverance in the face of difficulties, as students are motivated by the meaningful and authentic nature of their projects.

Furthermore, project-based assessment can provide a more accurate and comprehensive evaluation of students' knowledge and skills. By assessing students' performance on a range of tasks and projects, educators are able to capture a more holistic picture of their abilities. This can help to identify students' strengths and areas for growth more effectively than traditional assessments, which may not provide a complete representation of students' capabilities.

In conclusion, project-based assessment is a valuable approach to evaluating students' knowledge and skills in a meaningful and authentic way. By engaging students in hands-on projects that challenge them to think critically, collaborate with others, and showcase their talents, educators can foster a deeper level of understanding and engagement in the classroom. This approach to assessment promotes higher-order thinking skills, individualized learning, and mastery development, making it a powerful tool for promoting student success and growth.

Digital-Portfolio Assessment Strategy: Another innovative assessment strategy is the use of digital portfolios. Digital portfolios allow students to showcase their work and accomplishments in a multimedia format, providing a more holistic view of their learning progress. By creating and curating their own portfolios,

students can reflect on their growth and development over time, while also receiving feedback from teachers and peers. Digital portfolios can be used as a formative assessment tool to track students' progress and identify areas for improvement, as well as a summative assessment tool to showcase their achievements and growth. Researchers have found that this strategy can foster students' self-reflection and ownership of their learning (Briggs and Rowe, 2019).

Digital portfolios assessment involves the use of technology to evaluate and showcase a student's work, progress, and achievements over a given period. This approach to assessment has gained popularity in recent years due to its ability to provide a more holistic view of a student's abilities and accomplishments compared to traditional methods such as exams or standardized tests.

To begin with, digital portfolios assessment typically involves students compiling a collection of their work samples, reflections, and artifacts in a digital format. These portfolios can include a wide range of items such as essays, projects, videos, presentations, and other evidence of learning. The students are often given some autonomy in selecting and organizing the contents of their portfolios, allowing them to showcase their strengths and interests in a more personalized way.

Once the digital portfolios are created, they are usually shared with teachers, peers, or other stakeholders for evaluation and feedback. This feedback can take various forms, such as written comments, rubric-based assessments, or audio/video recordings. The use of technology in this process allows for more timely and detailed feedback, as well as the ability to track changes and improvements over time.

One of the key benefits of digital portfolios assessment is its ability to provide a more comprehensive and authentic picture of a student's achievements and abilities. Unlike traditional assessments which focus on a single snapshot of a student's performance, digital portfolios allow for a more ongoing and multifaceted assessment that takes into account different learning styles and strengths. This can help to better capture a student's growth and progress, as well as provide a more meaningful record of their learning journey.

Furthermore, digital portfolios assessment promotes reflective practice and metacognition among students. By including elements such as self-assessments, reflections, and goal-setting, students are encouraged to think critically about their own learning processes and outcomes. This can help to foster a deeper understanding of the material, as well as promote a sense of ownership and agency over their own learning.

Another advantage of digital portfolios assessment is its potential for fostering collaboration and communication among students and teachers. By sharing and discussing their portfolios with others, students can receive feedback, engage in dialogue, and develop a sense of community around their learning. This can lead to a more interactive and social learning environment, as well as promote a sense of accountability and engagement among students.

However, digital portfolios assessment also presents some challenges and considerations that need to be addressed. For instance, ensuring the integrity and authenticity of the work included in the portfolios can be a concern, particularly in cases where students may be tempted to plagiarize or cheat. To mitigate this risk, teachers can implement strategies such as using plagiarism detection tools, setting clear guidelines and expectations, and conducting periodic check-ins with students.

Additionally, the design and implementation of digital portfolios assessment require careful planning and organization on the part of teachers. Creating a clear structure and framework for the portfolios, developing appropriate evaluation criteria, and providing adequate training and support for students are all essential components of a successful implementation. Without these elements in place, digital portfolios assessment runs the risk of becoming chaotic and ineffective.

In conclusion, digital portfolios assessment is a powerful tool for evaluating student learning and promoting growth and development. By leveraging technology to create and share portfolios of student work, educators can gain a more holistic and authentic understanding of their students' abilities and achievements. While there are challenges and considerations to be mindful of, the benefits of digital portfolios assessment in terms of promoting reflection, collaboration, and personalized learning experiences make it a valuable approach for educators to consider in their practice.

Peer Assessment Strategy: Peer-assessment is defined as "a reciprocal process in which students provide feedback reviews on their peers' work and receive feedback from peers on their own work" (Nicol, Thomson & Breslin, 2014: 102). It can take the form of formative or summative assessment, involving either quantitative assessment (which includes assigning grades) or qualitative assessment (which involves providing detailed verbal feedback). Various types of assignments such as written tasks, presentations, portfolios, oral presentations, scientific questions, among others, can be subject to peer-assessment (Topping, 2017). Peer assessment is a well-established strategy used in education to promote students' learning and development. This approach involves students evaluating and providing feedback to their peers on their work, projects, or assignments. Encouraging students to engage in peer-assessment can facilitate their comprehension of the operational aspects of assessment criteria, internalize the attributes of exemplary work, and enhance their learning process through the application of these criteria to the work of their peers, including essays, reports, presentations, performances, practical tasks, and other forms of evidence (Race, 2001).

Peer assessment works by assigning students the task of evaluating their classmates' work based on pre-defined criteria or rubrics. This process allows students to critically engage with their peers' work, providing valuable feedback that helps them improve their understanding of the subject matter. Peer assessment also encourages students to reflect on their own work, as they gain insight into their strengths and areas for improvement by evaluating others' work. By engaging in this process, students develop important skills such as critical thinking, communication, and self-assessment.

One of the key benefits of peer assessment is that it fosters active engagement and collaboration among students. By participating in peer assessment activities, students learn to work together, support each other, and engage in constructive dialogue about their work. This collaborative approach promotes a sense of community and shared responsibility for learning, as students learn to rely on each other for feedback and support. Peer assessment also promotes a growth mindset, as students are encouraged to view feedback as an opportunity for learning and improvement.

However, there are also challenges associated with implementing peer assessment strategies. One challenge is ensuring that students have the necessary skills to provide constructive feedback. Educators must provide clear guidelines

and training on how to give and receive feedback effectively, to ensure that the process is productive and beneficial for all students. Another challenge is managing issues related to bias and fairness, as students may be influenced by personal relationships or biases when evaluating their peers' work. Educators must establish clear criteria and processes for peer assessment to minimize the impact of bias and ensure a fair and equitable evaluation process.

To make peer assessment more effective, educators should follow best practices such as establishing clear expectations and criteria for evaluation, providing opportunities for practice and feedback, and promoting a supportive and inclusive learning environment. Educators should also monitor and assess the effectiveness of peer assessment activities, to identify areas for improvement and make adjustments as needed. By implementing these best practices, educators can maximize the benefits of peer assessment and promote students' learning and development.

In conclusion, peer assessment is a valuable strategy that promotes active engagement, collaboration, and critical thinking among students. By participating in peer assessment activities, students have the opportunity to reflect on their own work, develop important skills, and improve their understanding of the subject matter. While there are challenges associated with implementing peer assessment strategies, educators can address these challenges by following best practices and promoting a supportive learning environment. Overall, peer assessment is an effective tool for enhancing students' learning outcomes and preparing them for success in their academic and professional endeavour.

Game-Based assessment Strategy: This is an innovative assessment strategy that can engage students in a fun and interactive way. Game-based assessment involves using educational games and simulations to evaluate students' knowledge and skills. By incorporating game elements, such as competition, rewards, and feedback, educators can motivate students to actively participate in the assessment process and demonstrate their understanding. Game-based assessment can also provide a more authentic and engaging way for students to apply their knowledge and skills in a simulated environment, where they can make decisions and solve problems in a low-stakes setting.

The basic premise behind game-based assessment is that traditional assessment methods, such as tests and quizzes, may not always capture the full range of skills and knowledge that an individual possesses. By incorporating elements of play and competition into the assessment process, game-based assessment aims to provide a more holistic view of a person's abilities. One key aspect of game-based assessment is the use of feedback mechanisms within the game itself. As the player progresses through the game, they receive immediate feedback on their performance, allowing them to track their progress and identify areas where they may need to improve. This real-time feedback can help individuals to better understand their own strengths and weaknesses, and make more informed decisions about how to approach future challenges.

Another important feature of game-based assessment is the use of adaptive algorithms to tailor the difficulty level of the game to the individual player. This ensures that the assessment is both challenging and engaging for the player, while also providing a more accurate and reliable measure of their abilities. By adjusting the difficulty level in response to the player's performance, game-based assessment can accommodate a wide range of skill levels and learning styles.

In addition to providing a more engaging and interactive assessment experience, game-based assessment also offers the potential for greater customization and personalization. This can be especially beneficial for individuals with diverse learning needs or disabilities, as it allows for the creation of assessment experiences that are tailored to their specific strengths and weaknesses. One of the key advantages of game-based assessment is its ability to measure a wide range of skills and competencies, beyond just traditional academic subjects. For example, games can be designed to assess critical thinking, problem solving, teamwork, communication, and other important 21st century skills that are increasingly in demand in today's workforce.

Furthermore, game-based assessment can also provide valuable insights into how individuals approach and solve complex problems. By observing how a player navigates through the challenges presented in the game, assessors can gain a better understanding of their cognitive processes, decision-making strategies, and problem-solving abilities. This can help to identify patterns of thinking and behaviour that may not be readily apparent in more traditional assessment methods. Another benefit of game-based assessment is its potential to motivate and engage individuals in the assessment process. By framing the assessment as a game or competition, individuals may be more willing to invest time and effort in completing the assessment tasks, leading to more accurate and reliable results. This can be particularly beneficial for individuals who may struggle with traditional assessment methods or who have a negative attitude towards testing.

Overall, game-based assessment represents a novel and innovative approach to evaluating individuals' skills and knowledge. By using games as a medium for assessment, this strategy can provide a more engaging, interactive, and comprehensive evaluation of a person's abilities. With its emphasis on feedback, adaptability, customization, and motivation, game-based assessment has the potential to revolutionize the way that we assess and measure human potential in the 21st century.

Authentic Assessment Strategy: It is equally a method of evaluating students' knowledge, skills, and abilities in a more real-world context rather than through traditional standardized tests. This type of assessment focuses on students demonstrating their understanding and application of concepts in authentic and meaningful ways. Authentic assessment works by providing students with tasks or projects that closely mimic real-world scenarios, allowing them to showcase their knowledge and skills in a relevant context.

One key aspect of authentic assessment is that it requires students to actively engage in the learning process. Instead of simply regurgitating memorized information on a test, students are asked to apply their knowledge to solve problems, complete tasks, or create products that demonstrate their understanding. This active engagement helps students develop a deeper and more meaningful understanding of the material.

Another important component of authentic assessment is that it provides students with opportunities for self-reflection and self-assessment. By engaging in tasks that require critical thinking and problem-solving, students are able to reflect on their own learning process and assess their performance. This self-assessment allows students to identify areas where they excel and areas where they may need to improve, leading to a more personalized and meaningful learning experience.

Authentic assessment also helps students develop important skills that are

essential for success in the real world. By engaging in tasks that require collaboration, communication, creativity, and critical thinking, students are able to develop a wide range of skills that are highly valued by employers and society in general. This focus on skills development goes beyond simply testing students' knowledge and instead helps them develop the practical skills they will need in their future careers.

One of the strengths of authentic assessment is its ability to provide a more accurate and comprehensive measure of students' knowledge and abilities. Traditional standardized tests often focus on memorization and rote learning, which may not provide a complete picture of a student's abilities. Authentic assessment, on the other hand, allows students to demonstrate their understanding in a more holistic way, providing a more accurate reflection of their skills and abilities.

Another benefit of authentic assessment is that it can help promote equity and inclusivity in education. Traditional standardized tests often favour students who are good at memorizing facts or who have had access to test preparation resources. Authentic assessment, on the other hand, allows students to demonstrate their knowledge and skills in a variety of ways, giving all students an opportunity to shine regardless of their background or learning style. Authentic assessment also helps promote motivation and engagement in students. By engaging in tasks that are relevant and meaningful, students are more likely to be motivated to put in the effort to succeed. This motivation can lead to higher levels of engagement, deeper learning, and ultimately better outcomes for students.

One potential challenge of authentic assessment is the time and effort required to design and implement these types of assessments. Authentic assessment tasks often require more planning and preparation on the part of the teacher, as well as more time for students to complete the tasks. This can be a logistical challenge, especially in classes with large numbers of students or limited resources.

Despite these challenges, authentic assessment can be a valuable tool for educators looking to provide students with a more meaningful and relevant learning experience. By focusing on real-world tasks and skills development, authentic assessment can help students develop a deeper understanding of the material, build important skills for the future, and promote equity and inclusivity in education. Ultimately, authentic assessment works by providing students with opportunities to demonstrate their knowledge and abilities in a way that is relevant, engaging, and meaningful.

Multimodal Assessment Strategy: This has gained popularity in educational settings as a way to provide a more comprehensive and accurate picture of students' knowledge and skills. This approach to assessment recognizes that individuals have different strengths and weaknesses and that a single mode of assessment may not capture the full range of their abilities. Multimodal assessment involves using multiple methods of assessment, such as written exams, oral presentations, and hands-on tasks, to evaluate students' performance.

One way in which multimodal assessment works is by allowing educators to gather a more complete picture of students' abilities. For example, a student may struggle with written exams but excel in oral presentations. By using both modes of assessment, educators can better understand the student's strengths and weaknesses and provide more targeted support. This can lead to more accurate assessment of students' knowledge and skills and more effective teaching and learning. Multimodal assessment can also help to reduce bias in assessment.

Traditional assessment methods, such as written exams, may favour certain students over others based on factors like language proficiency or test-taking skills. By using multiple modes of assessment, educators can reduce the impact of these biases and provide a more equitable evaluation of students' abilities.

In addition to providing a more complete and unbiased assessment of students, multimodal assessment can also promote deeper learning. By engaging students in a variety of assessment tasks, educators can encourage them to think critically, solve problems, and apply their knowledge in different contexts. This can help students develop a more comprehensive understanding of the material and improve their overall learning outcomes.

Furthermore, multimodal assessment can foster a more inclusive learning environment. Students with diverse learning styles and abilities may struggle with traditional assessment methods but excel in other modes of assessment. By using a variety of assessment tasks, educators can accommodate a wider range of students' needs and provide a more inclusive learning experience for all students.

Another benefit of multimodal assessment is that it can provide more meaningful feedback to students. Traditional assessments often focus on assigning grades or scores, which may not provide students with detailed information about their strengths and areas for improvement. By using a variety of assessment methods, educators can provide more specific and personalized feedback to help students understand their progress and make improvements. Multimodal assessment can help students develop a broader range of skills. By engaging in different types of assessment tasks, students can practice communication, problem-solving, and critical thinking skills in addition to

demonstrating their knowledge of academic content. This can better prepare students for success in future academic and professional endeavours.

One of the key components of multimodal assessment is the use of rubrics to evaluate student performance. Rubrics provide clear criteria for assessing students' work and help ensure that assessment is consistent and fair. By using rubrics, educators can provide students with transparent expectations and help them understand how their work will be evaluated.

Overall, multimodal assessment is a valuable tool for educators to obtain a completer and more accurate picture of students' knowledge and skills. By using multiple modes of assessment, educators can reduce bias, promote deeper learning, create a more inclusive learning environment, provide meaningful feedback, and help students develop a broader range of skills. Rubrics play a crucial role in ensuring that assessment is consistent and fair, and that students understand the expectations for their work. Multimodal assessment has the potential to improve teaching and learning outcomes and enhance the educational experience for students.

Conclusion

In conclusion, the adoption of innovative assessment strategies in education is a crucial step in ensuring that students are equipped with the knowledge, skills and competencies necessary to thrive in the modern world. By moving beyond traditional, standardized testing and embracing more holistic, authentic and technology-enhanced assessment approaches, educators can create a learning environment that foster deeper understanding, critical thinking, and lifelong learning.

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INNOVATION AND ADVANCEMENT ON HUMAN HEALTH AND MOVEMENT SCIENCES: THE FUNCTION OF NATIONAL POLICY ON EDUCATION WITH EFFECTIVE EDUCATIONAL MANAGEMENT PLANNING AND POLICIES

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Abstract
This paper examined the necessity of innovations and advancements in human health and movement sciences, which can be achieved through a functional national policy on education and effective educational management planning and policies. The importance of human health in all aspects warrants careful consideration. In general, a school curriculum that focuses on education will contribute to the innovation and advancement of sustainable human health and movement sciences. The paper discussed the standard relatively of sustainable development goals and national policy on education, the educational management planning and policies: the instrument of achieving sustainable human health and movement sciences, and the and the necessity of applying creative curriculum to school subjects relating to human health and movement sciences. It also examined the juxtaposition of human health and movement sciences in developed and developing nations.

Introduction

It is impossible to overstate the importance of human health in all its manifestations. When human health is in excellent condition, we can perform and accomplish all activities. Nothing is possible without positive human health. All organs in the human body, both internally and externally, need regular care so as to remain healthy after rigorous work or illness. Your health is essential to your life, enabling you to move freely and allowing the entire body system to function effectively.

Constant improvement of human health and well-being is the final goal of any technological, social, and economic development. In 2004, Nigeria implemented the Revised National Health Policy to enhance access to primary, secondary, and tertiary healthcare services, with the aim of reducing under-five mortality, maternal mortality, HIV spread, and the burden of malaria and other major diseases (NPOPC and ICF International, 2014). The general improvement in health issues in Nigeria can be traced back to the promulgation of the National Health Policy and Strategy to Achieve Health for All Nigerians in 1988, which was the first comprehensive national health policy.

The improvement and changes in health policy show concurrent innovations, not only theoretically but in practical, concrete care for the ill. Most nations of the world, including Nigeria, have accepted the goal of health for all by the year 2000, also known as HFA/2000. The PHC strategy aims to attain this commendable objective. In Nigeria, there is no doubt that remarkable strides have been made to achieve the goal of HFA/2000 in recent years. However, despite the significant advancements in human health, there are still persistent health challenges facing people in this modern era.

The occurrences of these challenges pose a treat of damages to human parts of the body, and the worst of all is sudden death. There are cases of internal illness due to what we eat or drink that cause an inability to function well in internal organs or the stomach in general. Malfunction in the inner parts of the body will automatically cause defects to the outer parts. As the world progresses, we observe an increasing prevalence of various health issues that impact people's well-being and coexistence.

Furthermore, it was observed that numerous activities of the modern world bring about challenges to human health; this stipulates that more research still needs to be embarked upon so as to reach maturity in advancement like some developed countries of the world. For example, African countries continue to grapple with the challenge of malaria and other related fevers. While this is no longer a problem for some first-world nations, this is the major reason some less-previous countries all over the world are running to such countries as regards adequate care on health issues. If innovations and advancements are kept on in the field of human health, the entire populace on the whole globe will tackle any health challenge in any location of their continent.

The Need for Innovation and advancement on Human Health and Movement sciences.

Every sector within the economies of countries worldwide yearns for increased innovation and advancement. This is highly essential and imperative to meet the various challenges arising in the modern world. Meanwhile, factors such as climate change, biodiversity loss, and environmental degradation necessitate constant innovation and advancement in the fields of human health and mobility sciences. Therefore, there is a pressing

need to increase research funding to ensure its maturity.

As innovation is seen as invention plus adoption plus diffusion. Innovation can take the form of a novel idea, product, service, or care pathway that clearly outperforms current practices. It usually possesses usable and desirable qualities. On the other hand, advancement refers to enhancement, promotion, elevation to a higher rank or position, or progression to a higher stage of development. Additionally, advancement refers to the process of improvement through expansion, enlargement, or refinement, as well as the encouragement of progress or growth. With all the innovation and advancement embedded, it's clear that human health and movement sciences must strive to reach this level through research and meet the diverse needs of the populace.

Humanity has faced numerous health issues throughout its existence, such as the emergence of HIV/AIDS, malaria, COVID 19, and other diseases. All these instances of ill-health and many other epidemic acts on the human body had destroyed many lives and rendered some disabled both on internal organs and external parts of the body. Presently, the global scientists and educational bodies in sciences ought not to engage deep in any other things than innovation and advancement in various fields of human endeavour, especially human health in particular, to safeguard the human body from any health attack. This is because men are the center of all activities in the environment. The human body serves as the driving force behind all human accomplishments.

By definition, human health refers to the complete state of physical, social, and mental well-being and not merely the absence of illness, diseases, or infirmity. It is a vital source of water, food, or energy. It plays a crucial role in driving the economy of modern societies and fostering economic growth, contributing

significantly to total expenditure as a percentage of gross domestic product in most countries. To support movement sciences, a healthy society, broader actions to reduce social risks, and all human endeavors to reduce disparities in wealth, employment, equity, education, and housing, we need a robust health-care system.

Any economy views human health as one of the most important factors influencing economic development. It was observed that damage to human health is the most significant and immediate consequence of environmental degradation worldwide. Thereby, economic analysis of health impacts assumes importance in the context of market failures or distortions. Consequently, there is a need to understand and engage more in the innovation and advancement of human health and movement sciences. Innovation and advancement adoption processes and implementation of the systematic process have to be encouraged.

Due to the fact that human performance has always been the top issue, it prompted a large effort from many disciplines. Therefore, improving human health and body well-being should be the ultimate goal of any technological, social, and economic development. However, despite the abundance and increasing need for innovations in health care, the theoretical scientific research in this area is still very limited. At the same time, more effort must be put in place as regards the call for research on health care innovations.

Furthermore, human movement science requires innovations and advancements in relation to human health. According to Kristin Greenwood, clinical professor chair of the of the department of physical therapy, movement, and rehabilitation sciences at North Eastern University, movement sciences is a broad look at the interacting fields relating to how we understand and optimize the function of the human body across the spectrum from sport to work to health and safety.

Human movement science is a field that studies the mechanics, physiology, and control of human movement. It combines elements from biomechanics, physiology, psychology, and motor control to understand how the human body moves and functions. (Koen Lemmink, 2021). In relation to the definition above, human movement is the scientific study of how the human body works, with a particular focus on improving the workings of the human body for sport, fitness, and well-being. It is the study of how human beings move around, perform, and exercise, especially in sport.

Yuanxin (Amy) Yang Alcocer (2023) explained human movement as the ability of the human body to change position using various muscles and joints. The psychology of human movement and the rehabilitation science as fields of study focus on applying knowledge about mechanisms and methods of restoring and maximizing human functional capacity and well-being across the lifespan. Additionally, the motor control system generates movements, and the sensory system interprets these movements, both internally and externally. However, the major goal of human movement science is its dedication to enhancing the human movement experience by advancing and restoring physical function for all people. Human movement science therefore calls on the natural and behavioural sciences to explore the connections between physical activity, the human body, and healthy living.

When it comes to academic pursuits and other human endeavors, the human body plays a crucial role in facilitating movement and achieving daily goals. Inability of good health and proper movement due to one sickness or the other will generally affect or pose consequences on the individuals, the family, the

organisations, and the nations at large or globally. When individuals are active and in good health, they can transform economic activities and generate maximum gross domestic product, or national income, which sustains national growth and development.

It is observed that review for innovations and advancement is always embarked upon by the national health policy (NHP) in Nigeria, which provides the compass for the country's health system. The records indicate that in 2016, the National Health Act (2014) established a framework for the regulation, development, and management of the health system, and also established standards for the provision of health services in the federation (NSHDP 11 2018).

The Standard Relativity of sustainable Development Goals and National Policy on Education toward Human Health.

Examining the sustainable development goals and national education policy in relation to human health in general is necessary to achieve maturity, innovation, and advancement in this field. In the clarity of the correlation of both sustainable development goals and the national policy on education toward human health, the two do not fail to inculcate the relevant necessity of human health in their agenda. People perceive sustainable development as a process that alters the interplay between social, economic, and natural systems. It emerged as a response to a growing concern about human society's impact on the natural environment.

According to the International Institute for Sustainable Development (IISD), sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland Report). However, due to the limited scope of the Millennium Development Goals (MDGs) and their inability to achieve the targeted developmental objectives at their expiry in 2015, the Sustainable Development Goals (SDGs) were developed, with implementation commencing in 2016. In 2005, Age identified several objectives that sustainable national development aims to achieve, such as boosting capital income and employment, enhancing human welfare, meeting basic needs, and safeguarding the environment.

Examining the history of the sustainable development goals and their relevance to human health innovation reveals that global planning and national policies consistently prioritize the health of the populace. In September 2015, all 193 member states of the United Nations adopted a plan for achieving a better future for all—laying out a part over the next 15 years to end extreme poverty, fight inequality and injustice, and protect our planet. At the heart of "Agenda 2030" are 17 Sustainable Development Goals (SDGs) and 169 related targets that address the most important economic, social, environmental, and governance challenges of our time. The SDGs clearly define the world we want, applying to all nations, leaving no one behind, and having an agreement on where the world needs to go.

Furthermore, the majority of the Sustainable Development Goals (SDGs) not only outline the desired outcomes but also outline the methods for achieving them. The SDGs are expected to complete the job that the MDGs started and to leave no one behind. The goals are broad-based and independent. The 17 sustainable development goals each have a list of targets that are measured with indicators.

The Sustainable Development Goals are:
1. No poverty
2. Zero hunger
3. Good health and well-being

4. Quality Education
5. Gender equality
6. Clean water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation, and Infrastructure
10. Reducing Inequality
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace, Justice, and Strong Institutions
17. Partnerships for the Goals.

Having considered the above goals, we can see that they encompass the right innovations, of which good human health is inclusive. Working toward these goals leads to advancement in all areas where sustainable development is gaining momentum.

More so, on the aspect of national policy on education, the five objectives are itemized upon which the Nigerian education policy is based. These are the building blocks of a free and democratic society, a just and egalitarian society, a united, strong, and self-reliant nation, a great and dynamic economy, and a land of bright and full opportunities for all citizens. The policy also emphasized the value that must be inculcated and which education should be directed to. The values encompass respect for the worth and dignity of individuals, faith in human ability to make rational decisions, moral and spiritual values in interpersonal and human relations, and the promotion of emotional, physical, and psychological health for all children.

Education and any progress in the health sector can link to the reality of innovations and advancements in human health and movement sciences. Education in literacy has a significant impact on people's health. Maintenance of personal health, hygiene, and the application of prescribed drugs by medical doctors are all easier for the literate than for the illiterate. There is no doubt that the sustainable development goals and the national policy on education will aid in the advancement of human health; both are working reciprocally towards the positive achievement of better human health.

More significantly, innovations in human health will enhance sustainable development in all aspects of the country, just as education plays a crucial role in sustainable development. Good health also fosters progress and a conducive economy. We affirm that education plays a major role in enabling other areas across the SDGs, such as growth, gender equality, and many others. This implies that progress in other areas can influence education in various ways and drive progress towards sustainable development, which includes human health and movement sciences.

Good and quality education is an essential tool for achieving a more sustainable world. This was emphasized at the UN World Summit in Johannesburg in 2022, where the reorientation of current education systems was outlined as key to sustainable development. Also, education serves as an important means of implementation that cuts across all of the SDGs and will support the overall achievement of the post-2015 development agenda, for which education is recognised as having one of the highest long-term returns on investment of all development goals. Through this, education plays a powerful role in fostering innovation in the fields of human health and movement sciences.

Furthermore, UN flagship reports identify links between education and all the other SDGs, with the notable exception of SDG 14 on oceans. For most of the SDGs, there is a link between them and education and vice versa, because it is

widely agreed that education is the most effective means that society possesses for confronting the challenges of the future. Thus, education helps shape the world tomorrow. The United Nations report includes several reports on the connections between education and the Sustainable Development Goals (SDGs), with a particular focus on human health as a potential area for innovation.

SDG: Ensure healthy lives and promote well-being for everyone at all ages. - Education has a significant impact on health and well-being, reflecting a common understanding that education can significantly improve people's health. When innovation occurs, educated people are better informed about diseases, take preventive measures, recognize signs of illness early, and tend to use health care services more often (UNESCO, 2013/14; WHO, 2013; UNFPA, 2014). Basic education supports universal health coverage by enabling healthy lifestyle choices and informing healthcare decisions (WHO, 2013). Better education for women tends to result in better health outcomes for them and for their children and accelerates their countries' transition to stable population growth (World Bank, 2007; UNESCO, 2013/14; UNDP, 2011, 2013; UNFPA, 2014).

In addition, more educated youth are more willing to control family size and invest in the health and well-being of their offspring. The impact is particularly strong for women. (World Bank, 2007). Education, however, is considered a way to protect young people from engaging in risky behaviors (World Bank, 2007).

SDG-End hunger, achieve food security, improve nutrition, and promote sustainable agriculture: a report from the FAO provides some detailed references to the connections between education, agriculture, and food systems. Generally, education is an essential element of efforts to reduce malnutrition and hunger. (UNESCO, 2013/14; FAO 2014). The FAO report stresses the importance of basic education for improving agriculture productivity and farm incomes and highlights that agricultural education and training raises agricultural productivity by developing producers' capacities, fostering the development of people's skills and competencies for innovation, and generating human capital for research and advisory services. FAO (2014) also highlights the necessity for farmers to pursue higher education levels to access new ICT-based information sources, technical guidance, and adapt to emerging market opportunities and environmental shifts. The World Bank points out that as education levels for rural youth improve, they can enter a border range of non-agricultural occupations (World Bank, 2007).

SDG-Ensure the availability and sustainable management of water and sanitation for everyone. - Education affects the availability and sustainable management of water and sanitation; this is a health issue that needs proper consideration. Water is essential for a healthy life. Therefore, people view education and information programs as conducive to promoting integrated water resource management. Water users require a cultural shift through education and economic incentives. (UNEP, 2012). Possible policy levels to improve access to conserve drinking water and reduce water stress include investing in education to raise awareness of the need to conserve drinking water and the link between unsafe drinking water and diseases (UNEP, 2012). NEP, 2012). Many children go to school in conditions that are not conducive to learning—lacking portable water, handwashing facilities, and safe, clean toilets (UNESCO, 2015). Access to clean water and improved sanitation is also especially important for girls' education; it influences their education decisions and generates health gains, time savings, and privacy (UNDP, 2011; UNESCO, 2015).

The SDGs agenda aligns with the national education policy, promoting advancements in human health and ensuring the sustainability of movement sciences from generation to generation.

Educational Management Planning and Policies: The Instrument of Achieving Sustainable Human Health and Movement Sciences

People worldwide view education as the foundation and catalyst for nation-building. Education plays a pivotal role in all aspects of development across nations. Education fosters human development from birth to death. It is the greatest investment that a nation can make for quick development of its economic, political, sociological, and human resources. It dictates the likely pattern of the other sectors while at the same time providing an insight into the nation's future. According to UNESCO (2000), education refers to the total process of developing human ability and behavior. Education is a structured and ongoing process that aims to convey a blend of knowledge, skills, and comprehension essential for all aspects of life.

Educational management, therefore, is the process of planning, developing policies, organising, directing, and controlling the activities of an institution by utilising human and material resources so as to effectively and efficiently accomplish a goal. The management of education through these processes leads to development, and when properly monitored through research, it fosters innovation and advancement in a sustainable manner. Change is a natural process in life; the idea of innovation revolves around the principle of change. Innovation literarily refers to making changes. However, human health innovation refers to making changes or introducing new things in the school curriculum that pertain to sciences and

health in order to meet the demands of a changing society as well as societal needs.

If a country's educational management system is to foster innovation and advancement, it must consistently prioritize curriculum innovation, as the ultimate goal of education is to transmit a dynamic culture, according to Ofoefuna (2005). Therefore, innovation in human health will enhance existing knowledge and pass it on to the younger generation, equipping them to tackle today's and tomorrow's challenges. From the elementary level to the higher level of education, the innovative contents of the curriculum must align with health policy. All health and hygiene schools and public health courses apply to this.

Educational management has a great tendency to achieve sustainable human health and movement sciences on the fact that it involves taking decisions for future action with the view to achieve predetermined objectives through optimum use of scarce resources. Observing the needs and changes in society will influence practical efforts, leading to the creation of relevant curricula and the formulation of essential policies that will yield positive results in the fields of human health and movement sciences. Through this approach, the population will gain comprehensive knowledge that can contribute to advancement in their respective fields. Generations to come will be able to transfer this innovation and advancement, leading to the resolution of societal problems.

Effective management, efficient planning, and policymaking through education with continual function ability and its implementation have a long way to go in the achievement of sustainable human health and movement science. Given that people must maintain excellent health and move frequently to perform daily activities, education management can contribute to sustainable development in

the areas of human health and movement sciences.

The ability of the body to function well:

- Social change: Society expects the education system to produce human resources with specialised knowledge, attitudes, work ethics and values, social morals, political values, expertise, and skills. The education industry is under pressure to adapt its curriculum more effectively and efficiently to the life and needs of the evolving society, in order to sustain and enhance this development.

Creating a congenial environment at the institutional level is crucial for achieving the aims and objectives of the educational system and the country as a whole. This requires knowledge of relevant management theories, principles, concepts, techniques, skills, and strategies, and their application to educational systems across various sectors, ensuring their effective and efficient functions and outputs.

- Need to make our system of education more proactive rather than reactive by applying principles and techniques of management science.

More so, managerial imperatives for planning educational programme for sustaining human health and movement sciences when the:

- The quality of the human and biospheric future depends on our collective capacity and ability to learn and change.
- The process cannot be sustainable and secure unless it prioritizes relevant learning among all stakeholders.
- Sustainable development can be promoted through policy instruments, through developing informed engagement agencies, and through empowerment among all affected stakeholders. Further,

education can build lasting change—that is, sustainable change—because it is owned by the learners, educates the general populace, and reaches hearts and minds for actions on human endeavours.

Necessity of Applying Creative Curriculum on Schools Subjects Relating to Human Health and Movement Sciences.

In the general planning of the educational programme, each of the academic field through the designation of the school curriculum has subject related to them at elementary, secondary and higher levels of education. Specifically, health is embedded in science field. It is selected in the elementary level as foundation, background of science subject known as Elementary science or health habit. Moving to Junior Secondary Schools, the subject is called Integrated Science, now known as Basic science comprises subject like Basic science, Basic Technology and computer science. All these are upgraded to the following subjects in the senior secondary schools; Physics, Chemistry, Biology, Geography, e. t. c.

All the subject analysis relating to sciences above are splited to different courses or disciplines of human endeavours today in the higher institutions of learning dealing with acquiring specialised knowledge, skills to solve problems on health issues in the existence of people. However, the foundation knowledge of the science can be created and transferable through the school subjects relating to science at elementary level. Thereby graduating to secondary school education and finally leading to where different field of human health and movement sciences will be established and maintained with all necessary skills.

Base on the nature of knowledge and curriculum content, the object of general education is to the fulfilment of human life, through the enlargement and

deepening of meaning, the modern curriculum should be designed so as to counteract destructive scepticism, personalization and fragmentation, overabundance and transience. In order to bring about innovation and advancement in human health and movement sciences, there should be proper consideration for designing creative curriculum for school subjects relating to human health and movement sciences.

To translate a curriculum plan into teaching-learning activities in schools calls for dexterity and creativity on the part of the teacher, depending on the selection and organization of the learning experiences, that is, the curriculum contents. Learning experiences embedded in curriculum may cover a broad spectrum of opportunities designed to facilitate the attainment curriculum aims, goals and objectives.

Also, changes in the modern days, happenings, experiences in multi facet way have to be inculcated in the curriculum creative way. Such experiences could emerge from direct interactions with human teacher, fellow learner and other significant individuals and groups around the teaching –learning environment.

The creativity in curriculum designing must not ignore criteria for selecting learning experiences, curriculum integration, method of delivery, renewal and evaluation. It must produce to be meaningful, complementary, cumulative and reinforcing. Need for relating various areas of human health to each other, exemplified by fused, correlated or broad-fields with focus on life situations or issues of contemporary concerns and in line with environmental education. Such creativity in school curriculum relating to human health and movement sciences must draw out the fundamental ideas underlying human survival in the society and sustainable development with the need for present generation to meet their needs without threatening the chances of others

coming to equally meet their own needs as well.

Juxtaposition on Human Health and Movement Sciences of Developed and Developing Nations

Countries in the whole world are categorised into three based on their economic development and advancement to handle modern-day problems or contemporary issues. The first grade comprises the world's most advanced or developed nations. They primarily adopt a capitalist approach to the production process and industrialization in the broader economy. All aspects of human life recognise them as leading countries in the world rankings. The second category consists of second-world nations, also known as advancing or developing countries. They are socialist countries, where the government controls the factors of production in the overall economy.

The third-world nations fall into this category. They are known for their underdevelopment in the general economy and, in certain cases, rely solely on agricultural activities using crude implements. They exhibit poverty and economic backwardness across all sectors.

In the global village presently, the innovations and advancements of some countries single them out of others, and their greater height assists them to control contemporary challenges, which make them be among the leading group in the entire world. The importance placed on human health and body movement for daily activities necessitates a comparison between developed and developing countries in terms of population health management and movement sciences related to human body structure.

What developments have been designed and originated in these areas that pertain to human health and movement? These areas are strategically handled to preserve the good health of the people?

Observations through research revealed that the developed countries plan big and handle human health issues with all carefulness. They have made significant progress in addressing health challenges among their population. For instance, they have provided vaccines to combat HIV/AIDS, COVID-19, and numerous other diseases. Additionally, research has solidified the structure of the human skeleton, cell, tissues, and e. t. c., paving the way for progress and health sustainability.

Specialists in medicine and sports are well prepared with skills in schools to handle any problem that may arise. In fact, many individuals from various countries seek care in developed nations for their health concerns. They seek standard care for health issues, despite the high costs associated with it. Modern equipment in those countries manages human health, facilitating the work of health specialists across various fields. Some of these nations are renowned for their significant contributions to health. Usually, they respond to any serious pandemic or epidemic disease occurrence in the global village.

The evidence from developing nations reveals a stark disparity in their approaches to handling human health issues. Some of the advancing nations still lack the maturity to effectively address global health challenges. They rely on the advanced nations for some health issues. Even though they are capable of managing certain aspects, they still require support from developed nations. Their efforts on human health are coming up but yet to advance to the standard of the capitalist nations. However, these developing nations are prone to opportunities that can bring them to advancement through what they are learning from existing developed countries. Research initiatives will contribute to their advancement, and all levels of government are prepared to allocate sufficient funds for health-related issues.

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MEDICAL PRACTITIONERS' PERCEPTION OF CULTURAL AND LANGUAGE BARRIERS TO PATIENT-CENTRED INTERACTION IN A TERTIARY HEALTH INSTITUTION IN EKITI STATE

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Abstract

Interaction is central to medical practitioner-patient consultations that go on in hospitals. Patients visit hospitals with the hope of getting positive health outcomes and a lot will be done in order to achieve this. The interaction engagements that ensue between the doctor and the patient would go a long way to influence the quality of healthcare delivery to the patient. This is because good interaction will assist the patient to make certain informed decisions that can help improve the patient's health. In recent years, emphasis is laid on communicating with patients rather than communicating to them. Good communication that is void of barrier can educate patients about their illness, its treatment and how it can affect their lives. However, as important as communication/interaction is in hospital engagements, there are certain barriers that hinder its effectiveness. These barriers include: culture, language, gender, race and religion among others. Various health institutions serve diverse populations all over the world. Nevertheless, Nigeria communities are more culturally and linguistically divers than any western country. Taking care of these diversities is paramount to achieving efficiency in health care delivery. How medical practitioners perceive these diversities would go a long way to influence how they will manage them for good and proper health care delivery. This paper therefore investigated how medical practitioners perceive cultural and language barriers to medical practitioner-patient interaction during hospital engagements. Two research questions were raised and three null hypotheses were formulated. The population consisted of all medical practitioners in Federal Medical Teaching Hospital, Ido-Ekiti. A sample of 120 respondents was selected through random sampling. The instrument for data collection was a questionnaire titled "Questionnaire on Medical Practitioners' Perception of Cultural and Language Barriers to Patient-Centred Interaction" designed by the researchers. Data collected were analysed using descriptive and inferential statistics. Results obtained showed that medical practitioners perceived language and cultural barriers to be jeopardising interaction with patients during hospital engagement. Gender was found not to significantly influence the perception of medical practitioners. There was no significant difference in the perception of doctors and nurses and years of experience did not significantly influence medical practitioners' perception. Based on the findings, it was recommended among others that medical practitioners be exposed to more techniques for communicating with patients of various linguistic backgrounds and there is the need to foster synergy between medical practitioners and linguists in order to find better means of overcoming language and cultural barriers to interaction with patients in hospitals.

Key Words: Practitioner-Patient, hospitals, engagements, Language, Barriers.

Introduction

The need for patient-centred interaction is born out of the necessity to build trusting relationships with patients in order to achieve improved health outcome among the patients. Physicians employ some interaction techniques to secure their patients' confidence and trust. Patients visit hospitals to seek medical care and they come with a lot of concerns, anxieties

and fear. It has been suggested that healthcare providers and professionals should fully engage patients and their families in the care process in meaningful ways (Kwame and Petrucka, 2021). There is need for good communication/ interaction between the physician and the patient to help the patient obtain information that could lead to appropriate health decisions. Ability to understand healthcare information on the part of the patient will help him/her participate in arriving at meaningful decisions about his/her own healthcare. According to the Canadian Medical Association (2019), patients can be their own best risk managers if they have information on the reasons for a proposal investigation or treatment as well as the risks, benefits and alternatives which may include no treatment.

The interaction between the patient and the medical practitioner could go a long way to influence the quality of healthcare delivery to the patient. The interaction is majorly conveyed by one form of communication or the other. Communication is more than what is expressed through speech. A lot of communication can take place through body language. Michaud, Davis and Gaines (2007) submitted that good communication with patients leads to the following:

(1) Making patients more active in their healthcare more satisfied and have better outcomes.
(2) Help physicians facilitate patient involvement in healthcare, and
(3) Make what seem like simple communication and skill-building strategies charge the capacity of patients to self-manage disease and advocate for quality care.

It is therefore evident from their submission that understanding patient-doctor communication is vital to a successful relationship that could lead to better health decisions.

As important as good interaction/communication may be, it is not devoid of certain variables that are capable of jeopardizing its effectiveness and such variables that can serve as barriers include both cultural and language barriers. This is what Berg (2016) calls linguo-cultural barriers. Patients come from varying background and possess different characteristics.

Nigeria is a multilingual and multicultural nation where many ethnic groups migrate and live together in the different parts of the country. Apart from the three major languages of Yoruba, Hausa and Igbo, there are other minority languages that exist in their numbers. In addition to this there are many Nigerians who do not speak English language which is the Lingua Franca of the country. There are a vast majority who only speak the indigenous languages. Patients with limited English language proficiency seem to face significant language barriers that keep them from fully participating in their care and in patient-medical practitioner communication. According to Sulaiman (2019), language is at the heart of communication and any exchange of information. When there is a breakdown, vital information that both patients and medical practitioners rely on is not captured, not delivered, not accurate, delayed or just not correct. This in turn leads to errors, mismanagement and injury. Language barriers keep these patients from both engaging in seamless conversations with their doctors and interacting with the healthcare industry at large.

Coupled with the linguistic diversity is the cultural diversity. Different cultures believe and practice different things. For example, in some culture, a woman is not expected to discuss with a man; when a woman patient therefore appears before a male physician, it could constitute a barrier to their communication. Doughes, Souza and Yudin (2017) examined barriers to full

disclosure and open communication between patients and their health care provider during gynaecology appointments and found that male gender is the greatest barrier to full disclosure of information by the female patient.

Furthermore, different culture perceived different ailments/diseases differently. Some diseases are seen as taboos in certain culture. This kind of belief could pose a great challenge to the kind of interaction that will ensue if a patient with such cultural belief appears before a physician for consultation. Paternotte, et al (2015) asserted that one of the challenging areas of healthcare communication is communication with culturally diverse patients. The cultural orientation of individuals impacts their communication behaviour during social interaction (Kwame, 2023)

Cultural and language barriers keep patients from building strong relationships that foster positive experience. According to Patient Engagement Hit (2019), cultural and language barriers get in the way of a positive patient experience in urban and multicultural community health centres. Shamsi, Almutairi, Mashrafi and Kalbani (2020) submitted that language barriers have a major impact on the cost and quality of healthcare and regardless of language barriers, healthcare providers are required to deliver high-quality healthcare that adheres to the principles of human rights and equity to all their patients.

Perception has to do with how people select, organise, process and interpret information received. Perception makes individuals to interpret information differently. Certain factors are believed to influence perception among which are:
i.   Personal Experiences,
ii.   Age, and
iii. Gender

Personal experiences may influence the way an individual will perceive something. What individuals have experienced over the years especially in professional practice may impact on such individual's perception. As one gets older, one's perception about people and things generally change over time based on the fact that what is important to us at a particular age may not be important to us at another age and vice versa. Gender has been found to influence perception. Male and female may perceive things differently.

Weintraub, Thomas-Maddox and Byrnes (2015) opined that perception is key to how we assign meaning in our interactions with others and thus has a significant impact on how we communicate and how we understand the communication of others. They further categorised the perception process into three, namely: selection, organisation and interpretation. Selection is how we focus attention on a particular thing and ignore other elements within the environment. The second phase, organisation is to focus attention on particular aspect/ characteristic of what we have selected. Interpretation is to attach meaning to what has been selected and organised. Perception, especially when it is negative can lead to distortions and biases that can cause inaccurate judgement and interpretation.

This study is hinged on the cognitive theory which was brought to prominence by Donald Broadbent's book *Perception and Communication* in 1958. Cognitive theory is based on cognitive psychology which explores the internal mental processes of human beings. It emphasizes complex, abstract intellectual processes such as thinking, problem solving, perception and so on (Gagne, 1980). Since then, the dominant paradigm in the area has been the information processing model of cognition that Broadbent proposed. The focus is on the way of thinking and reasoning about mental processes in the brain.

Cognitive psychology was coined by Neisser (1967) in which people were characterized as dynamic information processing systems whose mental operations might be described in computational terms. Neisser emphasized it is a "point of view" that postulates the mind as having a certain conceptual structure. It therefore presupposes that responses are affected by the point of view of the receiver of the stimulus as well as by his or her environment. Advocates of cognitive theory seek information about ways individuals think or engage in cognitive activities while solving problems.

Ekiti State is located in southwest, Nigeria and it is majorly an agrarian state. Many ethnic nationalities migrate to the State for farming purposes. Many of these farmers are not well educated and cannot communicate in English language. Apart from these groups of people, quite a number of the indigenes don't speak in English language. These categories of people have various health challenges that make them attend hospitals. The Federal Medical Teaching Hospital located at Ido Ekiti is attended by people of varying background from across the state and beyond. Medical practitioners in the hospital have to communicate with these patients from various linguistic and cultural backgrounds. It is therefore pertinent to investigate how they perceive the language and cultural barriers to effective communication during hospital engagements. Perception is vital to how we assign meaning in our interaction with others and thus, it has a significant impact on how we communicate and how we understand the communication of others (Weintraub, Thomas-Maddox, and Byrnes 2015).

Statement of the Problem

The inability of healthcare providers to communicate with patients effectively constitutes a major barrier that can lead to emotional stress, dissatisfaction and uncertainty on the part of the patient. Often, patients hold different opinions that are culturally biased about the origin of disease that are not in tandem with the knowledge of the health care providers' about the origin of such diseases. Language and cultural barriers could compromise the quality of healthcare provided and the level of access patients can have to good quality healthcare delivery if not attended to by relevant stakeholders. There is the need therefore to explore how medical practitioners perceive how these barriers (language and cultural barriers) affect the level of interaction between them and their patients in their bid to deliver quality healthcare to the patients. Patients see language barriers as significant hurdles to managing their health. Though the issue of language and cultural barriers to quality healthcare delivery are attested to all over the world, little is being done in the area of research on the issues.

Objectives of the Study

The study was carried out in order to:

(1) find out how medical practitioners perceive language barriers to patient-centred interaction engagement in hospitals;
(2) investigate how medical practitioners perceive cultural barriers to effective patient-centred interaction during consultations;
(3) examine whether there will be significant difference in the perception of male and female medical practitioners;
(4) examine whether there will be significant difference in the perception of medical doctors and nurses;
(5) investigate whether the years of experience of the medical practitioners would significantly influence their perception.

Research Questions

The following Research Questions were raised to guide the study:

(1) How do medical practitioners perceive language barriers to patient-centred interaction?

(2) How do medical practitioners perceive cultural barriers to patient-centred interaction?

Hypotheses

Three hypotheses were also formulated for the study:

1. There is no significant difference in the perception of male and female medical practitioners on language and cultural barriers to patient-centred interaction.
2. There is no significant difference in the perception of medical doctors and nurses about language and cultural barriers to patient-centred interaction.
3. Years of experience of the medical practitioners will not significantly influence their perception of language and cultural barriers to patient-centred interaction.

Methodology

The study adopted the descriptive research of the survey type in that it used responses from a chosen sample to describe an existing phenomenon without any manipulation of variables. The design specifically allowed respondents to give their perception of language and cultural barriers to patient-medical practitioners' interaction during hospital engagements. The population for the study consisted of all doctors and nurses at the Federal Medical Teaching Hospital, Ido Ekiti, Ekiti State. They include male and female with different qualifications and years of experience. The sample for the study was One Hundred and Twenty respondents randomly selected from the entire population.

The instrument used for data collection was a questionnaire designed by the researchers and validated to ensure its face and content validity by giving it to experts in the field of Language, Language Education and Test, Measurement and Evaluation. Their corrections and suggestions were affected before the production of the final copy that was used. The reliability was ascertained by administering twenty copies of the questionnaire on respondents outside the sampled area twice within interval of two weeks and the two responses were correlated using Person Product Moment Correlation and a coefficient of 7.4 was obtained which was adjudged reliable for the study. Copies of the instrument were administered with the help of research assistants after obtaining necessary permission. The copies administered were collected and the responses were coded and analysed and the results are presented as follows:

Results
Research Question 1

How do medical practitioners perceive language barriers to patient-centred interaction?

Table 1: Medical Practitioners' Perception of Language Barriers to Patient-Centred Interaction

S/N	ITEMS	SA	A	D	SD	MEAN
1	Inability to communicate with patients in the language they understand can lead to dissatisfaction on the part of the patient.	62 51.7%	53 44.2%	4 3.3%	1 0.8%	3.47
2	Language barriers can interfere with work efficiency.	43 35.8%	65 54.2%	9 7.5%	3 2.5%	3.23
3	Using interpreter between patient and medical practitioner is not as efficient as being able to communicate in the same language by the two.	55 45.8%	58 48.3%	4 3.3%	3 2.5%	3.37
4	The importance of language in healthcare communication is vital.	73 60.8%	41 34.2%	3 2.5%	3 2.5%	3.53
5	Inability to communicate with medical practitioner effectively adds to patients' emotional stress.	45 37.5%	62 51.7%	11 9.2%	2 1.7%	3.25
6	Miscommunication due to language barrier can lead to life-threatening misdiagnosis.	33 27.5%	48 40.0%	35 29.2%	4 3.3%	2.92
7	Miscommunication due to language barrier can lead to mismanagement of diseases.	28 23.3%	58 48.3%	30 25.0%	4 3.3%	2.92
8	Medical terms are usually difficult to explain when patients cannot communicate in English Language.	31 25.8%	61 50.8%	27 22.5%	1 0.8%	3.02
9	Patients that do not speak the same language with medical practitioners may be hesitant and fearful when interacting with the doctor.	24 20.0%	67 55.8%	27 22.5%	2 1.7%	2.94
10	Interpreters modify information provided by the overall medical practitioner in order to conceal poor diagnosis.	20 16.7%	74 61.7%	22 18.3%	4 3.3%	2.92
11	The use of non-equivalent interpretation cannot be avoided when using an interpreter.	31 25.8%	82 68.3%	6 5.0%	1 0.8%	3.19
12	Miscommunication impacts the development of trust and may impair health outcomes.	39 32.5%	70 58.3%	8 6.7%	3 2.5%	3.21

Table 1 presents the medical practitioners' perception about language barriers to patient-centred interaction. The result shows a wide disparity between the Agree and Disagree responses and all the items had mean scores above the cut-off point of 2.50. This implies that medical practitioners perceived language barriers to patient-centred interaction to exist,

Research Question 2
How do medical practitioners perceive cultural barriers to patient-centred interaction?

Table 2: Medical Practitioners' Perceived Cultural Barriers to Patient-Centred Interaction

S/N	ITEMS	SA	A	D	SD	MEAN
13	When patient and medical practitioners do not come from the same cultural background, it constitutes a barrier to their interaction.	39 32.5%	58 48.3%	12 10.0%	11 9.2%	3.04
14	Patients most times hold some culture-specific beliefs about certain diseases that can hinder interaction.	48 40.0%	66 55.0%	5 4.2%	1 0.8%	3.34
15	Some culture based gender opinion/beliefs by certain patients can hinder proper interaction between two opposite sex.	47 39.2%	69 57.5%	4 3.3%		3.36
16	Addressing cultural needs among practitioner can help improve and impact on effective health care delivery.	55 45.8%	55 45.8%	5 4.2%	5 4.2%	3.33
17	Cultural differences can lead to miscommunication between medical practitioner and patient.	46 38.3%	60 50.0%	11 9.2%	3 2.5%	3.24
18	Unaddressed cultural barriers can lead to some devastating health effects.	37 30.8%	63 52.5%	15 12.5%	5 4.2%	3.10
19	Cultural beliefs can cause misconceptions on the part of patients.	42 35.0%	72 60.0%	4 3.3%	2 1.7%	3.28
20	A medical practitioner may require different styles of interaction for patients from different cultural background.	56 46.7%	58 48.3%	3 2.5%	3 2.5%	3.39
21	Cultural beliefs can lead to patient's non-adherence to prescriptions.	38 31.7%	71 59.2%	9 7.5%	2 1.7%	3.21
22	Intercultural consultations are often complex and stressful.	26 21.7%	69 57.5%	19 15.8%	6 5.0%	2.96
23	Interaction can be more patient-centred if there is mutual cultural understanding between health practitioner and patient.	64 53.3%	47 39.2%	8 6.7%	1 0.8%	3.45
24	The social and cultural diversity of patients who come for consultation in the hospital poses a great challenge.	37 30.8%	61 50.8%	20 16.7%	2 1.7%	3.11

Table 2 presents the medical practitioners' perceived cultural barriers to patient-centred interaction. The result shows a wide disparity between the Agree and Disagree responses and all the items had mean scores above the cut-off point of 2.50. This implies that medical practitioners perceived cultural barriers as a jeopardy to patient-centred interaction.

Testing of Hypotheses
Hypothesis 1

There is no significant difference in the perception of male and female medical practitioners on language and cultural barriers to patient-centred interaction.

Table 3: t-test Showing Medical Practitioners' Perceived Cultural Barriers to Patient-Centred Interaction by Gender

Sex	N	Mean	SD	df	t	Sig.
Male	50	76.08	6.117	118	1.040	0.301
Female	70	77.29	6.366			

p>0.05

Table 3 shows that the calculated t-value is 1.040 with degree of freedom of 118 calculated at 0.05 level of significance.

Since the calculated sig (0.301) is greater than the critical sig (0.05); the null hypothesis is hereby not rejected. This

implies that there was no significant difference in the perception of male and female medical practitioners on language and cultural barriers to patient-centred interaction.

Hypothesis 2

There is no significant difference in the perception of medical doctors and nurses about language and cultural barriers to patient-centred interaction.

Table 4: t-test showing Medical Practitioners' Perceived Cultural Barriers to Patient-Centred Interaction by Status

Status	N	Mean	SD	df	t	Sig.
Medical Doctors	44	77.07	5.93	118	0.378	0.706
Nurses	76	76.62	6.49			

p>0.05

The result on Table 4 shows that the calculated t-value is 0.378 with degree of freedom of 118 calculated at 0.05 level of significance. Since the calculated sig (0.706) is greater than the critical sig (0.05); the null hypothesis is hereby not rejected. This implies that there is no significant difference in the perception of medical doctors and nurses about language and cultural barriers to patient-centred interaction.

Hypothesis 3

Years of experience of the medical practitioners will not significantly influence their perception of language and cultural barriers to patient-centred interaction.

Table 5: ANOVA of Medical Practitioners' Perceived Language and Cultural Barriers to Patient-Centred Interaction Based on Years of Experience

Source	SS	Df	MS	F	Sig.
Between Groups	169.598	4	42.399	1.083	.368
Within Groups	4502.769	115	39.155		
Total	4672.367	119			

p>0.05

Table 5 shows that the calculated F-value is 1.083 with degrees of freedom of 4 and 115 calculated at 0.05 level of significance. Since the calculated sig (0.368) is greater than the critical sig (0.05); the null hypothesis is hereby not rejected. This implies that years of experience of the medical practitioners did not significantly influence their perception of language and cultural barriers to patient-centred interaction.

Discussion

Result from the study shows that medical practitioners perceived that language and cultural barriers could jeopardise patient-centred interaction during hospital engagement. This finding is in line with the submission of Patient Engagement Hit (2019), that cultural and language barriers get in the way of a positive patient experience in urban and multicultural community health centres. This could also be as a result of the fact that when a problem is obvious, its perception will not compromise. Also, gender, status and years of experience did not significantly influence medical practitioners' perception in this study. These seem to contradict many findings that showed significant difference in male and female perception.

Conclusion and Recommendations

Based on the findings of this study, it is concluded that medical practitioners

perceived that there are certain language and cultural barriers to patient-centred interaction. There was no significant difference in the perception of male and female medical practitioners on language and cultural barriers to patient-centred interaction. Medical doctors and nurses did not differ significantly in their perception of language and cultural barriers to patient-centred interaction during hospital engagements. Years of experience of the medical practitioners did not significantly influence their perception on language and cultural barriers to patient-centred interaction.

It is therefore recommended that medical practitioners be exposed to more techniques for communicating with patients of various linguistic backgrounds. There is the need to foster synergy between medical practitioners and linguists in order to find better means of overcoming language and cultural barriers to interaction with patients in hospitals. The curriculum of medical schools should be improved in the area of learning of effective communication with patients in hospitals.

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EFFECTS OF HANDS-ON-INSTRUCTIONAL STRATEGY ON ACADEMIC PERFORMANCE OF SENIOR SECONDARY SCHOOL STUDENTS IN BIOLOGY IN ONDO STATE

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Abstract
Examining how gender and school location influenced students' academic performance with a hands-on instructional technique was the specific focus of this study. The study employs a quasi-experimental design with a control group, a post-test, and a pre-test. Every single biology student in Ondo State's secondary schools (SSII) served as the study's population. We used a sample of 69 high school students who were majoring in biology. A multi-stage sample approach was used for the sampling technique. The twenty-five (25) multiple-choice questions that made up the Biology Performance Test were the instrument that was utilized to gather data. Professionals in the area of science education validated the instrument's content and face validity. The reliability coefficient for the instrument was 0.81, as calculated by the test-and-retest procedure. To address the research topic, the researchers utilized descriptive statistics, namely the mean and standard deviation. On the other hand, hypotheses were tested using inferential statistics of the t-test at a significance level of 0.05. Students' pre-test mean scores in the hands-on-instructional method group were not significantly different from those in the control group, according to the study's results. Furthermore, this study's results showed that students' academic performance improved following treatment while using the hands-on instructional technique. Also, when comparing the academic achievements of male and female pupils, no significant difference is seen. In addition, pupils from urban and rural areas do not significantly differ in their performance. Teachers should be motivated to provide students with proper instruction and promote equity in students' approaches, according to the findings. To help students better grasp biological principles, the curriculum should use the hands-on-instructional approach.

Keywords: Hands-on- instructional, Strategy, Performance, Students Gender.

Introduction

Education is a process by which students acquire relevant knowledge, skills, and values to ensure proper intellectual and character development for self-reliance. Education is attentive to the process of imparting all that is good and useful in any culture, this includes the knowledge, skills, attitudes, and values that individuals need to live in the environment. Teaching cannot be separated from learning; the study of science is so important that emphasis is laid on teaching and learning science as contained in the National Policy of Education. The policy statement is to equip effectively all students in this present age. FME (2014).

Teachers should use effective techniques of instruction to lead, guide, and inspire their students. The impact of instructional method on student learning is good, as stated by Rajagopalan (2019). Therefore, it is necessary to find, create, and implement suitable teaching tactics that could improve students' academic performance. Adedayo and Owolabi (2021) state that pupils whose instructors

possess superior knowledge and expertise outperform their peers whose instructors possess inferior knowledge and expertise. Further evidence that pupils fare better in Biology classes taught by certified educators is mounting. If a teacher is competent in their subject area, it does not appear to matter what gender they are as long as they are able to influence their students' learning.

As agents of educational change, educators confront the challenge of how to best teach and learn biology. The main point is that when a teacher focusses on the instructor, the kids don't learn nearly as much. Consequently, educators in the field of science should focus less on the course material and more on the process of guiding students from their current level of knowledge and understanding to the desired level. Active learning is the most effective method of instruction for students. Because it is more likely to inspire pupils by capturing their interest, student-centered learning is a superior method of instruction. The way biology is taught in Nigeria is very teacher-centered, with students not being actively involved in what they are learning (Obodo, 2017). The desired outcomes were not achieved by using this approach.

An approach to education known as "hands-on instruction" encourages students to gain knowledge by doing. Students learn more effectively and retain more information when they work on projects that directly apply to their lives. Since a hands-on approach to education emphasises pupils learning via doing, it keeps their bodies and minds actively involved in the learning process. Students actively participate in the learning process by applying what they have learnt to real-world problems or projects, rather than merely receiving information from a teacher.

According to Ekwueme, Ekon, and Ezenwa-Nebife (2015), students are led to acquire knowledge by experience in the hands-on learning approach. Students benefit from a deeper understanding of the material, improved memorisation skills, a sense of personal achievement, and the ability to apply what they've learnt in different contexts when they engage in hands-on learning activities. Compared to more passive forms of education, the hands-on approach encourages and facilitates active student participation in the classroom, which in turn improves students' capacity for critical thinking.

Students' academic performance can be significantly enhanced through the use of activity-based instructional strategies, such as hands-on learning. The idea behind it is that by letting students work with physical items, they may better grasp abstract scientific concepts, which in turn improves their academic performance. Students are able to participate in realistic situations and see the impact of changing different variables through the use of a hands-on instructional style. Students are more likely to understand and retain information when they are actively involved in the learning process, as shown by Alkan (2016). In addition, Fuad, Deb, Etim, and Gloster (2018) argued that students are more likely to develop a love of learning and a thirst for knowledge when they participate in hands-on activities. Even when it comes to the science underlying "do it yourself" projects, this learner-centred approach encourages students to use their sense of sight, touch, and manipulation in addition to hearing when studying biology.

Gender was described by the United Nations as "socially constructed differences in attributes and opportunities associated with being female or male, and to the social interactions and relations between women and men." Given the volume of research in this subject, gender concerns in science education continue to garner substantial attention. All throughout the globe, people are starting to really care about gender inequalities. Researchers

nevertheless often take gender differences into account; for example, it is thought that, seemingly due to sex hormones, the brains of men and women can react differently to the same event. Two studies found no statistically significant difference in how well male and female students performed in scientific classes: Adigun, Onihuwa, Irunokhai, Sada, and Adesina (2015) and Agommuoh & Nzewi (2017). Everyone from parents and educators to researchers and policymakers is interested in how students of different genders are doing in the classroom. According to Kolawole (2019), there are still studies that find substantial gender inequalities in how well students do. There is no statistically significant difference between the academic achievements of male and female secondary school students, according to Ajaja & Erawwoke (2010) and Olasehinde & Olatoye (2014). Gender considerations in scientific inquiry, particularly in the biological sciences, are crucial. A number of studies have linked pupils' levels of underachievement to their level of academic achievement. Everything surrounding the physical site of the school is considered part of its location. Also included is maintaining the area immediately surrounding the school. Students in urban regions performed better than those in rural areas in science and mathematics, according to Nnenna & Adukwu (2018), Umar (2017), and Olutola (2016). The location of the school has little bearing on the academic performance of the students, according to Awodun and Oyeniyi (2018). While it's true that not all rural schoolchildren will have access to the same basic facilities as their urban school peers, at least they'll be spending more time in nature. Forests, trees, and aquatic life are more common in rural areas than in cities. Biology curricula ought to be more engaging and inventive in light of ongoing technological innovation.

Statement of the Problem

Biology students' dismal showing on the West African Certificate Examination in Nigeria is now a major problem. Students' low performance on both internal and external exams appears to be a direct outcome of their difficulties grasping a wide range of biological concepts, according to the researcher's interactions with them. A lack of hands-on activities, instructors who aren't qualified, students who don't engage with one another, and ineffective teaching methods are just a few of the many possible causes of this dismal academic performance. The majority of the previous research found that traditional classroom instruction was ineffective in raising students' test scores in biology and other science classes taken in high school. Therefore, it is important to investigate cutting-edge, contemporary approaches to education, of which hands-on learning strategies are an integral component.

Purpose of the Study

The research team in Ondo State set out to find out how high school seniors in Biology fared after implementing a more hands-on approach to the subject. More especially, this research:

i. Used a hands-on approach to teaching biology and evaluated the students' progress.

ii. Investigated the impact of school location on students' academic achievement through the use of a hands-on instructional technique.

iii. Identified gender disparities in students' performance using a hands-on learning approach.

Research Question

One question that guided the research for this study was:

1. How did students do in Biology both before and after the intervention?

Research Hypotheses

The following null hypotheses will be formulated:

Ho1. Students in Ondo State's senior high schools who were taught biology via a hands-on approach had no statistically significant improvement over those who were taught the subject through more traditional means.

Ho2. Students in Ondo State's senior high schools who were taught biology using a hands-on approach did not significantly outperform their male and female counterparts.

Ho3. The mean performance ratings of students taught Biology utilising a hands-on instructional technique in Ondo State's senior secondary schools do not vary significantly by school location.

Methodology

The study adopted a pre-test, post-test control group of quasi-experimental design from both rural and urban school locations. It also assessed the effect of the pre-test relative to the post-test and also assessed the homogeneity of the groups before administration of the treatment.

The population for the study consisted of all secondary school (SSII) biology students in Ondo State. The sample for the study consisted of 69 Senior Secondary School II Biology student As a preliminary step, one of Ondo State's three senatorial districts was chosen at random from a pool of candidates. Then, two LGAs were chosen from within the senatorial district and eighteen LGAs were also chosen at random. A three-year running total of the Biology Performance Test (BPT) based on previous SSCE, WAEC, and NECO questions served as the research instrument for data collecting. Both the pre- and post-tests were administered using the BPT. Professionals in the fields of biology and science education checked the tests for validity. The test-retest procedure was used to determine the instrument's reliability. At a significance level of 0.05, data was analysed using Pearson's Product Moment Correlation (PPMC). Twenty students who were not part of the original sample were given the instrument, and then the same set of respondents were given it again two weeks later. The obtained coefficient was 0.81. Descriptive and inferential statistics were used to examine the gathered data. The study topics were addressed using descriptive statistics such as percentages and frequency counts. To evaluate the hypotheses set at a significance level of 0.05, the inferential statistics of Analysis of the t-test were employed.

Results and Discussion

1. Research Question 1: How did students do in Biology both before and after the intervention?

To address this research issue, we compared the average performance of students who participated in traditional classroom education with those who participated in hands-on learning. The result is presented in Table 1.

Table 1: Mean and Standard Deviation of Students in the Experimental and Control Groups.

Strategy	N	Pre-test		Post-Test		Mean Difference
		Mean	SD	Mean	SD	
Hands-On Instructional	47	12.53	2.77	19.28	2.18	6.75
Conventional	22	13.36	2.97	14.23	2.72	0.87

Prior to treatment, students in the Hands-On Instructional Strategy group averaged 12.53 points, whereas those in the Control group averaged 13.36 points (Table 1). Prior to the treatment, the group seems to be homogeneous. Following the intervention, the control group's mean score was 14.23 and the Hands-On Instructional Strategy group's score was 19.28. Therefore, the results of the pre- and post-test mean differences and standard deviations differ, as shown in the table above, suggesting that the therapy had an effect.

Testing of Hypotheses.
Hypothesis 1: Students in Ondo State's senior high schools who were taught biology via a hands-on approach had no statistically significant improvement over those who were taught the subject through more traditional means.

To test this hypothesis, the post-test mean scores of students in the experimental group and the control group were computed for statistical significance using T test at 0.05 level of significance level.

Table 2: t-test Summary of the Post-test Mean Scores of Students in the Experimental and Control Groups.

Source of variations	N	Mean	STD Deviation	df	T	p
Hands-on strategy	47	19.28	2.18	67	8.2745	0.0001
Conventional	22	14.23	2.72			

p value 0.0001. Since p, value is<0.05 then Ho should not be accepted

The results in Table 2 shows that there is a significant difference in the post-test mean scores of students in the experimental and control groups (t = 8.2745, p = 0.0001 since the p-value is less than the level of significance. This implies that the treatment improved and enhanced the academic performance of the students.

Hypothesis 2: Students in Ondo State's senior high schools who were taught biology using a hands-on approach did not significantly outperform their male and female counterparts.

Table 3: t-test comparing the different mean scores of male and female students in hands-on learning Experimental Group.

Gender	N	Mean	Std. Deviation	df	T	P-value
FEMALE	29	19.48	1.920	45	0.818	0.417
MALE	18	18.94	2.578			

Accept H_0 Since p-value > 0.05

Table 3 displays the average score disparity between male and female students in Ondo State senior high schools who were taught biology through a hands-on approach. There are 29 females and 18 males in the group; the average score for the men is 19.48 and the average score for the females is 18.94. The results of the t-test indicate that the mean scores of male and female students taught utilising a hands-on teaching technique are not significantly different (t = -0.818, p-value = 0.417). Therefore, we do not reject the null hypothesis.

Hypothesis 3: The mean performance ratings of students taught Biology utilising a hands-on instructional technique in Ondo State's senior secondary schools do not vary significantly by school location.

Table 4: T-test comparing the difference mean score of rural and urban in hands-on learning Experimental Group

Location	N	Mean	Std. Deviation	Df	T	p-value
Rural	12	19.17	2.368	45	0.1895	0.983
Urban	35	19.31	2.153			

Accept H$_0$ Since p-value > 0.05

To examine the mean score difference of rural and urban students taught Biology utilising hands-on learning methodologies in Senior Secondary Schools in Ondo State, Table 4 presents the summary of the scores and an independent sample t-test. Twelve students from rural areas and thirty-five from metropolitan areas make up the group; their average scores are 19.17 and 19.31, respectively. The results of the t-test indicate that the mean scores of students in rural and urban areas who were taught biology using a hands-on approach were not significantly different (t = -0.1895, p-value = 0.983). Therefore, we do not reject the null hypothesis.

Discussion

The results demonstrated that both the experimental and control groups of pupils were similar prior to the intervention. This demonstrates that the two groups of pupils have historically performed at comparable frequencies. Their differences were insignificant.

In contrast to the traditional approach, students' performance improved significantly following the implementation of the hands-on educational strategy. The results were in line with those of other studies that found that students learnt more, retained more information, and had a deeper understanding of the material when they participated in hands-on activities. These studies included Ekwueme, Ekon, and Ezenwa-Nebife (2015), Alkan (2016), and Fuad, Deb, Etim, and Gloster (2018).

According to the study's results, male and female students who were taught via hands-on methods performed similarly.

Overall, this result lends credence to the conclusions drawn from previous research by Adigun, Onihuwa, Irunokhai, Sada, and Adesina (2015) and Agommuoh & Nzewi (2017), which demonstrated that students' performance did not differ according to their sexual orientation.

This study found no statistically significant difference between rural and urban students' mean performance scores when using the Hands-on Instructional Strategy. This confirms what Awodun and Oyeniyi (2018) have found: that kids' academic performance is unaffected by the school's location. Urban pupils outscored rural students in science and mathematics, according to Umar (2017) and Olutola (2016), although this fact is heavily contradicted by this.

Conclusion.

The study's findings suggest that students' biology grades are improved when teachers use a hands-on instructional strategy. Furthermore, male and female pupils do not differ much in their academic performance.

Recommendations

It is advised that, when teaching biology, educators should
- Take a proactive approach, to keep biology teachers abreast of this new method of instruction, seminars and workshops should be scheduled.
- Incorporate this method into teacher training programs; promote good student attitudes; enhance teacher-student contact; and treat all students equally, regardless of gender.

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INVESTIGATING THE KNOWLEDGE AND ATTITUDE OF LECTURERS IN ADVANCING MENTAL HEALTH AWARENESS AMONG UNDERGRADUATES

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Abstract
This study investigated lecturers' knowledge, attitudes, and perceived challenges regarding mental health issues among undergraduates. This study utilized a quantitative research design to investigate university lecturers' perspectives on mental health. A stratified random sampling technique was employed to select 90 participants, with 30 lecturers from each of the faculties of education, science, and technology. Data were collected from 90 lecturers across the university using a structured questionnaire. The demographic analysis revealed a diverse sample of gender, age, academic rank, and teaching experience. The findings indicate a moderate level of knowledge about mental health disorders, with high awareness of depression (83.3%) and anxiety (66.7%) but significant gaps in understanding bipolar disorder (55.6%), schizophrenia (61.1%), and PTSD (44.4%). While attitudes toward mental health were generally positive, 16.7% of lecturers held opposing views. Significant challenges included lack of training (70%), insufficient resources (60%), high student-to-teacher ratios (50%), limited time (44.4%), and stigma/cultural barriers (38.9%). ANOVA results showed significant differences in knowledge based on academic rank, with senior lecturers scoring the highest. Correlation analysis indicated that improved knowledge and positive attitudes could mitigate perceived challenges. The study underscores the need for targeted professional development and resource allocation to enhance mental health literacy among lecturers. Addressing these gaps is crucial for fostering a supportive educational environment that promotes student well-being and academic success. These findings provide a foundation for policy and practice reforms to integrate comprehensive mental health training and support mechanisms within the university framework.

Keywords: Attitudes, Awareness, Knowledge, Perceptions, Stigma,

Introduction

Mental health issues among university students are an escalating concern globally, and the prevalence of anxiety, depression, and other mental health disorders in this demographic is alarmingly high. Approximately one-third of college students worldwide report experiencing significant mental health problems, adversely affecting their academic performance, social interactions, and overall well-being (Auerbach et al., 2018). The transition to university life often involves substantial stressors, including academic pressure, financial strain, and separation from family and familiar support systems, which can exacerbate preexisting mental health conditions or contribute to new ones. Despite the critical importance of mental health, universities worldwide struggle to provide adequate support and resources to address these issues effectively. The World Health Organization (WHO) highlights the lack of mental health services in educational institutions, noting that mental health care is often underfunded and understaffed (WHO,

2021). This gap in support services is particularly detrimental as it leaves students without the necessary tools to manage their mental health challenges, potentially leading to severe consequences, including academic failure and an increased risk of suicide.

In Africa, the scenario is even more challenging due to socio-economic factors, cultural stigmas, and a shortage of trained mental health professionals. Cultural attitudes towards mental health can lead to significant stigma, preventing individuals from seeking help. Ndetei et al. (2020) describe how many African students suffer in silence due to fear of discrimination and inadequate access to mental health services. The infrastructure for mental health care in African universities is underdeveloped. Many institutions lack the necessary resources to provide comprehensive mental health support. A cultural context frequently misunderstands or dismisses mental health issues, compounding this deficit. Students experiencing mental health problems may be reluctant to disclose their struggles or seek help, further exacerbating their conditions.

In this context, the mental health landscape within Nigeria's university mirrors many of the broader challenges seen across the African continent, making it a significant player in the continent. Mental health issues among Nigerian university students are often underreported and inadequately addressed due to stigma and a lack of mental health education. According to Gureje et al. (2015), the prevalence of mental health disorders among Nigerian adolescents is significant, yet the awareness and support mechanisms in place are insufficient. Nigerian universities face challenges in this regard. The lack of comprehensive mental health support systems means that many students do not receive the help they need. Oginni et al. (2018) highlight that the mental health and well-being of Nigerian university students are critical yet often neglected areas, leading to a range of adverse outcomes, including poor academic performance, social isolation, and even suicide.

Lecturers play a pivotal role in university students' academic and personal development. Often viewed as mentors and sources of guidance, lecturers go beyond their educational responsibilities. This positions them uniquely to influence and advance mental health awareness among students. However, lecturers' effectiveness in this role depends on their knowledge and attitudes toward mental health. Adewunmi and Ojo (2022) emphasize that lecturers may be ill-equipped to support students effectively without adequate knowledge and positive attitudes towards mental health. They may inadvertently perpetuate stigma or fail to recognize the signs of mental health issues, thereby missing opportunities to intervene and provide support. Therefore, it is essential to assess and enhance the mental health literacy of lecturers to ensure they can fulfil this critical role effectively. Lecturers face significant challenges in promoting mental health awareness among students. As critical stakeholders in students' educational and personal lives, these lecturers may lack the knowledge and attitudes to advocate for and support mental health initiatives effectively.

The problem of the study will centre on understanding university lecturers' knowledge and attitudes towards common mental health disorders and how these factors will influence their interactions with students and willingness to engage in mental health promotion activities. It will seek to evaluate the extent of lecturers' knowledge about mental health disorders and to identify specific gaps in their understanding. Additionally, the study aims to explore how lecturers' perceptions and attitudes, including stigma and misconceptions, affect their ability to support students' mental health needs. It

tends to investigate the challenges lecturers face in promoting mental health awareness and examine how these challenges will impact their effectiveness. Furthermore, the study will consider differences in knowledge and attitudes based on demographic variables such as gender, age, academic rank, and years of experience. Finally, it will explore the relationships between lecturers' knowledge, attitudes, and the perceived challenges they encounter, providing a comprehensive analysis of the factors that will influence mental health literacy and support within the academic environment.

Literature Review

Mental health awareness in educational settings is crucial for fostering a supportive environment that enhances student well-being and academic performance. Lecturers play a significant role in shaping this environment. This literature review explores the knowledge and attitudes of lecturers regarding mental health issues, the impact of these factors on students, and the necessity for targeted interventions to enhance mental health literacy among educators. Knowledge of mental health disorders among university lecturers is essential for providing adequate support and advocacy. Studies indicate that while some lecturers have a basic understanding of common mental health issues, significant gaps remain. Adewunmi and Ojo (2022) found that many lecturers at Nigerian universities lack comprehensive knowledge about mental health disorders, which hampers their ability to provide adequate support to students. This lack of knowledge extends to recognizing early symptoms and understanding the appropriate steps to take when a student shows signs of mental distress (Jorm, 2012).

More recent studies further highlight these gaps. Oladele et al. (2023) found that although 70% of lecturers recognized symptoms of depression, only

45% were aware of the signs of bipolar disorder. Similarly, Akinsola and Ogunyemi (2023) reported that lecturers often confuse the symptoms of anxiety with everyday stress, leading to underreporting and mismanagement of mental health issues among students. This confusion can result in delayed intervention and inadequate support for students facing mental health challenges. Furthermore, Ojedokun and Balogun (2023) emphasized that lecturers' limited knowledge about less common mental health disorders, such as schizophrenia and PTSD, significantly impairs their ability to identify and refer students to appropriate mental health services. Their study showed that only 35% of lecturers could accurately identify symptoms of schizophrenia, and even fewer could recognize PTSD symptoms. This lack of knowledge not only affects the immediate well-being of students but also contributes to a longer-term stigma and misunderstanding of mental health issues within the academic community.

Adequate mental health literacy among lecturers requires comprehensive training programs that cover a broad spectrum of mental health issues. Numerous studies have well documented the effectiveness of such programs. Kitchener and Jorm (2012) highlighted the success of the Mental Health First Aid (MHFA) training in Australia, significantly improving participants' knowledge of mental health disorders and their confidence in providing support. In their study, lecturers who completed the MHFA training were more likely to recognize the symptoms of various mental health conditions and felt more equipped to assist students in distress.

In Nigeria, similar training initiatives are gaining traction. A study by Afolabi et al. (2023) evaluated a pilot mental health training program for university lecturers and found substantial improvements in their understanding of

mental health issues and their ability to support students. Participants reported a 50% increase in their confidence to identify and manage mental health problems among students, suggesting that targeted training can effectively bridge the knowledge gap.

Continuous professional development (CPD) is crucial for maintaining and updating lecturers' knowledge of mental health issues. Regular CPD sessions ensure that educators stay informed about the latest developments in mental health research and best practices for supporting students. According to Ogundipe et al. (2023), lecturers who participated in ongoing CPD programs demonstrated better knowledge retention and were more proactive in addressing mental health concerns within their classrooms. Numerous researchers have advocated the integration of mental health education into CPD programs. Tunde and Akinola (2023) argue that incorporating mental health modules into existing CPD frameworks could standardize knowledge across institutions and ensure that all lecturers have a baseline understanding of mental health issues. Their study found that lecturers who engaged in regular CPD were more likely to use mental health resources and refer students to appropriate support services.

The knowledge and understanding of mental health issues among lecturers directly impact student outcomes. Lecturers with a thorough understanding of mental health disorders are better equipped to create supportive and inclusive learning environments. This, in turn, encourages students to seek help and reduces the stigma associated with mental health issues. Kutcher, Wei, and Morgan (2013) demonstrated that students who felt supported by their lecturers were likely to seek help on mental health issues and reported better overall well-being. Reavley and Jorm (2014), who found that positive interactions with informed lecturers

significantly reduce the stigma surrounding mental health, making it easier for students to discuss their problems openly, support this finding. Lecturers' attitudes toward mental health significantly influence their interactions with students and their willingness to engage in mental health promotion activities. Boadu and Addoah (2018) highlight that stigma and misconceptions about mental health are pervasive among educators, which can discourage students from seeking help. Reavley and Jorm (2014) observed that positive attitudes toward mental health among educators correlate with a higher likelihood of students disclosing their mental health issues and seeking assistance.

At Nigerian universities, stigmatizing attitudes are particularly problematic. Oginni, et al., (2018) reported that stigma is a significant barrier to mental health support in Nigerian educational institutions. Lecturers who hold stigmatizing views are less likely to provide empathetic and supportive responses to students experiencing mental health issues, which further exacerbates the problem. More recent data by Eze et al. (2023) corroborate these findings, indicating that 55% of lecturers still harbor negative stereotypes about mental health, which significantly affects their engagement with affected students.

The negative attitudes of lecturers toward mental health issues have far-reaching consequences. When educators hold stigmatizing views, they inadvertently contribute to a culture of silence and avoidance among students. This environment discourages students from seeking help due to fear of judgement or misunderstanding. Studies have shown that lecturers with stigmatizing attitudes are less likely to engage in mental health training or utilize available resources, perpetuating a cycle of ignorance and stigmatization (Corrigan & Watson, 2002; Oginni et al., 2018). Conversely, positive

attitudes about mental health can significantly enhance student engagement and support. Reavley and Jorm (2014) found that educators who view mental health positively are likelier to foster an environment where students feel safe discussing their issues. This openness leads to early identification of mental health problems and timely interventions, which are critical for preventing more severe mental health crises.

A study by Eze et al. (2023) found that lecturers who participated in mental health awareness programs exhibited a 40% increase in positive attitudes toward students with mental health issues. These lecturers were more proactive in referring students to counseling services, and they provided more supportive responses to distressed students. This shift in attitude can significantly improve student mental health outcomes. Cultural factors play a substantial role in shaping attitudes toward mental health. Cultural beliefs and a lack of awareness often lead to misunderstood or stigmatized mental health issues in many African contexts, including Nigeria. Ndetei et al. (2020) highlighted that socio-economic factors and cultural stigmas significantly hinder mental health education and support. These cultural barriers make it challenging for students to seek help and for lecturers to provide appropriate support. Addressing these cultural stigmas through education and awareness campaigns is crucial for changing attitudes and improving mental health outcomes.

Studies continue to emphasize the importance of addressing stigmatizing attitudes among educators. Makanjuola et al. (2023) found that students who perceived their lecturers as knowledgeable and supportive of mental health issues were twice as likely to seek help than those who perceived their lecturers as uninformed or unsympathetic. This finding underscores the importance of improving mental health literacy among educators to

foster a more supportive learning environment. The knowledge gaps and changing attitudes among lecturers require targeted interventions. Jorm et al. (2010) emphasized the effectiveness of mental health first aid training for educators, significantly improving their ability to identify and respond to mental health issues. Lecturers can tailor such training programs to their specific needs, taking into account the unique challenges they encounter. Eyo and Eyo (2023) highlighted the success of a pilot mental health training program in a Nigerian university, where 85% of participating lecturers reported increased confidence in handling student mental health issues.

Furthermore, institutional policies play a crucial role in supporting mental health initiatives. The World Health Organization (2021) stressed the importance of comprehensive mental health policies in educational institutions. These policies should include regular training for lecturers, mental health resources for students, and mechanisms for early intervention and support. Umeokafor and Umeokafor (2022) noted that universities with well-defined mental health policies had better student mental health outcomes and higher overall satisfaction rates.

Several universities globally have successfully implemented mental health programs that can serve as models; Kutcher, Wei, and Morgan (2013) reported on the success of a Canadian mental health curriculum resource that significantly improved student mental health literacy when implemented by classroom teachers. Similarly, Auerbach et al. (2018) highlighted the importance of global mental health initiatives, such as the WHO World Mental Health Surveys International College Student Project, in providing data that can inform local interventions. More recently, the University of Melbourne implemented a comprehensive mental health strategy that

includes mandatory mental health training for all staff, on-campus counselling services, and student-led mental health awareness campaigns (Reavley et al., 2023). This approach has led to a 30% increase in students seeking mental health support and a significant reduction in reported stigma.

Methodology

This study employed a quantitative research design to investigate lecturers' knowledge and attitudes regarding mental health issues. The aim was to gather numerical data for statistical analysis to provide objective insights into lecturers' mental health literacy, perceptions, and attitudes. The population consisted of university lecturers, and a stratified random sampling technique was used to ensure representation across different faculties. Ninety lecturers participated, with 30 from three faculties (Education, Science and Technology), completing the questionnaire. This sampling ensured adequate representation and reliability of the results.

A structured questionnaire was the primary data collection tool, divided into four sections: Section A collected demographic information (age, gender, academic rank, and years of teaching experience). Section B assessed knowledge of mental health disorders, including symptoms and intervention strategies. Section C used Likert-scale items to measure attitudes toward mental health, including stigma, misconceptions, and willingness to promote mental health. Section D investigated challenges lecturers faced in supporting student mental health and their views on needed resources and policies.

Data collection was done through online surveys using Google Forms, with links distributed via lecturers' platforms and follow-up reminders sent to ensure a high response rate. The survey remained open for sufficient time to allow ample responses. The collected data were analyzed using descriptive statistics (frequencies, percentages, means, and standard deviations) to summarize demographics and overall responses, and inferential statistics (t-tests and ANOVA) to examine differences in knowledge and attitudes based on demographic variables. Correlation analysis explored relationships between lecturers' knowledge, attitudes, and perceived challenges. While the study relied on self-reported data, which could introduce response bias, and an online survey, which might limit participation to those with internet access, efforts were made to mitigate these limitations, providing a comprehensive understanding of lecturers' knowledge and attitudes regarding mental health issues.

Results:
Table 1: Demographic Variable of Respondents

Demographic Variable	Frequency	Percentage (%)
Gender		
Male	54	60.0
Female	36	40.0
Age		
25-34	20	22.2
35-44	40	44.4
45-54	25	27.8
55 and above	5	5.6

Demographic Variable	Frequency	Percentage (%)
Academic Position		
Assistant Lecturer	20	22.2
Lecturer II	30	33.3
Lecturer I	25	27.8
Senior Lecturer	15	16.7
Years of Experience		
1-5	25	27.8
6-10	40	44.4
11-15	15	16.7
16 and above	10	11.1

Table 1 provides a comprehensive overview of the demographic characteristics of the 90 university lecturers who participated in the study. The sample consisted of 54 male lecturers (60%) and 36 female lecturers (40%), reflecting a gender distribution that aligns with broader trends in higher education institutions in Nigeria.

The age distribution among the respondents shows that the largest group, 44.4%, fell within the age range of 35–44 years. Those aged 25-34 years accounted for 22.2% of the sample, while lecturers aged 45-54 years comprised 27.8%. A smaller proportion, 5.6%, were aged 55 and above. In terms of academic position, the distribution was diverse: 22.2% of respondents were Assistant Lecturers, 33.3% were Lecturer II, 27.8% were Lecturer I, and 16.7% were Senior Lecturers. Regarding years of teaching experience, 44.4% of lecturers reported having 6-10 years of experience, indicating a substantial mid-career presence in the sample. Additionally, 27.8% had 1-5 years of experience, 16.7% had 11-15 years, and 11.1% had 16 years or more of teaching experience.

Research Question 1: To what extent do lecturers know about common mental health disorders?

Table 2: Knowledge of Mental Health Disorders

Knowledge Item	High	Low	Percentage (%)
Recognizing depression symptoms	75	15	83.3
Understanding anxiety disorders	60	30	66.7
Identifying bipolar disorder	50	40	55.6
Awareness of schizophrenia	55	35	61.1
Knowledge of PTSD	40	50	44.4

Table 2 presents the results of an assessment on university lecturers' knowledge of common mental health disorders, providing insights into their overall awareness and understanding. The mean knowledge score was 68 out of 100 (SD = 12.5), indicating a moderate level of knowledge. However, the assessment revealed significant gaps in specific areas. 83.3% of the lecturers correctly identified symptoms of depression, while 66.7% demonstrated knowledge of anxiety disorders. Approximately 55.6% were able to recognize symptoms of bipolar disorder, and awareness of schizophrenia symptoms was noted in 61.1% of respondents. Only

44.4% of the lecturers demonstrated knowledge of symptoms associated with Post-Traumatic Stress Disorder (PTSD).

Research Question 2: How do lecturers' perceptions and attitudes towards mental health issues, including stigma and misconceptions, influence their interactions with students and willingness to engage in mental health promotion activities?

Table 3: Attitudes Towards Mental Health

Attitude Score	Frequency	Percentage (%)
1 (Very Negative)	5	5.6
2 (Negative)	10	11.1
3 (Neutral)	20	22.2
4 (Positive)	40	44.4
5 (Very Positive)	15	16.7

Table 3 presents the distribution of attitudes toward mental health among university lecturers based on five distinct attitude scores, ranging from 1 (very negative) to 5 (very positive). It details the number of lecturers and the corresponding percentage of total respondents for each attitude score. In the category of Attitude Score 1 (very negative), five lecturers, constituting 5.6% of the respondents, expressed a notably negative attitude toward mental health issues. Attitude Score 2 (negative) revealed that ten lecturers, accounting for 11.1% of the respondents, held negative views regarding mental health. Twenty lecturers, or 22.2% of the respondents, expressed a neutral stance on mental health under Attitude Score 3 (Neutral). Attitude Score 4 (positive) showed that forty lecturers, representing 44.4% of the respondents, held positive attitudes toward mental health.

Finally, Attitude Score 5 (Very Positive) indicated that fifteen lecturers, making up 16.7% of the respondents, reported having a very positive attitude toward mental health.

Research Question 3: What challenges do lecturers face in advancing mental health awareness?

Table 4: Challenges in Supporting Student Mental Health

Challenge	Frequency	Percentage (%)
Lack of training	63	70.0
Insufficient resources	54	60.0
High student-to-teacher ratios	45	50.0
Limited time	40	44.4
Stigma and cultural barriers	35	38.9

Table 4 outlines the challenges faced by university lecturers in supporting student mental health, along with their respective frequencies and percentages of total respondents. The most reported challenge was Lack of Training, cited by 63 lecturers (70.0%), indicating a significant obstacle due to insufficient training in mental health support. Insufficient resources were noted by 54 lecturers (60.0%), highlighting challenges related to inadequate access to counselling services and educational materials essential for effective support. High

student-to-teacher ratios affected 45 lecturers (50.0%), making it difficult to provide personalized assistance to students with mental health needs. Approximately 40 lecturers (44.4%) highlighted limited time, indicating that heavy workloads and teaching schedules limited their ability to address students' mental health needs.

Stigma and cultural barriers were significant concerns for 35 lecturers (38.9%), reflecting challenges posed by societal attitudes and cultural beliefs that hinder open discussions and support initiatives related to mental health in academic settings.

Differences in Knowledge and Attitudes Based on Demographic Variables
Table 5: ANOVA Results for Differences in Knowledge-Based on Academic Rank

Academic Rank	Mean Knowledge Score	Standard Deviation	F-Value	P-Value
Assistant Lecturer	62.0	8.5	4.32	0.01
Lecturer II	68.5	10.2		
Lecturer I	69.0	11.5		
Senior Lecturer	72.0	12.8		

Table 5 displays the results of an ANOVA analysis examining how knowledge scores vary across different academic ranks among university lecturers. It includes the mean knowledge score, standard deviation, F-value, and p-value for each academic rank category.

The mean knowledge score represents the average understanding of mental health disorders within each academic rank group. Assistant Lecturers had the lowest mean score (62.0), while Senior Lecturers had the highest (72.0), indicating a trend of increasing knowledge as academic rank rises.

Standard deviation measures the spread of knowledge scores within each group. A higher standard deviation implies more variability in scores among lecturers within that academic rank. A higher F-value suggests larger differences in knowledge across ranks, while P-values indicate the significance of the F-test, as Assistant Lecturer's p-value of 0.01 suggests a statistically significant difference in knowledge compared to other ranks, prompting further exploration into these disparities and their implications for mental health education and support strategies among lecturers.

Relationships between Knowledge, Attitudes, and Perceived Challenges
Table 6: Correlation Analysis

Variables	Knowledge	Attitudes	Perceived Challenges
Knowledge	1	0.45**	-0.32*
Attitudes	0.45**	1	-0.28*
Perceived Challenges	-0.32*	-0.28*	1

The correlation analysis in Table 6 highlighted significant positive associations between knowledge and attitudes (r = 0.45, p <.01), indicating that greater knowledge is linked with more positive attitudes towards mental health. Additionally, there were significant negative correlations between perceived challenges and both knowledge (r = -0.32, p <.05) and attitudes (r = -0.28, p <.05), suggesting that higher levels of knowledge and positive attitudes can reduce the challenges lecturers face in supporting student mental health. Table 6 presents the outcomes of a correlation analysis investigating how knowledge about mental

health disorders, attitudes toward mental health issues, and perceived challenges interrelate among university lecturers. The table displays correlation coefficients illustrating these relationships: Knowledge shows perfect correlation with itself (r = 1), while attitudes exhibit a moderately positive correlation of 0.45** (significant at p < 0.01) with knowledge, indicating that lecturers with greater mental health knowledge tend to hold more positive attitudes. Perceived challenges display a negative correlation of -0.32* (significant at p < 0.05) with knowledge, suggesting that increased mental health knowledge correlates with fewer perceived challenges in supporting students' mental health. Similarly, attitudes demonstrate a negative correlation of -0.28* (significant at p < 0.05) with perceived challenges, indicating that lecturers with positive attitudes towards mental health perceive fewer challenges in supporting students. Overall, these findings underscore the importance of enhancing mental health literacy among lecturers to foster positive attitudes and potentially reduce perceived barriers in supporting students' mental well-being.

Discussion of Findings

The findings indicate a moderate level of knowledge about mental health disorders among university lecturers, with significant gaps in certain areas. Attitudes toward mental health are generally positive, but stigma and misconceptions persist. Challenges such as lack of training and resources hinder lecturers' ability to support student mental health effectively. The significant correlations suggest that improving knowledge and attitudes could reduce perceived challenges, highlighting the need for targeted interventions and training programs. Reavley and Jorm (2014) underscore the importance of enhancing mental health literacy among lecturers to foster a supportive educational environment for students. The study's findings can inform the development of

policies and practices to promote mental health awareness and support within the university.

Furthermore, the demographic data suggest that university lecturers come from varied backgrounds in gender, age, academic rank, and teaching experience. Understanding this demographic variable is essential, as it may impact lecturers' perspectives on mental health. Younger lecturers or those with less teaching experience have different levels of exposure to contemporary mental health training compared to their more experienced counterparts. Similarly, gender differences played a role in how mental health issues are perceived and addressed within the academic environment (Chigudu et al., 2018). Considering these demographic factors, the study provides a nuanced understanding of the context in which mental health awareness initiatives need to be developed and implemented. This demographic analysis helps identify specific groups that require more targeted interventions to enhance their mental health literacy and support capabilities.

The study also examined lecturers' knowledge of specific mental health disorders, revealing high awareness of depression symptoms (83.3%) and understanding of anxiety disorders (66.7%). However, knowledge of bipolar disorder (55.6%), schizophrenia (61.1%), and PTSD (44.4%) was notably lower, indicating gaps in understanding less common or more complex conditions (American Psychiatric Association, 2020). These gaps highlight the need for targeted educational initiatives to improve comprehensive mental health literacy among lecturers. The correlation analysis further underscores the relationship between knowledge and attitudes, suggesting that improving mental health knowledge may positively influence attitudes toward mental health issues (Jorm, 2012). This agrees with the findings

by Jorm et al. (2010), which advocate that comprehensive mental health training programs for lecturers should be prioritized to enhance their knowledge and ability to support students effectively. These findings emphasize the interrelatedness of knowledge, attitudes, and perceived challenges and the need for comprehensive training programs that address all these aspects.

Conclusion

Based on the findings of this study, university lecturers generally demonstrate a moderate level of knowledge concerning common mental health disorders, with notable gaps identified in areas such as bipolar disorder and PTSD. While there is substantial awareness of prevalent conditions like depression and anxiety disorders among students, deficiencies in understanding fewer common disorders underscore the necessity for targeted educational interventions. Enhancing mental health literacy among lecturers is crucial to effectively supporting students experiencing diverse mental health challenges. Attitudes toward mental health among lecturers are predominantly positive, indicating strong support for mental health initiatives. However, persistent stigma and misconceptions among some lecturers may impact their interactions with students and their willingness to engage in mental health promotion activities. Addressing these attitudes through training and awareness programs could foster a more inclusive and supportive educational environment.

Lecturers face significant challenges in supporting student mental health, including insufficient training, limited resources, high student-to-teacher ratios, time constraints, and stigma. These challenges intersect with lecturers' knowledge and attitudes, as evidenced by correlations suggesting that improved knowledge and positive attitudes could help mitigate these barriers. The study

underscores the importance of institutional support in providing comprehensive training, increasing resource allocation, and cultivating a culture that prioritizes mental health awareness within universities. Universities can better equip lecturers to play a pivotal role in promoting student mental well-being and fostering an environment conducive to academic success and overall student flourishing.

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CREATING HEALTHY EMOTIONAL AND SOCIAL ENVIRONMENT FOR PROFESSIONAL ACCOUNTING CAREER

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Abstract

The significance of fostering a positive emotional and social environment for careers in professional accounting has drawn a lot of interest from scholars, practitioners, and organizations. As a result of this, the study employs a systematic review to delve into creating healthy emotional and social environment for professional Accounting career. The study highlights among others; the importance of emotional health in accounting, the strategies for promoting emotional well-being, building a socially supportive environment and addressing work-life balance and stress management. The study concludes that it is essential to cultivate a pleasant work environment that prioritizes cooperation, open communication, and work-life balance and that Professional development and social ties can be further strengthened by putting peer support networks and mentoring programs into place. It recommends among others that accounting professionals and organizations should implement comprehensive wellness programmes that address both emotional and physical health.

Key words: Health, Emotional, Environment, Accounting, Career.

Introduction

Fostering success and well-being in any professional job, including accounting, requires the establishment of a positive emotional and social environment. The emotional and social dimensions are frequently important in accounting, a field where accuracy, honesty, and clarity are critical, in terms of output, job happiness, and career longevity. Cultivating good emotions in oneself and one's coworkers, such as motivation, excitement, and resilience, is essential to a healthy emotional environment in the accounting profession. This can be accomplished by having a supportive leadership style, communicating clearly, and recognizing accomplishments. People are more likely to perform at their best and have a good impact on the workplace environment when they feel appreciated and supported. Socially, establishing a positive work atmosphere in accounting entails encouraging productive cooperation, respect, and teamwork among coworkers.

To supply accurate financial information and handle difficult challenges, accountants frequently collaborate in teams. Thus, encouraging candid communication, activities that foster trust, and the ability to resolve conflicts are crucial for preserving a peaceful and effective work environment. Given the long hours and strict deadlines that are typical in the accounting field, it is imperative to support a healthy work-life balance. Encouragement of flexible work schedules, wellness initiatives, and mental health education can all assist staff in managing stress and preserving wellbeing, which in turn improves job satisfaction and lowers attrition. However, creating a healthy emotional and social environment in a professional accounting career involves nurturing positive emotions, fostering effective communication and collaboration, and supporting employees' overall well-being. By prioritizing these aspects, organizations can cultivate a workplace culture that not only attracts top

talent but also enables them to thrive and excel in their roles.

Importance of Emotional Health in Accounting

In the context of accounting, emotional health refers to the resilience and psychological well-being of those who work in the field. It includes the capacity to control stress, uphold a healthy work-life balance, and handle the particular demands placed on those in reporting and financial management responsibilities. Because accounting is a high-stress industry, mental well-being is especially important. Tight deadlines, intricate legal constraints, and the duty of handling sensitive financial data are commonplace for accountants. If these issues are not adequately addressed, they may result in elevated anxiety, burnout, and other mental health problems (Janvrin & Watson, 2017).

Accountants who are in good emotional health are better able to manage the demands of their line of work. They exhibit better decision-making abilities, stronger interpersonal ties with clients and coworkers, and increased flexibility to changes in technology and accounting norms. Furthermore, even in the face of difficulty, they are more likely to uphold moral principles and professional integrity (Cianci et al., 2014). Among the essential elements of emotional well-being in accounting are:

Stress management: The ability to cope with high-pressure situations, especially during tax seasons or audits.

Emotional intelligence: Understanding and managing ones own emotions and those of others in professional interactions.

Work-life balance: Maintaining boundaries between professional and personal life to prevent burnout.

Resilience: The capacity to bounce back from setbacks and adapt to changing circumstances in the field.

Mindfulness: Being present and focused, which can enhance accuracy and attention to detail in financial tasks.

There is no way to overstate the importance of emotional well-being on job performance in the accounting profession due to the demanding nature of the work, which is marked by tight deadlines, intricate regulatory requirements, and high-stakes decision-making. Research has indicated that accountants who are in good mental health typically perform better in a variety of work-related areas. In financial reporting and analysis, they demonstrate enhanced focus, precision, and attention to detail (Cianci et al., 2014). This is especially important in a field where small mistakes can have a big impact on clients and companies.

Improved creativity and problem-solving abilities when handling intricate financial matters are correlated with emotional well-being. Good mental health enables accountants to think critically and creatively, which produces superior financial management strategies and solutions (Janvrin & Watson, 2017). In the workplace, interpersonal interactions are positively impacted by emotional well-being. Strong emotional intelligence allows accountants to interact with clients, coworkers, and superiors more successfully. According to Boyle et al. (2015), this enhances client happiness, teamwork, and overall organizational performance.

In accounting, stress management is very important as it is a crucial aspect of emotional health. Accountants that are emotionally robust are better equipped to sustain their performance levels and prevent burnout during high-pressure times like tax seasons or audits. Over the course of the year, this resilience translates into reliable work performance.

Furthermore, moral judgment in accounting is influenced by emotional health. Professionals are more likely to respect moral principles and withstand pressure to commit fraud if they are emotionally stable and self-aware (Cianci et al., 2014). Accuracy, problem-solving capacity, social skills, moral judgment, and general job satisfaction are all enhanced substantially by emotional well-being. Maintaining high performance standards and securing the long-term success of accounting professionals will depend heavily on giving emotional well-being top priority as the field continues to change. Accounting professionals face a unique set of emotional challenges due to the nature of their work. These challenges can significantly impact their well-being and job performance if not properly addressed. One of the most prevalent issues is stress and burnout.

The demanding nature of accounting work, characterized by strict deadlines, complex regulations, and high-stakes decision-making, can lead to chronic stress. During busy seasons, such as tax periods or year-end closings, this stress can escalate to burnout. The pressure to maintain accuracy while managing heavy workloads contributes to this stress.

Perfectionism is another common challenge. The need for precision in financial reporting can foster perfectionist tendencies, leading to anxiety and self-doubt. This perfectionism can sometimes be counterproductive, causing delays and additional stress (Chartered Accountants Australia and New Zealand, 2019). Accountants face tremendous emotional difficulties when faced with ethical quandaries. They might encounter circumstances that put pressure on them to violate moral principles, which could cause moral discomfort and emotional strife. Those who operate in settings where unethical behavior is common may find this especially difficult (Cianci et al., 2014).

Work-life balance is a persistent problem in the accounting industry. Working long hours can make it harder to maintain personal relationships and general life happiness, especially during busy times of the year. Burnout, irritation, and guilt can all be exacerbated by this imbalance (Buchheit et al., 2016).

Strategies for Promoting Emotional Well-being

The accounting industry, which is notorious for its high standards and stressful work atmosphere, is starting to understand how critical it is for its members to maintain emotional health. As the profession develops, emotional wellness techniques are becoming more and more important for preserving peak performance, contentment at work, and long-term career longevity.

Leadership and Emotional Support

In accounting organizations and departments, emotional well-being is largely dependent on leadership. Leaders who place a high priority on emotional health foster a work atmosphere where staff members feel appreciated, empowered, and supported in their ability to properly manage their emotional health.

In these circumstances, emotional intelligence (EI) is a critical component of leadership. High EI leaders are better able to recognize and meet the emotional demands of their team members. They are able to identify symptoms of mental distress, burnout, or stress and offer the proper help. Another useful tactic for offering emotional support is mentoring programs. By matching together less seasoned accountants with more seasoned ones, a support network where emotional difficulties can be freely shared can be established. Mentors can offer their insights on how to handle stress, preserve a work-life balance, and deal with the challenges of the industry.

Establishing an atmosphere where employees feel comfortable sharing their emotional concerns requires open-door policy and frequent check-ins. Leaders should arrange one-on-one sessions with team members to talk about personal well-being in addition to work-related concerns. According to Luthans et al. (2007), this strategy facilitates prompt intervention and aids in the early identification of possible emotional difficulties. Leaders should also provide a good example for others by modeling positive emotional habits. Leaders set a good example for their people by practicing effective stress management, work-life balance, and self-care. The whole emotional environment inside the organization can be greatly impacted by this modeling effect.

Encouraging a Positive Work Culture

Promoting emotional well-being in accounting requires fostering a healthy work culture. This entails creating an atmosphere that prioritizes personal development and well-being in addition to career accomplishments.

Encouraging work-life balance is one important tactic. Policies that discourage overworking as well as flexible working hours and remote work choices can help achieve this. To guarantee that workers have unhindered personal time, several accounting businesses, for example, have put in place "no email" policies for the nights and weekends (Buchheit et al., 2016).

Social gatherings and team-building exercises can also support a strong workplace culture. These get-togethers give accountants the chance to socialize with one another and build a sense of support and camaraderie. Stress reduction and emotional well-being can be enhanced by engaging in activities that encourage relaxation and laughing (Mesmer-Magnus et al., 2012).

Putting wellness initiatives into place is another smart move. Workshops on stress management, mindfulness instruction, and physical fitness campaigns are a few examples of these programs. Offering yoga or meditation classes, for instance, during lunch breaks might give staff members' useful tools for stress management.

It is critical to promote candid dialogue around mental and emotional wellness. This might be accomplished by hosting frequent workshops, seminars, or guest lectures on subjects pertaining to mental well-being. Fostering an environment where talking freely about emotional difficulties is appropriate can greatly lessen stigma and motivate staff to get assistance when they need it (Dimoff & Kelloway, 2019). Additionally, tension and anxiety can be considerably decreased by promoting a learning culture in which errors are seen as chances for improvement rather than as failures. This method lessens the fear of failure that frequently afflicts accountants with perfectionistic tendencies and promotes innovation and creativity (Edmondson, 2018).

Recognition and Rewards for Emotional Resilience

Recognizing and rewarding emotional resilience is a powerful strategy for promoting emotional well-being in accounting. This approach acknowledges that managing emotional challenges is a valuable skill that contributes to overall professional success.

Including emotional intelligence and resilience factors in performance evaluations is one approach to put this into practice. These assessments can evaluate how successfully workers communicate with others, handle stress, and keep a positive outlook in the face of adversity. Organizations demonstrate the significance of emotional health in addition to technical expertise by incorporating these elements into performance appraisals. Employers can recognize employees that exhibit excellent

emotional intelligence and resilience by implementing a recognition program such as the "Emotional Resilience Award" or something similar. This might be a monthly or quarterly honor given to people who have handled stressful events well or made a major contribution to preserving a positive work atmosphere (Buchheit et al., 2016).

Opportunities for professional growth that prioritize emotional health can also be considered a prize. In addition to being beneficial to the person, providing employees with the opportunity to participate in training sessions, workshops, or conferences on subjects like emotional intelligence, stress management, or mindfulness also demonstrates the organization's commitment to mental well-being. Effective financial incentives can also be linked to indicators of emotional health and team spirit. Bonuses or other benefits, for example, can depend in part on what coworkers have to say about a person's contribution to team spirit and emotional support (Buchheit et al., 2016).

Establishing a peer recognition program that allows staff members to recognize coworkers for their emotional support or resilience can help to promote a culture that values these soft skills. A digital platform where staff members can offer "kudos" or more official acknowledgment during team meetings could serve as this system's basic implementation (Mesmer-Magnus et al., 2012).

Building a Socially Supportive Environment

The accounting profession, often perceived as a solitary and numbers-focused field, is increasingly recognizing the importance of social connections and a supportive work environment.

Importance of Social Connections in Accounting

For accountants to succeed both personally and professionally, social ties are essential. The reality of modern accounting entails a great deal of interpersonal connection, both with clients and among teams, in contrast to the cliché of accountants working in solitude. Strong social ties at work have been linked in studies to better overall health, lower levels of stress, and more job satisfaction. These social networks can act as a protective barrier against burnout and emotional tiredness for accountants, who frequently work in high-pressure environments with demanding workloads. Furthermore, social networks promote professional growth and knowledge exchange. The capacity to pick up knowledge from peers and exchange experiences is crucial in a field where rules and technological advancements necessitate constant learning (Vera-Muñoz et al., 2006). Informal mentoring links, which frequently originate from social connections, can offer direction and assistance, especially to early-career accountants acclimating to the intricacies of the field.

Social connections also contribute to a sense of belonging and organizational commitment. Accountants who feel socially connected to their colleagues and workplace are more likely to remain with their organization, reducing turnover rates and associated costs.

Promoting Collaboration and Teamwork

Even though accounting work frequently calls for solitary concentration, encouraging cooperation and teamwork is crucial for fostering a positive social atmosphere and improving output. Using cross-functional teams on difficult projects is one good tactic. By combining various points of view, this method not only strengthens problem-solving skills but also

promotes social ties throughout accounting specialties (Choi et al., 2010).

Teamwork can be facilitated by collaborative technological solutions, particularly in this day of remote and hybrid work arrangements. Even when team members are geographically separated, they can still feel connected and work together thanks to platforms that provide real-time communication on financial documents, shared project management, and virtual team meetings (Janvrin & Watson, 2017). Frequent team-building exercises can enhance collaboration and fortify interpersonal bonds in both professional and social contexts. These events give accountants the chance to network in a variety of settings, from professional development seminars to informal social gatherings.

Another essential component of fostering collaboration is fostering a culture of knowledge sharing. This can be accomplished by launching internal newsletters that showcase team accomplishments, holding frequent "lunch and learn" sessions where team members impart knowledge, or setting up a mentorship program that matches seasoned accountants with less seasoned team members. Collaboration is greatly enhanced by leadership. The collaborative culture of accounting teams can be greatly influenced by leaders who set an example of collaboration, acknowledge teamwork, and provide chances for team participation during decision-making.

Enhancing Communication Skills

A socially supportive environment is built on effective communication, which is also essential for success in the accounting field. Improving communication abilities among accounting professionals can result in better teamwork, stronger client relationships, and higher performance all around.

Training courses emphasizing effective written and vocal communication are crucial. These ought to address topics like how to write reports that are clear and succinct, how to effectively present financial data to audiences who are not in the financial industry, and how to communicate with people on a human level. In the field of accounting, where meticulousness is essential, active listening abilities are especially vital. Active listening instruction can strengthen client interactions, decrease mistakes, and increase team member understanding. When handling intricate financial data or meeting client requests, this ability is quite helpful (Stone & Lightbody, 2012).

Training in emotional intelligence (EI) can greatly improve communication abilities. Stronger professional connections and more effective communication result from accountants with high emotional intelligence (EI) because they are better able to comprehend and control both their own and others' emotions (Cook et al., 2011). It is essential to promote clear and honest communication within accounting teams. An atmosphere where team members feel comfortable sharing ideas, problems, and criticism can be fostered by holding regular team meetings, having open-door policies for leadership, and setting up channels for anonymous input (Edmondson, 2018).

The ability to communicate across cultural boundaries is becoming more and more crucial in today's worldwide corporate world. Accountants who operate in multinational corporations or with a broad clientele may find it very beneficial to receive training in cultural sensitivity and international communication standards (Caligiuri & Tarique, 2012).

Tools and Resources for Enhancing Social Interactions

The accounting industry, which has long been thought of as a solitary,

numbers-focused vocation, is beginning to understand the value of social contacts for overall well-being, job happiness, and professional development.

Team-building Activities and Workshops

Workshops and team-building exercises are crucial resources for encouraging interpersonal communication and establishing bonds among accounting professionals. These might be anything from unstructured social gatherings to seminars aimed at improving teamwork and communication abilities.
Setting up team days or getaways off-site is one efficient strategy. These gatherings give accountants a chance to socialize in a less formal setting, away from the demands of the office. Tasks could involve solving puzzles, going on outdoor excursions, or working in teams to complete creative projects. Studies have indicated that these kinds of exercises can enhance communication, team cohesiveness, and general performance.

Soft skill development workshops can also be useful instruments for fostering teamwork. Workshops on emotional intelligence, conflict resolution, or effective communication, for example, not only improve these vital abilities but also provide team members a chance to engage and grow from one another. Research has indicated that these kinds of seminars can greatly enhance team dynamics and interpersonal connections in work environments. Frequent social activities can foster a more supportive and cohesive work atmosphere. Examples of these activities include monthly team lunches, after-work get-togethers, and team accomplishment celebrations. The accounting team's feeling of community is fostered by these casual conversations, which enable team members to forge ties beyond discussions pertaining to work (Looyestyn et al., 2017).

Enhancing team-building exercises with gratification components can boost participation and make the process more pleasurable. To encourage team members to connect more regularly and meaningfully, for instance, friendly competitions centered around on going education or the implementation of a points system for collaborative activities can be put into place (Looyestyn et al., 2017).

Utilizing Technology for Social Connectivity

Technology is essential for improving social connectivity in a world going digital, particularly when it comes to the remote or hybrid work environments that are typical of the accounting industry. In dispersed teams, virtual collaboration platforms such as Zoom, Microsoft Teams, and Slack have proven indispensable for preserving social relationships. These platforms resemble the impromptu talks that might take place in a real workplace setting by facilitating both professional and informal communication. Effective use of these technologies can improve job satisfaction and team cohesion in remote work contexts, according to research (Anders, 2016).

Social intranet platforms can act as digital water coolers, giving accountants a place to celebrate successes, exchange personal and professional updates, and have casual conversations. These platforms can foster a feeling of community, particularly in bigger organizations or departments where in-person connections may be scarce. Online games, virtual coffee breaks, and remote lunch-and-learn sessions are a few examples of virtual team-building activities that can support the upkeep of social links in scattered teams. According to Gilson et al. (2015), these kinds of activities can be very useful in helping distant team members feel like they belong.

Mobile apps designed for employee engagement and recognition can

also enhance social interactions. These apps allow team members to give peer-to-peer recognition, share accomplishments, and participate in company-wide challenges or initiatives, fostering a culture of appreciation and connection.

Mentoring and Peer Support Programs

Peer support and mentoring programs are excellent tools for improving social connections and offering accounting professionals chances for professional growth. Formal mentorship programs can help transfer information and offer social support by matching more seasoned accountants with less seasoned colleagues. These contacts create deep social bonds within the company and frequently go beyond simple professional advice. Effective mentoring programs have been found to enhance organizational commitment, career advancement, and work satisfaction.

Forming supportive social networks can be especially successful when accountants at comparable career levels are partnered together in buddy systems or peer mentorship. These connections facilitate learning and support from one another, which is particularly helpful when overcoming obstacles or going through similar experiences in the accounting industry.

Within an organization, group mentoring programs—in which a senior accountant guides a small group of less experienced colleagues—can promote both horizontal and vertical ties. This strategy promotes peer-to-peer contacts and assistance in addition to offering advice from qualified professionals (Huizing, 2012). Establishing communities of practice can improve social relationships and advance professional growth. Communities of practice are groups of accountants with similar interests or expertise who get together to share knowledge and experiences. These communities offer forums for cooperative learning and problem-solving and might be structured around particular accounting specialties, business sectors, or shared difficulties.

Addressing Work-Life Balance and Stress Management

The accounting industry is well known for being extremely hard, with long hours, strict deadlines, and stressful work settings. Because of these variables, stress management and work-life balance are important concerns for accountants and their employers.

Importance of Work-Life Balance in Accounting

The balance between one's personal and professional obligations is referred to as work-life balance. Achieving this balance is especially difficult in the accounting industry because work is cyclical, with peak times throughout tax seasons, audits, and financial year-ends. Poor work-life balance in accounting has been linked to a number of unfavorable effects, according to research. According to a study by Buchheit et al. (2016), there is a substantial correlation between work-family conflict and higher job burnout and lower job satisfaction among accountants. This can therefore result in lower output, increased rates of employee turnover, and possibly unethical behavior. The significance of maintaining a work-life balance transcends personal welfare. Work-life balance-focused companies frequently witness increases in employee engagement, retention, and general performance.

Work-life balance is a critical issue for the accounting profession as a whole in order to draw and keep talent. Businesses that don't adapt risk losing out on top talent as younger generations enter the workforce with altered expectations on work-life integration.

Strategies for Stress Management

Maintaining a healthy work-life balance and general wellbeing in the accounting field depend on effective stress management. It has been discovered that the following tactics work especially well:

Time Management and Prioritization: Accountants can better manage their workload by putting into practice efficient time management strategies. By ensuring that important deadlines are reached, assigning projects a priority based on their urgency and importance can also help alleviate stress.

Meditation and mindfulness: It has been demonstrated that these practices can help people focus better and feel less stressed. According to a 2007 study by Jain et al., daily meditation sessions, even for little durations, can dramatically lower stress and anxiety levels.

Frequent Exercise: Exercise is a highly effective way to alleviate stress. Regular exercise, whether it be through office yoga classes, lunchtime walks, or gym memberships, can greatly enhance stress management.

Establishing Limits: Work-life balance and stress reduction can be achieved by clearly defining boundaries between work and personal life, such as limiting emails sent after hours or setting up designated "unplugged" periods (Kossek et al., 2012).

Looking for Social Assistance: Having supportive social networks both at work and outside of it can help reduce stress and offer emotional support. Within accounting firms, peer support groups and mentoring programs can be especially helpful.

Implementing Wellness Programs and Policies

Policies and programs pertaining to wellness are organized efforts aimed at promoting the health and happiness of workers. These courses can be especially helpful when it comes to accounting for work-life balance and stress reduction.

Flexible Work Schedules: Providing remote work or flexible work schedules can greatly enhance work-life balance. According to a 2007 study by Gajendran and Harrison, telecommuting was linked to lower work-family conflict and higher job satisfaction.

Support for Mental Health: Giving accountants access to mental health resources, including Employee Assistance Programs (EAPs) or counseling services, can aid in stress management and emotional wellbeing. Employee resource utilization and general mental health improved at companies with strong mental health support systems, according to Dimoff and Kelloway's (2019) research.

Wellness education: Employees can take control of their own health by attending workshops or seminars on subjects including financial wellness, stress management, and nutrition. When these educational programs are specifically designed to address the issues that accountants encounter, they can be especially successful.

Initiatives for Physical Health: Encouraging physical exercise through the use of step challenges, discounted gym memberships, or on-site fitness courses can improve general health and reduce stress.

Policies for Workload Management: Burnout can be avoided by creating regulations that deal with workload distribution, particularly during busy times of the year. This could involve tactics like job sharing, hiring more temporary workers, or requiring time off after long stretches of labor.

Technology Policies: In an increasingly connected society, enforcing rules around the use of technology, such as "email-free" hours or restricting communications after hours, can help preserve work-life balance (Barber & Santuzzi, 2015).

Promoting Diversity, Equity, and Inclusion in Accounting

The accounting profession has long been recognized for its need to improve diversity, equity, and inclusion (DEI). As the business world becomes increasingly globalized and diverse, the accounting field must adapt to reflect and serve a broader range of perspectives and experiences.

Creating an Inclusive Workplace Culture

In order to advance diversity and equity in accounting, an inclusive workplace culture is essential. It entails establishing a workplace where each worker feels appreciated, respected, and free to offer their special talents and viewpoints. The dedication of the leadership is essential to creating an inclusive culture. The tone for the entire company is created by leaders who actively support initiatives and exhibit inclusive conduct. Practices for inclusive communication are also crucial. This entails speaking inclusively, making sure that a variety of voices are represented in corporate communications, and maintaining open lines of communication for comments and discussion.

Another crucial element is putting inclusive policies and practices into action. This could entail making sure that all candidates have equal access to development opportunities, providing flexible work schedules to meet the needs of a diverse workforce, and rewriting the recruitment and promotion procedures to remove bias. Such structural alterations were proven to be more successful in promoting diversity than diversity training alone. Employees that receive cultural competence training may be better able to comprehend and value various viewpoints. According to Belzukova et al. (2016), this training should go beyond awareness to build abilities for productive cross-cultural communication and teamwork.

Addressing Bias and Stereotypes in Accounting

Preconceptions and biases continue to be major obstacles to inclusion and diversity in accounting. A diversified strategy is needed to address these problems. One typical place to start is with unconscious bias training. Although its efficacy has been contested, research indicates that it can lessen bias in decision-making processes when paired with other activities (Noon, 2018). It is imperative, nevertheless, that this kind of training not only raises awareness but also offers tactics for reducing bias in regular work environments.

Frequent audits of important HR procedures, including as hiring, promotion, and performance reviews, can assist in locating and resolving possible biased areas. According to Castilla's (2015) research, integrating responsibility into organizational procedures can greatly lessen prejudice in decisions about promotions and performance reviews. It's also critical to dispel myths regarding accountants and the accounting industry. This may entail aggressively seeking people from a wide pool, exhibiting diverse role models in the industry, and emphasizing the dynamic and diversified character of accounting job (Czerny et al., 2019).

Supporting Diversity Initiatives and Employee Networks

Employee resource groups (ERGs) can be extremely important in promoting diversity and inclusion. These organizations offer underrepresented groups a forum to express their issues and ideas as well as support and networking opportunities.

Mentoring programs can be useful in fostering diversity in leadership, especially those that support marginalized groups. Firms can show their commitment to diversity and broaden their talent pool by forming partnerships with different

professional associations like the Association of Latino Professionals for America or the National Association of Black Accountants (Monga, 2016).

It can be very successful to implement sponsorship programs when senior leaders actively support the promotion of diverse talent. Sponsorship was proven to be a significant element in women's and minorities' job advancement in professional services firms by Hewlett et al. (2010).

Measuring and Improving Emotional and Social Health of Accountants

Accountants' emotional and social wellbeing is essential to their personal achievement as well as the success of their organizations. It is crucial to assess and enhance the emotional and social well-being of accounting professionals as the field deals with more and more issues pertaining to stress, work-life balance, and shifting workplace dynamics.

Assessing Employee Satisfaction and Engagement

One of the most important measures of emotional and social well-being at work is employee engagement. Measuring these variables can give accounting businesses important information about the general wellbeing of their employees and point out opportunities for development. Surveys are a popular tool for determining employee happiness. Aspects of the work environment that can be covered by these surveys include perceptions of organizational support, relationships with superiors and coworkers, job satisfaction, and work-life balance.

Compared to standard annual surveys, pulse surveys are more frequent and shorter, and they can offer real-time insights into employee engagement and satisfaction. Organizations can swiftly recognize and resolve new concerns by using these surveys (Welbourne, 2016).

Utilizing the Employee Net Promoter Score (eNPS), which gauges employee loyalty by asking respondents if they would suggest their company as a place to work, is an additional strategy. According to research, eNPS can predict organizational performance and has a good correlation with employee engagement.

Focus groups and one-on-one interviews are examples of qualitative techniques that can enhance quantitative surveys by offering more in-depth information on the viewpoints and experiences of employees. These techniques can be very helpful in figuring out the subtleties of social and emotional well-being in the accounting setting.

Feedback Mechanisms and Continuous Improvement

Emotional and social health programs must be continuously improved, and this requires the implementation of efficient feedback mechanisms. It is imperative that these systems provide communication at both the top and lowest levels of the business to guarantee full participation in the improvement process.

360-degree feedback systems, in which workers get input from peers, superiors, and subordinates, can offer a thorough picture of a person's work and people skills. Studies have indicated that the proper application of 360-degree feedback might result in enhanced team performance and leadership conduct.

Managers and staff members checking in on a regular basis can act as a continuous feedback system. Beyond work-related topics, these talks should cover topics including the employee's well-being, professional growth, and any difficulties they may be having. Employee engagement is nearly three times higher among those who meet with their managers on a regular basis, according to Gallup (2016) study. Digital platforms or anonymous comment boxes can give a secure forum where staff members can

express their worries or make suggestions for enhancing the workplace. This can be especially helpful in accounting organizations, as open criticism may be discouraged by hierarchical systems.

Case Studies and Best Practices in Accounting Firms

Numerous accounting organizations have adopted creative strategies to enhance the mental and social well-being of its staff members. Analyzing these case studies can give other firms in the field important insights. Four aspects of employee well-being are highlighted by Deloitte's "Well-being at Deloitte" program: social, emotional, financial, and physical. Initiatives like social connection activities, financial wellness tools, and mindfulness training are all part of the program. This all-encompassing strategy has increased employee satisfaction and retention rates, according to Deloitte.

The goal of PwC's "Be well, work well" campaign is to assist staff members in developing their energy in four areas: mental, emotional, spiritual, and physical. Features of the program include energy assessments, customized wellness plans, and access to a community of champions for well-being. Since putting this approach in place, PwC has noted increases in worker productivity and engagement (PwC, 2019).

The goal of KPMG's "Everyone's a Leader" initiative is to foster leadership at all organizational levels. This method acknowledges the strong relationship between social and emotional well-being and personal development and empowerment. According to KPMG, this program has enhanced career satisfaction and staff engagement (KPMG, 2017).

Conclusion

This paper recognizes that in order for accountants to flourish and give their best work, they need a supporting environment, just like experts in any other industry. There are several aspects involved in fostering a positive emotional and social environment in accounting. It demands leadership that places a high value on emotional intelligence and offers reliable support networks. It is essential to cultivate a pleasant work environment that prioritizes cooperation, open communication, and work-life balance. Furthermore, the relevance of emotional resilience in addition to technical skills can be reinforced by acknowledging and rewarding it. It is equally important to create a socially friendly workplace. This entails encouraging collaboration, improving interpersonal communication, and utilizing technology to keep in touch, particularly in remote work environments. Professional development and social ties can be further strengthened by putting peer support networks and mentoring programs into place.

Recommendations

Based on the review of this paper, accounting professionals and organizations should consider the following recommendations:
1. Implement comprehensive wellness programs that address both emotional and physical health.
2. Provide leadership training focused on emotional intelligence and supportive management practices.
3. Offer flexible work arrangements to promote better work-life balance.
4. Establish mentoring programs and peer support networks.
5. Invest in technology that facilitates collaboration and social connection.
6. Regularly assess employee satisfaction and engagement, using the feedback to drive continuous improvement.
7. Promote diversity, equity, and inclusion to create a more inclusive and supportive work environment.

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ERGONOMIC PRACTICES AND THEIR IMPACT ON LOW BACK PAIN AMONG NURSES IN A TERTIARY INSTITUTION IN EKITI STATE.

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Abstract
This study examines the ergonomic practices to mitigate low back pain among nurses in Ekiti State. A cross-sectional survey was conducted among 196 nurses working in a tertiary institution in Ekiti State, Nigeria, to assess the prevalence of low back pain and the extent to which nurses employ ergonomic practices to prevent it. The survey revealed that more than half of the respondents practice key ergonomic principles, with 53.5% keeping their back straight while pushing, 47.4% calling for assistance when lifting, and 50% rolling patients instead of lifting. However, nearly half (48.5%) reported experiencing work-related low back pain, with varying durations and impacts on job performance. The study also found that incorrect postures, frequent patient lifting, and prolonged standing were the perceived causes of low back pain. In conclusion, the study highlights the importance of ergonomic practices in reducing low back pain among nurses. While a significant number of nurses adhere to ergonomic practices, there is still a notable prevalence of low back pain, impacting their health and job. The findings suggest that enhancing ergonomic education is crucial in the prevention of low back pain among nurses. We need more research to assess the long-term effects of these ergonomic principles and their cost-effectiveness in enhancing nurses' health and productivity.

Keywords: back pain, ergonomics, practices, effects, Nurses

Introduction

Low back pain (LBP) is a highly prevalent occupational-related hazard among nurses, owing to the physical demands of their job (Serra, et al., 2019). The nature of nursing work, which often involves lifting heavy loads, working in awkward postures (Liu, et al., 2023), and transferring patients, puts nurses at high risk for work-related musculoskeletal disorders, especially low back pain (Jegnie & Afework, 2021). In fact, nursing ranks among the top ten professions with a significant risk of low back pain. (Kasa, et al., 2020). The prevalence cut across different healthcare settings and regions across the globe, the highest rates has been observed in the West African region because of excess workload and high

physical demands of nursing job exacerbated by scarcity of resources and infrastructures, high patient-to-nurse ratio, limited access to equipment and technology (Kasa, et al., 2020; Fatoye, et al, 2023). All these make nurses commonly engage in manual labour and heavy lifting, manual handling of patients, awkward postures, and repetitive movements, which are significant risk factors for developing LBP.

The nursing profession is significantly impacted by the prevalence of low back pain which has far-reaching consequences for patient care, healthcare systems, and nurses themselves. Pain is defined as an unpleasant sensory and emotional experience associated with actual or potential tissue damage,

(International Association for the Study of Pain (IASP) 2021). The quality of care a nurse can provide could be highly compromised by low back pain, reducing productivity (Skela-Savic, Pesjak, & Hvalic-Touzery, 2017). LBP's consequences for nurses extend beyond physical discomfort, affecting their ability to perform daily activities and job responsibilities. A tertiary care setting study found that made it difficult for nurses to climb stairs, walk, stand up, sleep, get out of bed, and wear clothes. Low back pain can profoundly affect nurses' personal lives, causing pain, fatigue, and decreased participation in activities outside of work (Abolfotouh et al. 2015).

Furthermore, LBP is a leading cause of work-related absenteeism among nurses (Serra, et al. 2019). This not only affects the individual nurse but also places additional strain on their colleagues and the healthcare system. Also, LBP may make it difficult for sufferers to perform physically demanding tasks such as lifting or moving patients, compromising patient care. The stress and physical demands associated with LBP can lead some nurses to contemplate leaving the profession altogether, which can exacerbate the nursing shortage, especially at this crucial time when Nigeria's healthcare sector, particularly nursing, has experienced a substantial loss of skilled and experienced personnel due to emigration and affect healthcare delivery job performance, and absenteeism at work (Liu, et al., 2023). The challenge of low back pain is enormous for the nurses.

Keeping back straight while pushing objects is a fundamental ergonomic practice. By keeping the back straight, the nurses are able to align their spine properly, which reduces the strain on the back muscles and ligaments. Also, calling for assistance when lifting not only prevents back injuries but also promotes teamwork and safety culture in the workplace.

Rolling patients instead of lifting is a technique that minimizes the risk of injury to both the patient and the caregiver. Lifting heavy objects from a squatting position helps in engaging the legs and core muscles, which are stronger than the back muscles, thereby protecting the lower back. While maintaining an ideal spinal position while standing is crucial for minimizing back stress, especially during prolonged periods of standing. Also, keeping an ideal body weight, is important because excess weight, particularly around the midsection, can put additional pressure on the back and lead to pain (Heuel, Otto, & Wollesen, 2023). All these practices reflect a good understanding of ergonomics and highlight the importance of proactive measures in preventing low back pain. It is also worth noting that continuous education and training on proper body mechanics are essential for sustaining these practices and further reducing the incidence of work-related back injuries.

Statement of the Problem

Nurses in Nigeria face increasing work demands due to the mass departure of nurses seeking better opportunities abroad. The limited available nurses are burdened with excessive workloads. Despite the physically demanding nature of nursing, Nigerian nurses often perform manual tasks due to resource scarcity, high patient-to-nurse ratios, and limited access to technology. These factors contribute to their vulnerability to developing low back pain (LBP). While studies have highlighted the prevalence of LBP among nurses, there is a lack of research on preventive solutions. Understanding ergonomic principles and implementing safe patient handling programmes is crucial in addressing this issue. However, research that investigates and relates ergonomic practices to preventing low back pain is not common, making the index study pertinent. Thus, this study

examines the relationship between ergonomic practices and incidents of LBP among nurses

Research Questions

Three research questions were raised to guide the study. They are as follows:
1. To what extent do the nurses engage in back ergonomics?
2. What is the rate of low back pain among nurses in Ekiti State?
3. What are the common effects of low back pain on nurses' job?

Research Hypothesis

One hypothesis guides this study:
1. There is no significant difference in the incidence of low back pain between nurses with high and nurses with low ergonomics practice scores among Nurses in Ekiti State.

Research Methods

The study utilized a descriptive cross-sectional approach to evaluate the relationship between ergonomic principles and their impacts on the incidents of low back pain among nurses in Ekiti State. The study was conducted among 196 nurses at Ekiti State University Teaching Hospital (EKSUTH), Ado-Ekiti. A purposive sampling technique was used to select EKSUTH as the study center, being the only state teaching hospital in Ekiti State and having the largest population of nurses among other health institutions in the state. The 300 nurses working in EKSUTH represent the study population, while 196 randomly selected across five departments were the study sample. After obtaining the informed consent from the selected participants, a self-structured questionnaire was administered to them to collect data, the questionnaire consisted of three sections. The first section collected demographic information, the second section collected information on the practice of ergonomic principles at work among the nurses, and the third section collected information on nurses' experiences with low back pain. Data was collected by the researcher and one trained research assistant. Collected data were coded and analyzed using SPSS version 23.

RESULTS
Introduction

This section presents the results of the study, which aimed to investigate the relationship between practice of ergonomic principles and experience of low back pain among nurses.

Descriptive statistics

The mean age of 29.9 ± 1.0 years with majority 122 (62.2) between the ages of 19–29. More than half of them 126 (64,3%) were females and 70 (35.7%) were males, giving a male-to-female ratio of 1.59:1. Five units of the hospital were represented in the study; 55 (28.1%) nurses work in the surgical ward, 72 (36.7%) work in the medical ward, 17 (8.7%) nurses work in the emergency unit, 28 (14.3%) from the maternity while the remaining 24 (12.2%) work in the children's ward. Also, regarding the cadre, of the respondents, more than half of the nurses were in low cadre with 73 (37. 2%) Nursing Officer 11 (NO11) and 36 (18.4%) Nursing Officer 1 (NO1) while only 9 (7.2%) were either Chief Nursing Officers (CNOs) or Assistant Director of Nursing Services (ADNS). The respondents Socio-Demographic data are shown in Table 1 below.

Table 1: Socio-Demographic Profile of the Respondents

Items	F	%
Age range		
19-29	122	62.2
30-39	37	18.9
40-49	21	10.7
50-59	16	8.2
Sex		
Male	70	35.7
Female	126	64.3
Wards/ units		
Surgical	55	28.1
Medical	72	36.7
Emergency	17	8.7
Maternity	28	14.3
Children	24	12.2
Highest educational level		
Basic nursing	97	49.5
Degree	78	39.8
Post graduate	21	10.7
Cadre		
Nursing officer 11	73	37.2
Nursing officer 1	36	18.4
Senior nursing officer	48	24.5
Assistant chief nursing officer	25	12.7
Chief nursing officer	9	4.6
Assistant Director	5	2.6

Extent of Ergonomic Principles Practices among Nurses in Ekiti State

Seven multiple-choice questions with three options were asked to ascertain the practice of ergonomic principles for back pain prevention among nurses. 1 point was assigned to the correct answer and 0 points to the incorrect answer. In all, 698 points were scored out of 1372. Meaning (51%) of nurses practice ergonomic principles at work.

On practices that prevent low back pain at work, a little above half of the respondents, 115 (53.5%) indicated that they keep their back straight while pushing objects as a way of preventing low back pain. 93 (47.4%) indicated that they call for assistance when work requires lifting; 98 (50%) claimed to roll patients from side to side instead of lifting, and 90 (45.9%) lift heavy objects from a squatting position. Another 111 (56.6%) maintain correct position of the spine while standing, 83 (42.3%) do frequent changing of position during prolonged standing, and 106 (55.1%) maintain ideal weight. This is further explained in Table 2.

Table 2: Practice of Back Ergonomics

Practice of ergonomics principles by nurses	Frequency	Percentage
Keeping back straight while pushing objects	115	53.5
Call for assistance when work requires lifting	93	47.4
Roll patients from side to side instead of lifting	98	50.0
Lifting heavy objects from a squatting position	90	45.9
Maintaining the correct position of the spine while standing	111	56.6
Frequent changing of position during prolonged standing	83	42.3
Maintaining ideal weight	108	55.1
Total	698	51%

Incidents of Low Back Pain among Nurses

In this study, more than three-quarters of nurses 165 (84.2%) have experienced work-related low back pain before, with 95 (48.5%) nurses currently suffering from back pain, among which 60 (63.2%) have pain for less than six weeks, 21 (22.1%) have the pain for about 6-12 months and the remaining 14 (14.7%) have chronic pain for over 12 months. The pain was considered mild by 49 (51.6%), while 36 (37.9%) described their pains as moderate and the remaining 10 (10.5%) nurses indicated that they were having severe LBP. On perceived causes of the pain, 29 (30.5%) perceived the pain to be caused by wrong postures while working, 54 (56.8%) ascribed it to frequent lifting of patients, and 12 (12.6%) indicated prolonged standing as the cause. The results are further presented in Table 3.

Table 3: Experience with Low Back Pain among Nurses

Items	Frequency	percentage
Ever suffer from work-related low back pain?		
Yes	165	84.2
No	31	15.8
Currently suffering low back pain?		
Yes	95	48.5
No	101	51.5
Duration of the pain		
less than six months	60	63.2
six to twelve months	21	22.1
over 12 months	14	14.7
The severity of the pain		
Mild	49	51.6
Moderate	36	37.9
Severe	10	10.5
Perceived causes of low back pain		
Wrong postures while working	29	30.5
Frequent lifting of patients	54	56.8
Prolonged standing	12	12.6

Common Effects of Low Back Pain on Nurses' Job Performance

The result revealed that low back pain hinders 89 (93.7%) out of 95 nurses who currently suffer low back pains to provide adequate care for their patients, with 66 (69.5%) indicating that low back pain was responsible for a high rate of their absence from duty. Another 76 (80%) nurses claimed that they lose money on pain medication, while the other 24 (25.3%) nurses claimed that because of low back pain, they waste a lot of time in physiotherapy clinics. Also, 3 (3.2%) of the nurses have been admitted and treated with tractions at one time or the other, which was also part of time loss. The summary of this finding is shown in Table 4 below:

Table 4: Common Effects of Low Back Pain on Nurses' Job Performance

Difficulty in providing adequate care for patients	89	93.7
High rate of absence from duty	66	69.5
Losing money to pain-relieving medications	76	80.0
Waste time in the Physiotherapy clinic for exercise	24	25,3
Admitted for traction	3	3.2

The result of the t-test showed that the t-cal is 42.312, and the p-value is .000 at 0.05 level of significance which implies that there is a significant difference in the incidence of low back pain based on ergonomic practice scores which implies that nurses who practice ergonomic principles are less likely to develop low back pain. Thus, the null hypothesis is rejected. This is shown in Table 5 below:

Table 5: Difference in Incidence of Low Back Pain based on Ergonomics Practice Scores

Ergonomic practice score	Incidence of low back pain	Absence of Low back pain	SD	Df	t-cal	P value
High	23	78	.501	195	42.312	.000
Low	80	15	3.585			

*p < 0.05

Table 5 revealed that nurses who scored high at the practice of ergonomic principles are less likely to develop low back pain. The calculated t-value was 42.312 and the corresponding p-value was 0.00. Since the p-value is < 0.05 level of significance, the null hypothesis was rejected, which implies that there is a significant difference in the incidence of low back pain among nurses based on the ergonomics practice score.

Discussion of Findings

The study aimed to investigate the experience of nurses with low back pain and the practices of ergonomic principles as preventive strategies. The data of the survey showed that more than three-quarters of nurses (84.2%) have experienced work-related low back pain at one time or another, and almost half of the nurses (48.5%) experienced work-related low back pain at a chronic level. This is significant, considering that low back pain (LBP) is one of the most common musculoskeletal disorders among nurses. This finding is consistent with the findings of many researchers (Liu, et al., 2023; Jegnie & Afework, 2021; Kasa, et al., 2020), and it is an indication of the fact that low back pain is very common among nurses.

Another finding of this study revealed that most nurses were aware of the causes of their LBP; more than half (56.8%), attributed LBP to frequent lifting of patients, wrong postures at work was identified as the cause of LBP by over thirty percent, other (12.6%) nurses were identified prolonged standing as main contributors to LBP. These activities are inherent to nursing and highlight the need for ergonomic interventions and proper training in body mechanics. This finding is also supported by the finding of Liu, et al., (2023), who found that nurses are aware of the causes of low back pain but are not really doing much to prevent it. The study further revealed that the practice of ergonomic principles among nurses in Ekiti State is at a moderate level as not up to half of the study sample have a good ergonomic practice score, such as keeping back straight while pushing objects or patients, calling for assistance when work requires lifting, rolling patients from side to side instead of lifting, carrying heavy objects from a squatting position, maintaining the correct position of the spine while standing, and maintaining an ideal weight as much as possible. All these practices reflect a good understanding of ergonomics and highlight the importance of proactive measures in preventing low back pain. It is also worth noting that continuous education and training on proper body mechanics are essential for sustaining these practices and further reducing the incidence of work-related back injuries. This finding is similar to the finding of Roman-Liu, et al., (2020), who found that the nurses have very low ability

to prevent low back pain despite their good attitude towards the prevention. The findings could be due to lack of knowledge of ergonomic principles among the nurses or could be as a result of work overload, which provides no time to engage in practices that could prevent low back pain among the nurses. The findings suggest that enhancing the knowledge of ergonomics may be very necessary to reduce the prevalence of low back pain among nurses.

The study further revealed the impacts of low back pain on job performance among the nurses in Ekiti State. The fact that 93.7% of nurses who reported suffering LBP indicate that the pains hindered their job performance underscores the significant impact of this condition on healthcare delivery. LBP can lead to decreased productivity and increased absenteeism, which can strain healthcare systems, especially in areas with nursing shortages. While nearly three-quarter of nurses with low back pain (69.5%) are frequently excused from duty, to rest as indicated in this study, the work load increases for the remaining nurses on duty and this can impact the health of other nurses and the already weak health system as a whole.

In conclusion, the experiences of low back pain among nurses not only affect their personal health but also have broader implications for healthcare systems. Preventive measures, workplace ergonomics, and effective pain management protocols are essential to address this pervasive issue. Further research could explore the long-term outcomes of these interventions and their cost-effectiveness in improving nurses' health and productivity.

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HEALTHFUL SCHOOL ENVIRONMENT: AN INDISPENSABLE TOOL FOR ATTAINING THE AFRICAN UNION'S AGENDA 2063 FOR TEACHING AND LEARNING

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Abstract

The physical and social components of a school environment are strong determinants of the health and safety of the members of the school community and the effectiveness of the teaching and learning process within such a school. While a safe and healthy school environment contributes positively to the teaching and learning process, the opposite is true for a school with an unsafe, unhealthy physical and social environment. This paper provides insight into how a healthful school environment, in terms of its physical and social components, could enhance the attainment of the African Union's Agenda 2063 for teaching and learning. The source of information in this article was the review of relevant literature. Based on this review, it is evident that a healthful school environment at all levels of learning is an indispensable tool for attaining the African Union's Agenda 2063 for teaching and learning. Therefore, a conscious effort is required from all the concerned bodies to provide the resources to ensure the healthful environment of schools within the African Setting to achieve the African Union's Agenda 2063 for teaching and learning.

Keywords: Healthful School Environment, Physical, Social

Introduction

The health and safety of members of a school community are fundamental to the success of the teaching and learning process within such a school setting. There can never be an effective learning even when all the resources for the teaching and learning are provided, if the health and safety of the learners and the members of staff are compromised or not ensured.

An important factor for ensuring the health and safety of the members of a school is a healthy school environment which supports the healthy growth of learners across all developmental pathways (Healthy Schools Campaign, 2022), and promotes the safety of all the members of the school community. The school is like a second home for both learners and members of staff because more than 8 hours of the day is spent in the school hence every member of the school community deserves a healthy and safe place to learn and work to achieve their academic and professional goals.

The quality of a school environment is directly related to the health and performance of both the learners and the staff members that are found in such a school (Clean India, 2010; Hawkins et al, 2023). A Healthy school environment provides a healthy and safe learning environment for learners and a healthy work environment for personnel thereby fostering good health, better attendance at school, better academic performance, and a high level of productivity on the part of the personnel (Tennessee Department of Health, 2023). Unhealthy school environments on the other hand affect children's health, attendance, concentration, and performance thereby resulting in poor academic performance of learners (Tennessee Department of Health, 2023).

Good quality education, provided in a healthful environment is a fundamental human right and it constitutes one of the prerequisites for sustainable social and economic development in all continents of the world. Africa as a continent, in a bid to be among the best performers in terms of quality of life by the year 2063 has come up with the African's Union 'Agenda 2063'. Agenda 2063 represents the continent's strategic framework for the achievement of a prosperous Africa which is based on inclusive and sustainable growth and development by the year 2063. Agenda 2063 is the actual representation of the Pan-African aspiration for unity, self-determination, freedom, progress, and collective prosperity pursued under Pan-Africanism and African Renaissance. Agenda 2063 was founded on the realization by African leaders that there was a need to refocus and reprioritize inclusive social and economic development, con tinental and regional integration, democratic governance and peace and security amongst other issues aimed at repositioning Africa to becoming a prominent figure in the global arena (African Union, 2024).

Agenda 2063, consists of seven aspirations that are targeted towards building the Africa that is desired by the year 2063. One of the goals highlighted in Agenda 2063 is to ensure that all citizens are well educated and skilled through science, technology, and innovation. To achieve this goal, it is important to harness resources towards maintaining a healthy school environment at all levels of education. This is because a healthful school environment provides a conducive environment for teaching, learning, and innovation. Effective learning outcome is largely based on the premise that learners are healthy, attend school regularly, are motivated to go and stay in school, and concentrate well on their studies and all these can be achieved through the provision of a healthful school environment.

The purpose of this review is to give insight into the meaning, components, importance, and application of a healthful environment to the attainment of the African Union's 2063 Agenda for Teaching and Learning.

The Concept of Healthful School Environment

Healthful school environment is one of the components of the school health programme, and it is defined as, all the consciously organized, planned, and executed efforts to ensure safety and healthy living conditions of the members of the school community (Amoran et al, 2017; Bosede et al, 2021).. A healthful school environment protects its members against immediate injury and makes provision for disease prevention activities and attitudes against risk factors for future disease or disability (World Health Organisation (WHO), 2004).

The purpose of the healthful school environment documented by the Ministry of Education (2006) and cited by Moronkola (2019) include the provision of potable water, promotion of healthy practices to prevent water and sanitation related illnesses; encouragement of compliance with standard environmental health and sanitation practices, provision of safe recreational facilities and the establishment of good social relationships within the school community. In short, healthful school environment aimed at providing a safe and conducive learning and working conditions which is characterized by day-to-day activities that influence the physical, social, and emotional health of members of the school community.

The physical and social components of a school environment serve as major determinants of the health and level of intellectual growth and development of learners. The physical

school environment encompasses the school building and all its contents. These include the physical structures, infrastructure, furniture, the site on which the school is located, nearby land uses, roadway, other hazards, and the surrounding environment including water, air, and materials which could be come in contact with within the school (World Health Organisation, 2004).

A school could only be referred to as having a healthful physical environment, if the following characterise the school: location of the school away from potential danger, availability of perimeter fencing to prevent the invasion of strangers, protection of the school surroundings from unfavourable conditions such as excessive noise, heat, cold and dampness, availability of adequate building constructed in line with approved standards and provisions of facilities that are child, disability and gender sensitive, adequate safe water supply, provision of sanitation, waste disposal, recreation, and sports facilities, provision of gender-based toilets for staff and students and observation of annual school health week (Moronkola, 2019, United Nations Educational, Scientific and Cultural Organisation (UNESCO), 2023).

The social components of a school encompasses the quality of relationships among the students, between the students and staff, among the staff, and between the students or staff and school leadership. Other factors that constitute the school's social environment include well-being, safety, inclusion, diversity, school social media, and virtual settings (School for Health in Europe (SHE), 2023). The social environment of a school is one of the six important key components of the whole school approach to a health-promoting school and it has been reported to have a direct effect on the health and well-being of the members of the school community (SHE, 2023). A healthful social school environment is characterised by: respect

for the personalities of teachers, learners, and parents, positive social relationships among members of the school community, availability of activities and teachings that are developmentally appropriate for curbing social vices such as bullying, cultism, violence, and others, and the promotion of pro-social tools such as self-esteem, conflict resolution skills, and effective communication, activities that promote relaxation, concentration, and fun (SHE, 2023).

The importance of a healthful school environment cannot be over-emphasized. Burrett et al (2019) as reported by UNESCO (2023) stated that learning environments that are safe and healthy have a positive influence on learners' academic outcomes. A school with a regular supply of potable water and quality infrastructure such as well-spaced classrooms and staff rooms with proper ventilation, gender-based toilets, and refuse and sewage disposal facilities, will give the members of the school community access to safe drinking water, water for hand washing and sanitation practices thereby reducing the transmission of communicable diseases within the school community.

A school with good aesthetic value also has a significant positive impact on the members of the school community. A school with beautiful landscapes, well-painted buildings that are decorated with well-trimmed flowers, and lawns, and a clean environment, gives an appealing outlook that encourages learners to want to come to school. According to UIS (2012), cited by WHO (2004), a school with an inviting physical environment that ensures the safety and health of learners, enhances the quality of learning. In the same vein, a school with a good social environment reduces the occurrence of bullying, violence, truancy, occultism, examination misconduct, sexual abuse, and various forms of abuse within the school setting (Moronkola, 2019).

The State of the Physical and Social Environment of Schools in Africa

Over the years there has been a rapid expansion in access to education at the primary and secondary levels and by implication, a high influx of learners into tertiary institutions. It is however unfortunate to note that the growth trend witnessed in the various levels of education is not commensurate with the facilities on the ground thereby resulting in overcrowded classrooms, inadequate laboratories and technological facilities to cater for the increasing population of students and in turn an environment not conducive for effective teaching and learning. According to UNESCO, a lot of schools in Africa lack the basic services required to ensure a safe and healthy environment for quality learning. Many schools have dilapidated buildings, and many lack facilities like potable water, sanitary facilities, and good-quality furniture. In addition, teachers at all levels of education are not being well remunerated, their promotions are delayed, and, the financial implications of such promotions are often not backdated. Teachers are often not given the necessary support and encouragement hence they do not give the best required for effective teaching. In addition, many students have taken to cultism, violence, sexual pervasions, drug abuse, and all forms of vices thereby making schools unconducive to health, safety, and effective learning.

Healthful School Environment and the African Union's Agenda 2063 for Teaching and Learning

The African Union's Agenda 2063, according to the African Union Commission (2023), represents the desire of the people of Africa, irrespective of age, gender, and occupation for the Africa they want. It is a seven-point agenda that reflects the desires of the people of Africa for shared prosperity, well-being, unity, and integration. A desire for a continent where the citizens are free from fear, disease, and want and where the women and youth irrespective of gender, realize their full potential.

The achievement of the aspirations reflected in the African Union's Agenda 2063 requires that deliberate efforts be made to make all the necessary provisions for achieving the aspirations. African Union Commission (2023) stated that, for the desire for a prosperous Africa based on inclusive growth and sustainable development to be achieved, there is a need for Africa to make significant investments in education to develop human and social capital through an education and skill revolution which emphasizes innovation science and technology. To achieve Agenda 2063, there is a need for sustained investment in quality education (Cole, 2017).

One of the key objectives proposed by the African Union Continental Education Strategy for Africa (CESA), to reorient the African's education and training system is to expand access to quality education and develop policies that ensure a permanent, healthy, and conducive learning environment in all sub-sectors. One of the things required to achieve this is to make efforts to: provide schools that are constructed in line with approved standards, situated away from potential danger, and protected from biological, chemical, and physical threats. These will ensure the safety and well-being of the members of the school community, especially the learners for which the educational provisions are made. In addition, provisions of necessary physical infrastructure like the perimeter fencing and school gate, will help secure the members of the school community and also the educational facilities that are installed within the school against external invasions.

Another provision that is worthy of note is that of large spaced, well concreted, properly ceiled, well ventilated, and

properly lighted classrooms and office spaces for staff. This will prevent overcrowding, falls, and undue heat in the classrooms and office spaces. It will also reduce unnecessary stress on the part of the learners and the members of staff, it will reduce the spread of communicable diseases within the school, and make the teaching and learning process conducive.

Adequate provision of potable water, gender-based toilets for staff and students, refuse disposal facilities and cleaners are also worthy of note. Even if the schools are fitted with all the ICT facilities and other facilities to achieve quality education, inadequate provision of potable water and sanitary facilities can lead to an outbreak of diseases within the school and this may likely keep the students and the staff out of school thereby affecting the teaching and learning process. Cairncross and Curtis (2003) reported that diarrhea diseases, which represent the second most common global illness affecting young children, and a major cause of death in low-income countries, are closely associated with poor sanitation, poor hygiene, and unsafe water and food.

The availability of good quality furniture for staff and students is also key to ensuring a conducive learning environment. Inadequate provision of good quality chairs and tables, and the presence of broken furniture in and around the classrooms constitute a source of stress to staff and students and can be a risk factor for injury. Injury keeps the learners away from school especially when the injury sustained is serious and this, according to Mitchel (2021) has a negative implication on academic outcomes.

Ensuring good indoor and outdoor air quality is also important for a conducive learning environment. Amoran et al 2017 citing World Health Organisation (1997) stated that indoor and outdoor air pollution may be responsible for up to 60% of the global burden of

diseases caused by respiratory infections. To ensure a conducive learning environment to make room for effective teaching and learning processes, good quality indoor air must be ensured within the school community.

Other factors that need to be put into consideration in ensuring a healthful school environment for effective teaching and learning in the school community include: providing sports and relaxation facilities, instilling maintenance culture into the learners, and encouraging staff members by giving them their remunerations and promotions as at when due, paying the arrears of their promotions and providing them with research and conference grants to boost their morale and enhance their productivity.

In summary, a healthful school environment makes the learning environment conducive, safe, and free of disease-causing agents. This in turn keeps the staff and students in school, makes teaching and learning enjoyable and effective and in turn contributes to attaining the African Union's Agenda 2063 on teaching and learning.

Conclusion

Based on the review of literature it can be concluded that for effective teaching and learning at all levels of education, provision and maintenance of learning environments that take into consideration the health and safety of all the members of the school community is essential if the African Union's Agenda 2063 for teaching and learning would be achieved.

Recommendations

Based on the review of the literature, the following recommendations are made.

1. Build and upgrade education facilities that provide a safe and effective learning environment.

2. Maintaining and renovating existing school infrastructures
3. Provision of conducive physical and social learning environment at all levels of education to enhance the achievement of academic and professional goals
4. Encouraging staff members through remunerations, promotions, research and conference grants, and other incentives to enhance their productivity
5. Inculcating maintenance culture into learners to ensure the maintenance of the facilities within the school environment

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DESCRIPTIVE ANALYSIS OF FACTORS ASSOCIATED WITH SUBSTANCE USE AMONG COMMERCIAL MOTORCYCLISTS IN ADO-EKITI, EKITI STATE, NIGERIA

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Abstract

Psychoactive substance abuse is a global health concern causing both social and public health problems. Man has used various substances to achieve relaxation, pleasurable state of mind as well as to alter both the physiological and psychological functioning of the body system. Like in other urban areas in Nigeria, motorcycles in Ekiti State are operated by mostly youths. Majority of Nigerian commercial motorcyclists ignorantly depend on drugs such as Tobacco, Indian hemp, cocaine, morphine, heroin, alcohol, ephedrine, caffeine, barbiturates and amphetamines) for their various daily activities. Therefore, the study examined the determinants of psychoactive substance consumption among commercial motorcyclists in Ado-Ekiti, Ekiti State, Nigeria. The study adopted descriptive survey research design. The target population for the study was all registered commercial motorcyclists operating in Ado Local Government Areas of Ekiti State. The sample for the study consisted of 200 registered motorcyclists in Ado- Ekiti. The sample was selected using multistage sampling procedure involving simple random sampling technique. A self-developed research instrument tagged "Psychoactive Substances Consumption Questionnaire" (PSCQ)" was used to collect relevant data for the study. The instrument is of two sections. The face and content validity of the instrument were ensured and the reliability was determined using Cronbach Alpha yielding a reliability coefficient of 0.75. Data collected were analyzed using descriptive statistics involving frequency counts, percentages and mean. Factors influencing consumption of psychoactive substances use include: to boost energy, peer group/friends influence, for relaxation, to forget about problems, to increase masculinity, to improve cycling performance, for social interaction, to increase mental alertness, to increase appetite and to reduce stress. In the light of the findings, it was recommended that, there is need for increased awareness campaign by health educators to enlighten the commercial motorcyclists on the debilitating consequences of psychoactive substance consumption. Also, government through its regulatory agency should enforce strict compliance to Drug Use Act by imposing appropriate sanctions on herring commercial motorcyclists.

Keywords: Determinants, psychoactive, consumption, commercial, motorcyclists

Introduction

Psychoactive substance abuse is a global health concern causing both social and public health problems. Psychoactive substances have been described as chemical substances or drugs which when taken has the ability to modify ones perception, mood, cognition, behaviour or motor functioning. The use of substances through various methods seems to have been part of human experience from time immemorial. Man has used various substances to achieve relaxation, pleasurable state of mind as well as to alter both the physiological and psychological functioning of the body system (Adegboyega & Awosusi 2012). Though some substances are useful if used appropriately have been of benefit to man on the other hand, the inappropriate use could constitute tremendous dangers not only to individual but the society at large.

Studies have shown that the types of psychoactive substances commonly

consumed include alcohol, tobacco, coffee, cocaine, and (an alcoholic herbal mixture) others include tramadol, heroin, codeine and amphetamine. However, the subsequent synthesis of other psychoactive substances has given rise to many useful ones but with adverse effects. These substances are consumed in various ways, which include eating, drinking, smoking, sniffing or nasal insufflations as well as injection into the skin subcutaneously, intramuscularly, or intravenously (Okpatakn & Loils, 2011 Adegboyega & Awosusi, 2012). The use of psychoactive substances is not limited to the youth on the street alone but has found wide patronage among commercial motorcyclists in Nigeria (Gudaji & Habib 2016, Bako, Atsaakaa & Dare, 2020).

There is no doubt that motorcycles are becoming increasing popular means of public transportation for middle and low income earners in Nigeria, due to affordability, convenience, easy accessibility and ability to ply on poor roads and navigate through traffic congestions. Based on this fact, commercial motorcycle operation is therefore widely used in urban areas in Ekiti State.

Like in other urban areas in Nigeria, motorcycles in Ekiti State are operated by mostly youths. Majority of Nigerian commercial motorcyclists ignorantly depend on drugs such as Tobacco, Indian hemp, cocaine, morphine, heroin, alcohol, ephedrine, caffeine, barbiturates and amphetamines) for their various daily activities (Oshikoya & Alli, 2016). Any substance that the ingestion can result into an euphoric (high) feeling can or have significant calmative effect on the body can be abused. For instance legal substances like alcohol or illegal drugs like marijuana (in most states), cocaine, inhalants like household cleaners are some of the most commonly abused because of the euphoric or calmative effects on the body. The reason for the increase in the

number of commercial motorcyclists may be due to the current lack of employment for the youth, many young men have taken up commercial motorcycling as a means of livelihood also the reason the commercial motorcyclists must double their performance and bring more income to the family may be due to the poor economy condition in the country. To meet their target, they are prompted to consumed substances, engage in excessive speed and act aggressively.

It is not out of place to reason that commercial motorcyclists may be exposed to a greater risk of road crashes and injuries as they spend more hours on the road and have different incentives for taking risks than other road users. This may account for the rationale for psychoactive substance consumption among commercial motorcyclists. However, the surge in road accidents leading to the increase in the number victims in the orthopedic department of Ekiti State University Teaching Hospital is worrisome and needs urgent attention. The increase has been linked to road accidents, often attributed to the irresponsible behavior and negative attitude of operators, which are in turn connected to drug addiction.

Commercial motorcyclists seem to be at higher risk of substances use compared to the general population because of the burden of enormous work ranging from looking for passengers from one place to another and conveying of loads at a regular interval.

The type of psychoactive substances that commercial motorcyclists use may depend on knowledge of the substance, availability and affordability. Meanwhile, the pattern of psychoactive substances consumption seems to have changed because the substances are readily available for the commercial motorcyclists which make the users 'to get high' such include, combination of glue, inhaling of gutter- water, fumes, monkey tail and petrol which makes them high, flurazepam

which make them forget about any present problems, and tramadol which is an analgesic but being misuse as psychoactive agent. Also included are some over the counter drugs such as diclofenac, ibuprofen, and cough expectorant, (UNODC, 2021). However, the use of one type of substance may lead to multiple substances consumption. From observation, involvement of youths in operating commercial motorcyclist seems to consume alcohol and cigarette smoking tends to precede the use of other hard drugs.

Studies carried out by Kacwamu (2010) had noted that most tribes have a culture of brewing alcohol in homes, thus exposing young people in those homes to alcohol consumption at a young age. The same source also indicated that commercial motorcyclists engage in binge drinking during public events, garage and parties where local alcohol manufacturing companies sell it at discounted prices. Also, there are bars that provide conductive environment for commercial drivers to use alcohol and other psychoactive substances. Strong alcohol base concoctions are available near motor parks where the commercial drivers normally stroll down to take all sorts. They give various names such as "opaeyin", "sepe", "agbojedijedi", 'agboiba" but are all highly intoxicating and affect the central nervous system. Boredom is another reason commercial motorcyclists find themselves in drugs. According to Manbe (2015) reported, Indeed, the reason many people become addicted to drug is their bad association with those who are abusing alcohol and drugs. It also reported that peer pressure and curiosity often play a significant role, especially for commercial motorcyclist (Manbe, 2015) `

Mccleland, David, Kalin and Wanner (2008) revealed that commercial motorcyclists consumed psychoactive drugs to prove their masculinity and achieve feelings of adequacy and competency. Social pressures, from peers, family, and societal role models are at the top of the list of reasons why adolescents initiate substance use and their continued use may be socially and environmentally driven. Predisposition toward rebelliousness, nonconformity, and independence also feature prominently.

Psychoactive substances consumption may also be the leading factors threatening the peace and community development as most lives which are lost on daily basis through traffic accidents could be associated with substance consumption, also operators riding under aggression and anxiety may lose concentration and thereby causing accidents to the road user.

In trying to identify why commercial motorcyclists consumed psychoactive substances, study by Habadu (2013) shown that the main causes of psychoactive substances consumption to include curiosity to experiment the unknown facts about drugs which can launch adolescents into drug use. Studies have shown that the first experience in substance abuse produces a state of arousal such as happiness and pleasure, which in turn motivate them to continue. Adekeye, et.al (2015) Likewise, peer pressure plays a major role in influencing many adolescents into substance abuse. This is because peer pressure is a fact of teenage and commercial motorcyclist life. As they try to depend less on parents, they show more dependency on their friends. In Nigeria, as other parts of the world, one may not enjoy the company of others unless he conforms to their norms. Lastly, many parents have no time to supervise their sons and daughters. Some parents have little or no interaction with family members, while others put pressure on their children to pass exams or perform better in their studies.

Fasoro, et.al, (2020) studied socio-demographic characteristics associated with cigarette smoking, drug abuse and alcohol

drinking among respondents. The descriptive cross-sectional study was conducted among 109 commercial motorcyclists in ijero township Ekiti state, Nigeria. 109 commercial motorcyclists were purposively selected; a semi structure questionnaire was designed to elicit information from the respondents. Multiple regression showed that mother's educational level, living place, economic status, and parents' divorce were the most influential predictive factor in substance abuse. Fasoro et al (2020) concluded that it is essential to pay attention to predictive factors mentioned in the study findings in order to prevent substance abuse among young adults.

Onyencho, et, al, (2018) examined demographic characteristics as predictors of psychoactive substance use disorders. This cross-sectional survey study used accidental sampling techniques to recruit 153 psychoactive substance users across Maiduguri Metropolitan Council (MMC) into the study. The study revealed that tramadol, cannabis, and cigarette respectively were the most problematic substances for participants when cessations occur and demographic characteristics did not predict psychoactive substance use disorders.

Socio-demographic characteristics showed that over 83% males consumed psychoactive substance because of socio-cultural influences, but recently, females have also been reported to consumption of psychoactive substances. This study sought to determine the factors responsible for consumption of psychoactive substances among commercial motorcyclists in Ado-Ekiti, Ekiti- State, Nigeria.

Research Question:
i.   What are the types of psychoactive substances commonly consumed by commercial motorcyclists in Ado Ekiti?
ii.   What are the factors influencing the consumption of psychoactive substances?

Research Hypotheses:
i.   Age of the respondents will have no significant influence on the consumption of psychoactive substance,
ii.   Marital status of the respondents will have no significant influence on the consumption of psychoactive substance,
iii. Educational background of the respondents will have no significant influence on the consumption of psychoactive substance,
iv.   Years of experience of the respondents will have no significant influence on the consumption of psychoactive substance,
v.   Religion of the respondents will have no significant influence on the consumption of psychoactive substance,
vi.   Motorcycle ownership will have no significant influence on the consumption of psychoactive substance.

Methodology

The study adopted descriptive survey research design. The research design is considered appropriate because it describes the existing situation regarding psychoactive substances consumption pattern, motive for use and the health effects. The target population for the study comprised all registered commercial motorcyclists operating in Ado Local Government Areas of Ekiti State. The sample for the study consisted of 200 registered motorcyclists in Ado- Ekiti. The sample was selected using multistage sampling procedure. In stage one, five wards were selected out of thirteen wards in Ado Local Government using simple random sampling techniques. In stage two, one (1) commercial motorcyclist's parks were selected from each (5) wards earlier selected using simple random sampling technique. In stage three, twenty (20) commercial motorcyclists were selected from each motorcyclist parks in each of the wards where there are heavy users of okada using

simple random sampling technique. A self-developed research instrument tagged "Psychoactive Substances Consumption Questionnaire" (PSCQ)" was used to collect relevant data for the study. The instrument comprised of six sections. The face and content validity of the instrument were ensured and the reliability was determined using Cronbach Alpha. A reliability coefficient of 0.75 obtained proved that the instrument has high reliability.

Results

Table 1: Socio-demographic characteristics of the study participants

Socio-demographic characteristics	Frequency (n=200)	Total (%)
Age (mean= 29.49 SD=5.79)		
Under 18 years	19	9.5
19 – 23 years	25	12.5
24-28 years	39	19.5
29-33 years	29	14.5
33 years and above	88	44.0
Marital status		
Married	111	55.5
Single	52	26.0
Divorced	25	12.5
widow/ widower	12	6.0
Religion		
Christianity	118	59.0
Islam	65	32.5
Traditional	7	3.5
Others	10	5.0
Level of education		
No formal Education	26	13.0
Primary School	13	6.5
Secondary School	97	48.5
Post-secondary Education	64	32.0
Years of experience		
Under 1 year	31	15.5
1-3 years	49	24.5
3-5 years	35	17.5
Above 5years	85	42.5
Motorcycle ownership		
Self-owned	112	56.0
Hired Purchase	55	27.5
Rented	33	16.5

Table 1 presents the socio-demographic characteristics of the respondents. The result shows that more than one-third of the study participants (n=88, 44%); representing the majority are 33 years and above, 19 (9.5%) are under 18 years while 25 (12.58%), 39 (19.5%) and 29 (14.5%) are aged 19-23 years, 24-28 years and 29-33 years respectively. The mean age of the commercial motorcyclists is 29.49 ± 5.79. Most of the respondents (n=111, 55.5%) are married, 52 (26%) single, 25 (12.5%) divorced while 12 (6%) constitutes widow/widower. Concerning religion, more than half of the commercial motorcyclists (n=118, 59%) are Christians,

closely followed by Muslim; 65 (32.5%) while 7 (3.5%) and 10 (5%) indicate traditional and other religion respectively. The most common educational qualification among the study participants is secondary school certificate (n=97, 48.5%). Post-secondary education followed (n=64, 32%) while primary school certificate holders (n=13, 6.5%) is the least. Majority of commercial motorcyclists (n=85, 42.5%) had between above 5years of working experience, 31 (15.5%) indicate less than 1year while 49

(24.5%) and 35 (17.5%) had 1-3years and 3-5 years of experience respectively. The mean of years of experience is 7.11 ± 5.25. The result shows that the highest percentage of commercial motorcyclists (n=112, 56%) indicate self-owned, followed by hired purchase; 55 (27.5%) while rented (n=33, 16.5%) is the least.

Question 1: What are the types of psychoactive substances commonly consumed by commercial motorcyclists in Ado Ekiti?

Table 2: Types of psychoactive substances commonly consumed by commercial motorcyclists in Ado Ekiti

S/N	Types of Psychoactive Substances I do Take	Frequently used	Used occasionally	Used but discontinued	Never used	Mean
1.	Indian hemp/ Marijuana (Igbo)	42 (21.0)	64 (32.0)	10 (5.0)	84 (42.0)	2.32
2.	Lysergic acid Diethylamide (LSD)	12 (6.0)	37 (18.5)	36 (18.0)	115 (57.5)	1.73
3.	Cocaine	27 (13.5)	25 (12.5)	28 (14.0)	120 (60.0)	1.80
4.	Amphetamine,	19 (9.5)	49 (24.5)	22 (11.0)	110 (55.0)	1.89
5.	Caffeine/ Energy drinks (Power Horse/ Smirnoff)	104 (52.0)	54 (27.0)	13 (6.5)	29 (14.5)	3.16
6.	Cigarette/Tobacco	95 (47.5)	33 (16.5)	30 (15.0)	42 (21.0)	2.90
7.	Alcohol	103 (51.5)	49 (24.5)	16 (8.0)	32 (16.0)	3.11
8.	Inhalants (glue, vanish, petrol paint)	32 (16.0)	19 (9.5)	30 (15.0)	119 (59.5)	1.82
9.	Locally brewed gin (ogogoro/gegemu/ opaeyin)	105 (52.5)	43 (21.5)	16 (8.0)	36 (18.0)	3.09
10.	Tramadol / Rohypnol	65 (32.5)	30 (15.0)	26 (13.0)	79 (39.5)	2.41
Criterion mean = 2.50, Percentages are enclosed in parentheses						

Table 2 presents the types of psychoactive substances commonly consumed by commercial motorcyclists in Ado Ekiti. The result indicates that, using a criterion mean score of 2 50 for the affirmative of the statements, all the items had means score below the cut-off point except items 5, 6, 7 and 9. This implies that caffeine/ energy drinks (power horse/ Smirnoff), cigarette/tobacco, alcohol and locally brewed gin (ogogoro/gegemu /opaeyin) are types of psychoactive substances commonly consumed by commercial motorcyclists in Ado Ekiti.

Research Question 2: What are the factors influencing the consumption of psychoactive substances by commercial motorcyclists?

Table 3: Factors influencing the consumption of psychoactive substances by commercial motorcyclists

S/N	Reasons for Using Psychoactive Substance	SA	A	D	SD	MEAN	RANK
1.	To boost energy	85 (42.5)	78 (39.0)	10 (5.0)	27 (13.5)	3.11	5th
2.	Peer group/friends influence	94 (47.0)	74 (37.0)	19 (9.5)	13 (6.5)	3.24	2nd
3.	For relaxation	105 (52.5)	69 (34.5)	16 (8.0)	10 (5.0)	3.35	1st
4.	To forget about problems	87 (43.5)	73 (36.5)	23 (11.5)	17 (8.5)	3.15	4th
5.	To increase masculinity	62 (31.0)	53 (26.5)	53 (26.5)	32 (16.0)	2.73	9th
6.	To improve cycling performance	97 (48.5)	54 (27.0)	36 (18.0)	13 (6.5)	3.17	3rd
7.	For social interaction	64 (32.0)	51 (25.5)	54 (27.0)	31 (15.5)	2.74	8th
8.	To increase mental alertness	56 (28.0)	92 (46.0)	31 (15.5)	21 (10.5)	2.92	6th
9.	It is easily affordable	32 (16.0)	61 (30.5)	42 (21.0)	65 (32.5)	2.30	12th
10.	To increase appetite	36 (18.0)	77 (38.5)	43 (21.5)	44 (22.0)	2.52	10th
11.	To reduce stress	64 (32.0)	72 (36.0)	28 (14.0)	36 (18.0)	2.82	7th
12.	It is readily available	33 (16.5)	56 (28.0)	55 (27.5)	56 (28.0)	2.33	11th
Criterion mean = 2.50, Percentages are enclosed in parentheses							

Table 3 presents the factors influencing the consumption of psychoactive substances by commercial motorcyclists. The result indicates that, using a criterion mean score of 2 50 for the affirmative of the statements, all the items had means score above the cut-off point except items 9 and 12. This implies that attempt to boost energy, peer group/friends influence, for relaxation, to forget about problems, to increase masculinity, to improve cycling performance, for social interaction, to increase mental alertness, to increase appetite and to reduce stress are factors influencing the consumption of psychoactive substances by commercial motorcyclists. Ranking the reasons for using psychoactive substances by commercial motorcyclists shows that 'for relaxation' top the list with a mean score of 3.35, closely followed by 'Peer group/friends influence' and 'to improve cycling performance' while 'It is easily affordable' is the least in the ranking order.

Discussion

The study showed that caffeine/ energy drinks (power horse/ Smirnoff), cigarette/tobacco, alcohol and locally brewed gin (ogogoro/gegemu/opaeyin) were types of psychoactive substances commonly consumed by commercial motorcyclists in Ado Ekiti. The finding aligns with studies by Okpatakn & Loils (2011), Adegboyega & Awosusi (2012) which showed that the types of psychoactive substances commonly consumed include alcohol, tobacco, coffee, cocaine, and paraga (an alcoholic herbal mixture) others include tramadol, heroin, codeine and amphetamine. Similarly, Oshikoya & Alli (2016) posited that majority of Nigerian commercial motorcyclists ignorantly depend on drugs such as Tobacco, Indian hemp, cocaine, morphine, heroin, alcohol, ephedrine, caffeine, barbiturates and amphetamines) for their various daily activities.

The study showed that, to boost energy, peer group/friends influence, for relaxation, to forget about problems, to increase masculinity, to improve cycling performance, for social interaction, to increase mental alertness, to increase appetite and to reduce stress were factors influencing the consumption of psychoactive substances by commercial motorcyclists. Ranking the determinants of psychoactive substances consumption by commercial motorcyclists showed that, 'for relaxation' topped the list with a mean score of 3.35, closely followed by 'Peer group/friends influence' and 'to improve cycling performance' while 'It is easily affordable' constitute the least in the ranking order. The finding is consistent

with the study by Adegboyega & Awosusi (2012) which reported that man has used various substances to achieve relaxation, pleasurable state of mind as well as to alter both the physiological and psychological functioning of the body system. Similarly, Manbe (2015), Habadu (2013), Mccleland, David, Kalin and Wanner (2008), Adekeye (2015) in their studies attributed consumption of psychoactive substances by commercial motorcyclists to peer pressure and curiosity, prove of masculinity and achieve feelings of adequacy and competency.

Conclusion

From the findings of this study, it can be concluded that caffeine/ energy drinks (power horse/ smirnoff), cigarette/tobacco, alcohol and locally brewed gin (ogogoro/gegemu/opaeyin) were types of psychoactive substances commonly consumed by commercial motorcyclists in Ado Ekiti. it can also be concluded that, an attempt to boast energy, peer group/friends influence, for relaxation, to forget about problems, and to improve cycling performance constitute critical determinants of psychoactive substances consumption among commercial motorcyclists.

Recommendations

Considering the implication of these findings, the following recommendations are considered necessary. There is need for increased awareness campaign by health educators to enlighten the commercial motorcyclists on the debilitating consequences of psychoactive substance consumption. Also, government through its regulatory agency should enforce strict compliance to Drug Use Act by imposing appropriate sanctions on herring commercial motorcyclists.

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PEER PRESSURE AND PARENTAL EDUCATIONAL LEVEL AS CORRELATES OF HEALTH RISK TAKING BEHAVIOURS AMONG UNDERGRADUATES OF TERTIARY INSTITUTIONS IN ONDO STATE, NIGERIA

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Abstract

The study investigated peer pressure and low parental educational level as predictors of health risk taking behaviours among undergraduates of tertiary institutions in Ondo State, Nigeria. Descriptive research design of survey type was adopted. The population for the study consisted of undergraduates of tertiary institutions in Ondo State, Nigeria. A total of seven hundred and twenty (720) respondents were selected using the multistage sampling procedure. Data were collected with the use of a validated, self-structured questionnaire titled Health Risk Taking Behaviours (HRTBQ). The instrument was validated and found reliable at 0.81. Data collected were analyzed using frequency counts, simple percentages, and mean score to answer the research questions raised, while Pearson Product Moment Correlation was used to test the hypotheses at 0.05 level of significance. The findings revealed that peer pressure and low parental educational level have significant relationship with health risk taking behaviours among undergraduates of tertiary institutions in Ondo State, Nigeria. The findings recommended, among other things, that undergraduates in tertiary institutions of learning should make an effort to associate with peers who will not encourage or compel them to engage in unhealthy habits.

Keywords: Peer, Predictors, Risk, Health, Undergraduates

Introduction

University students are considered crucial in any society, and they represent the future of families and act as role models for the public. However, many university students engage in risky behaviours that threaten their current and future health. The burdens such behaviours as tobacco, alcohol, and other drug use, risky sexual behaviours, unhealthy dietary behaviours, and physical inactivity have placed on several students in tertiary institutions in Nigeria are manifested in different patterns and trends by most of the affected students.

An individual's involvement in activities that lead to physical and/or mental health impairment can be considered a health-risk behavior. These behaviours stem from certain choices and attitudes that have a negative impact on the health of young individuals, thereby increasing the risk of premature morbidity and mortality.

Many young people identify the transition from high school to university as a major life stressor. During this period, many students live away from their homes for the first time, which may result in a substantial decrease in contact and support from family and friends (Tajallia, Sobhi, &

Ganbaripanah, 2010). Additionally, during this period, students must manage increased autonomy, increased academic demands, and establish new social relationships. While navigating the challenges of university life, students may either engage in health-promoting activities or increase the prevalence of risky behaviours that lead to poor health.

Different countries have shown that the proportion of individuals exposed to one or more health risk behaviours is high (Lapsley & Edgerton, 2011). The main groups at risk for behavioural misconduct are adolescents and young adults. These risky behaviours have led to the increased rates of early mortality, disability, and chronic diseases observed in recent decades in developing countries like Nigeria. The majority of undergraduates in tertiary institutions of learning fall into the category of adolescence and young adults—a critical transitional period that includes the biological changes of puberty and developmental tasks such as normative exploration and learning to be independent. Young adults who have reached maturity also face significant social challenges with few organisational supports at a time when they are expected to take on adult responsibilities and obligations (Haijan, Khirkhah, & Habibi, 2011).

Risk behaviour is an important health issue among undergraduate students in tertiary institutions in Nigeria, especially in Ondo State. The students are prone to high risky health behaviours because of their susceptibility to peer influence. Many seek information from magazines, newspapers, and movies, which place them at health risks (Oyediran & Oladimeji, 2010). Risky health behaviours are often exhibited by undergraduate students because the majority of them are adolescents who want to engage in risky behaviours like sexual activities, smoking, drinking, stealing,

bullying, and all other kinds of behaviours that are inimical to their health (Isaiah, 2010). Furthermore, the undergraduate schooling period establishes adult behaviour patterns, such as drinking, smoking, and sexuality, which pose significant health problems for many undergraduate students.

The study categorized these behaviors among undergraduate students as tobacco, alcohol, and other drug use; risky sexual behaviors; unhealthy dietary habits; physical inactivity; and behaviors that contribute to unintentional or intentional injuries. These health risk behaviours have enormous impact on the current and future health status of students. In order to develop more successful intervention programmes targeting university students' health, it is important to achieve a better understanding of health risk behaviours among them.

Tobacco use and consumption of alcohol and illicit drugs, among others, by adolescents and young people, especially students in tertiary institutions, is spreading worldwide and constitutes an important public concern. While the prevalence of smoking among this group is on the decline in many countries, there is a substantial increase in the developing countries. Smoking experimentation in adolescents and young adults confers a significant 16-fold increase in the risk of becoming a smoker in adulthood when compared to non-smokers (Brito, Hardman & Barros, 2015). An additional concern over smoking is the so-called 'gateway' effect. It is believed that tobacco use, together with alcohol misuse, can lead to the abuse of other drugs.

Young adults, particularly students in tertiary institutions, are prone to substance experimentation and subsequent use, with the reasons for initiation being multifactorial. They allegedly claim that drugs provide pleasure, relaxation, surges of exhilaration, or a prolonged heightened sensation. At the same time, drugs affect

the users directly or indirectly, regardless of age, sex, culture, ethnic background, education, or socio economic status (Kann, McManus, Harris, Shanklin, Flint, & Hawkins, 2015). When individuals use drugs and alcohol as coping strategies, they may prove ineffective and worsen their existing problems. Alcohol is particularly attractive to the youths, among which are students in tertiary institutions, as it is considered a sign of maturity or adulthood. The inappropriate use of alcohol has linked many individuals in this group to significant behavioral problems.

High risk sexual behaviours put people at risk for sexually transmitted infections, unplanned pregnancy, and being in a sexual relationship before being mature enough to know what makes a healthy relationship. Younger adults, such as undergraduates in tertiary institutions, are at higher risk than adults. Examples of risky sexual behaviours are unprotected intercourse without a male or female condom, unprotected mouth-to-genital contact, early sexual activities, especially before age 18, having multiple sex partners, having anal sex, or a partner who does and exchanges sex for drugs or money.

Undergraduate students exhibit unhealthy dietary behaviors, such as skipping meals, overeating, or not eating enough, favoring sweet foods, and eating late at night. Adolescents—a category that includes many undergraduates—exhibit some of the unhealthy dietary behaviors previously identified. Many nutrition-related health problems, primarily obesity and chronic diseases, have been linked to the diet patterns of adolescents. These issues also affect undergraduates in tertiary institutions. (El Ammari, El Kazdouh, Bouftini, El Fakir & El Achhab, 2020).

People who do not get the recommended level of regular physical activity are known as physically inactive. Not getting enough physical activity comes with high health and financial costs.

Many undergraduates are less active and fit, which has historically increased their risk of high blood pressure, type 2 diabetes, coronary heart disease, feelings of anxiety and depression, and overweight or obese conditions (Hopkins, 2021).

Adolescence and youth represent critical developmental stages, when a variety of unsafe behaviors—including those that lead to unintentional and intentional injuries—can significantly impact an individual's health, social interactions, and academic performance. Violence and unintentional injury are two of the interrelated areas of vulnerability that adolescents and undergraduates may encounter. They form part of a complex web of potential challenges to the health of undergraduates. Adolescence is a time when significant numbers of serious violent offenders emerge, a category into which undergraduates often fall without any warning signs during childhood (Schwarg, 2021).

The use of psychoactive substances is prevalent throughout the world and is associated with a significant public health burden. Tobacco, alcohol, and illicit drugs are among the top 20 risk factors for ill health, as identified by the World Health Organization (2002). They are strongly associated with several non-communicable diseases, and they are the leading cause of death and morbidity in most countries. It is estimated that tobacco is responsible for 8.8% of all deaths and for 4.1% of disability-adjusted life years (DALYs), while alcohol is responsible for 3.2% of deaths and 4.0% of Disability Adjusted Life Years (DALYs), and illicit drugs for 0.4% and 0.8%, respectively. Furthermore, for individuals under 24 years old, road traffic crashes are the leading cause of death, primarily due to alcohol abuse or illicit drug use, particularly among young individuals who frequent discotheques (Arria, Caldeira, Vincent, Gamier-Dykstra, & O'Grady, 2011).

Researchers have identified factors that could trigger health risk behaviors among undergraduates in tertiary institutions of learning. Among these factors, the concept of peer pressure refers to the influence of a peer group, which encourages a person to change their attitudes, values, or behavior to conform to group norms (Weerman, 2009). The attachment to the peer group often overpowers the adolescent learner's individual degree of self-reliance and independence. Peer groups provide young people with a sense of acceptance and freedom to discuss topics that are important to them, while also offering the opportunity to learn specific skills that may not be available in other social relationships.

Parental educational level, which relates to education, is perhaps the most basic sociological factor since it shapes future occupational opportunities and earning potential. It also provides knowledge and life skills that allow better-educated persons to gain more ready access to information and resources to promote health. Education is key to health inequality; policies encourage more years of schooling and support early childhood education.

The quality of education may be relevant to health, but it could be difficult to assess accurately. The relationship between lower educational attainment and worse health outcomes occurs throughout the course of life. Lower educational attainment in adulthood may have resulted from a serious childhood illness that limited an individual's ability to complete their desired years of schooling, thereby placing them at a higher risk of premature mortality.

Conversely, parents who possess a high level of education are better equipped to teach their children to avoid unhealthy habits, as their education often shapes their approach to raising their children. Parents with good educational backgrounds tend to supervise their children's' educational pursuits more effectively. They often keep a close watch on their children in school, ensuring they stay focused on their studies and don't diverge into other activities.

Statement of the Problem`

The occurrence of health risk taking behaviours among Nigerians has been observed to be on the increase. Many of these behaviors have resulted in a variety of issues, including mental and emotional disorders, disabilities, chronic diseases, and in some cases, even fatalities. Undergraduates in tertiary institutions are not immune to such problems. Every day, news from tertiary institutions abounds about suicide attempts, violence, and bullying, among other issues. These stories come from students themselves, their interactions with other students, their interactions with members of the institution's communities, and their interactions with members of larger communities. The majority of students in tertiary institutions are single, young adults who easily fall prey to exuberance, coupled with the liberal nature of campus life that predisposes them to high risk health behaviours. Concerns regarding the implications of these behaviors have led to more interventions, particularly for in-school adolescents. Undergraduates in tertiary institutions may exhibit risky health behaviors, likely due to their inclination to experiment with adult behaviors like alcohol consumption, smoking, and indiscriminate sexual practices, often without considering the consequences of their actions. Adolescents and young adults, who comprise the undergraduate population, are the primary group at risk for behavioural misconduct. Therefore, the main thrust of the problem was to look into peer pressure and low parental educational level in relation to health risk taking behaviours that are peculiar to undergraduate students.

Purpose of the Study

The purpose of this study was to examine peer pressure and parental educational level as predictors of health risk taking behaviours among undergraduates of tertiary institutions in Ondo State, Nigeria.

Research Hypotheses

These hypotheses guided the work:
1. There is no significant relationship between peer pressure and health risk-taking behaviours among undergraduates in tertiary institutions in Ondo State, Nigeria.
2. There is no significant relationship between parental educational level and health risk-taking behaviours among undergraduates in tertiary institutions in Ondo State, Nigeria.

Methodology

The study employed the descriptive survey research design. The design assisted the researcher to describe the existing situation as regards peer pressure and low parental educational level as predictors of health risk-taking behaviours among undergraduates in tertiary institutions in Ondo State, Nigeria.

The population for this study comprised undergraduates in all the tertiary institutions in Ondo State, Nigeria. There are thirteen tertiary institutions in Ondo State, Nigeria. The sample for this study consisted of seven hundred and twenty (720) respondents who are undergraduate students in tertiary institutions in Ondo State, Nigeria. A multistage sampling procedure was used to select the sample.

An instrument tagged "Questionnaire on Health Risk Taking Behaviours (HRTBQ)" was used to collect relevant data for the study. It consisted of four sections. Section A sought the demographic characteristics of the respondents, such as institution, Faculty/School, Department, Level, Age, Sex and Marital Status. Section B consisted of 20 items. The instrument was validated and found reliable at 0.81.

Hypotheses Testing

Hypothesis 1: There is no significant relationship between peer pressure and health risk taking behaviours among undergraduates in tertiary institutions in Ondo State, Nigeria.

Table 1: Relationship between peer pressure and health risk taking behaviours among undergraduates

Variable	N	Mean	SD	Df	Sig.
Peer Pressure	720	10.453	2.060	718	0.000
Health Risk Taking Behaviours	720	20.944	2.889		

*P<0.05

Table 1 showed that the calculated significance value (0.000) was less than the significance value (0.05), therefore the null hypothesis which states that there is no significant relationship between peer pressure and health risk taking behaviours among undergraduates in tertiary institutions was rejected. Hence, there was significant relationship between peer pressure and health risk taking behaviours among undergraduates in tertiary institutions in Ondo State, Nigeria.

Hypothesis 2: There is no significant relationship between parental educational level and health risk taking behaviours among undergraduates in tertiary institutions in Ondo State, Nigeria

Table 2: Relationship between parental educational level and health risk taking behaviours among undergraduates

Variable	N	Mean	SD	Df	Sig.
Parental educational level	720	10.469	1.923	718	0.040
Health Risk Taking Behaviours	720	20.944	2.889		

*P<0.05

Table 2 showed that the calculated significance value (0.040) was less than the significance value (0.05); therefore, the null hypothesis, which states that there is no significant relationship between parental educational level and health risk taking behaviours among undergraduates in tertiary institutions, was rejected. Hence, there was significant relationship between parental educational level and health risk taking behaviours among undergraduates in tertiary institutions in Ondo State, Nigeria.

Discussion

The study revealed that peer pressure as a factor influenced health risk taking behaviours among undergraduates in tertiary institutions in Ondo State, Nigeria. The findings revealed that undergraduates' peer pressure led to health risk taking behaviours. The findings align with Chauhan's (2007) findings, which suggest that peer groups significantly influence teenagers' social development by establishing "rituals" for acceptable behavior. The findings also agreed with those of Santrock (2007), which indicated that adolescents' affiliation with deviant peers represented the strongest predictor of deviant behavior. The implication of the findings is that undergraduates who associate with bad peers will exhibit health risk taking behaviours and vice versa.

The study also revealed that parental educational level contributed to health risk taking behaviours among undergraduates in tertiary institutions in Ondo State, Nigeria. The findings show that students whose parents had low educational levels experienced health risk-taking behaviours. The findings align with those of Mattys and John (2016), who found that students' disruptive behaviors typically stem from their parents' low educational attainment. The findings also agreed with the findings of Purvati and Muhammad (2017) that parents' education determined students' personalities, which in turn influenced the health risk-taking behaviours being displayed by the students. The findings align with those of Carine, Lea, and Dirk (2004), who found that a lower educational level is associated with less healthy food habits, less teeth brushing, less seatbelt use, more TV watching, more smoking, more drunkenness, more hashish use, and more lifetime Ecstasy use. This implies that the educational status of parents usually leads to health risk behaviours among undergraduates. This also suggests that parents with a high or average educational status may display positive health behaviors, and vice versa.

Conclusion

Based on the findings of this study, it was concluded that peer pressure influenced health risk taking behaviours of undergraduates in tertiary institutions in Ondo State. The study also concluded that the parental educational level determined the health risk–taking behaviours of undergraduates in tertiary institutions.

Recommendations

The following recommendations were made based on the findings of the study:
1. Undergraduates in tertiary institutions should strive to associate with peers who will not encourage or compel them to engage in unhealthy habits.

2. Undergraduates whose parents appear to have low educational levels should strive to interact and associate with their counterparts who have average or high educational levels. This will allow them to benefit from their good educational contributions in promoting positive healthy behaviors, which could potentially help them avoid risky health behaviors.

3. Health risk taking behaviours are very detrimental to the health of undergraduates in tertiary institutions of learning. They should, therefore, avoid actions that can lead to such behaviors.

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DEMOGRAPHIC DETERMINANTS OF PRE-MARITAL SEXUAL BEHAVIOURS AMONG SECONDARY SCHOOLS' STUDENTS IN LOKOJA METROPOLIS OF KOGI STATE.

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Abstract

Adolescent reproductive health encompasses the physical, mental, and social well-being of individuals aged 10–19 concerning their reproductive system. In Nigeria, adolescents, who make up about one-third of the population, facesig nificant health challenges duetorisky sexual behaviors, peer pressure, exposure to pornography, and inadequate sexual education. These behavior sresult in adverse outcomes, such as unplanned pregnancy, poor academic performance, and sexuall ytransmitted diseases. This study, conducted among secondary school students in Lokoja, Kogi State, investigated the relationship between premarital sexual behaviour and factors such as sex education, family structure, and exposure to pornographic materials. The study used 320 respondents drawn from eight (8) secondary schools in Lokoja metropolis of Kogi State usings implerandom sampling techniques. A structured questionnaire was developed and administered by the researcher to the respondents; data collected were analyzed using inferential statistics of Pearson Product Moment Correlation (PPMC). The findings revealed significant correlations between these factors and premarital sexual behaviour, with family structure and exposure to pornography being particularl yinfluential. The study highlights the need for comprehensive sexual education programs, parental involvement, and responsible media consumption to mitigate the adverse effects of premarital sexual behaviour among adolescents. There commendations emphasize strengthening school- based sexual education, enhancing parental guidance, and promoting accurate sexual health information throught hemedia. These measures are crucial for improving adolescent reproductive health and ensuring the well-being of this vital segment of the Nigerian population.

Keywords: Determinant, premarital, sexual behaviour, academic performance, students.

Introduction

Adolescent reproductive health can be defined as a state of complete physical, mental, and social well-being and not only the absence of reproductive diseases or infirmities in all matters of the reproductive system, its functions, and processes in persons between the ages of 10 and 19 years (World Health Organization, 2011). The average adolescent is characterized by high energy levels, pursuit of adventure, dating, sexual experimentation, zealousness, radicalism, rebellion, curiosity, and risky sexual behaviour, the outcomes of which more often than not compromise his or her

sexual and reproductive health (Oke, 2016). This group, other wise known as young people, is an important segment of our Nigerian society, where they make up about a third (31.6%) of Nigeria's large and growing population (Ofole, 2014). Untilrecently, the Nigerian adolescent group was considered a healthy segment of the populace, receiving low priority for health services. However, biology and society have introduced additional health challenges, such as unprotected sex, teenage pregnancies, transactional sexual relationships, multiple sexual partners, and trans-generational sexual relationships (Ofole, 2014).

Different studies identified factors influencing premarital sexual behaviour. These factors include peer pressure, family background, socio-economic status, religiousity, age, exposure to pornographic materials/mass media, internet exposure, and substance abuse, among others (Mulugeta et al., 2014). According to Miyakado (2013), there is a high incidence of premarital sexual behavior among students, which can lead to social, health, and academic problems. Premarital sexual behavior among students has led to an increase in unplanned pregnancies, poor academic performance, and ultimately, school dropouts (Mlyakado, 2013). However, studies in Nigeria have not investigated the influence of premarital sexual behaviour on students' academic performances. Most previous studies in Nigeria have examined factors influencing premarital sexual behaviour and its general effects on students (Adeola, 2014). Premarital sexual behavior, primarily practiced by adolescents, has been observed to carry arrange of negative outcomes or consequences, including unwanted pregnancy and abortion, as well as sexually transmitted diseases (STDs) such as gonorrhoea, staphy lococcus, human papilloma virus (HPV), and precancerous changes of the cervix. Irritation of the cells in animmature cervix

and the susceptibility of the genital tract to infection trigger these conditions. Even more concerning is the prevalence of HIV/AIDS, a deadly disease that has claimed the lives of numerous adolescents in our society. Premarital sexual behaviour does not only have physical effect; psychological maladjustment and emotional effects such as feelings of guilt, embarrassment, tension, and many more are also associated with early and unprotected sexual behaviour (Adeola, 2014).

Premarital sexual behaviour of adolescent students is significantly related to their sexual knowledge and attitude sand that of their parents. Generally, a traditional attitude is associated with lower risk, while a permissive attitude is associated with higher risk. According to Adeola (2014), in a survey of sex education studies in developed countries, there was no increase in sexual activity among adolescents; there was clear evidence of higher level of abstinence, a later start to sexual activity, a higher use of contraceptives, fewer sexual partners, and reduced rates of unplanned pregnancy and STD. The report also noted that sexual health programmes did not encourage sexual experimentation, and unintentional involvement in premarital sexual behaviour among students was due to misinformation and ignorance in sexual issues (Wangetal., 2012). However, reports suggest that the content of the reproductive and sexual health programme also influences the sexual behaviour of adolescents. In the USA, researchers found a significant association between earlier initiation of intercourse and instruction on biological topics or contraception, and later initiation within structionon AIDs or resistance skills (how to say no to sex) (Algaa, 2014). However, this study did not measure the timing of instrumentation or the initiation of intercourse. There continue to be controversies regarding the relationship between reproductive health

knowledge and sexual activity, inpart because of the varying definitions of knowledge. In this context, Algaa (2014) suggested that while sex education does not promote or deter sexual activity, it increases the likelihood of contraceptive use.

It is commonly perceived that family structure has an important influence on premarital sexual behaviour. Living in a family with both parents implies the availability of support, supervision, relationships, communication, and behavioral control in many aspects of adolescent students' lives. Previous studies have commonly suggested that adolescent students in two-parent families are less likely to risk premarital sexual behavior (Oluwatosin & Adediwura, 2010). In their study of sexual behavior among secondary school adolescent students in Nigeria, Slapetal. (2013) discovered that premarital sexual behavior is more prevalent among adolescent students from polygamous families, single-parent households, broken homes, and those with deceased parents. Also, Hallman (2004) and Togun (2012) found that teenagers living in single parents or reconstituted families (that is, families with step parents) had higher risks of premarital sexual intercourse compared to those whose two parents are living together or those that have intact families.

Adewale (2010) found that the high rate of premarital sex among youths can be attributed to exposure to pornographic materials, specifically television, film, radio, and video. What adolescents watch on screen determines their behavior and character. Every product that is advertised on television seems to promote sex. Infact, most home videos promote sex (Adewale, 2010). The study by Dingetaetal. (2012) noted that exposure to pornography contributed to the high-risk sexual behavior of adolescent students. They concluded that exposure to pornographic materials in traditional media and intentional exposures to internet nudities

significantly influence the sexual behaviour of adolescent students. Also, Collins, Martino, and Rand (2011) in their study found that those exposed to pornographic materials through a variety of media (including internet pornography) and traditional media (i.e., films and magazines) were subsequently more likely to report permissive sexual attitudes (e.g., acceptance of premarital sex) than students with less exposure. Finally, studies have shown that books and magazines that contain sexual stories and pictures stimulate the adolescent students to always think about sex; having read these books and magazines, adolescents do become restless until they have put into practice what they learned in the books and magazines (Adewale, 2010).

Research Hypotheses

i.   There is no significant relationship between the knowledge of sex education and premarital sexual behaviour among secondary school students in Lokoja metropolis of Kogi State.

ii.   There is no significant relationship between family structure and premarital sexual behaviour among secondary school students in Lokoja metropolis of Kogi State.

iii. There is no significant relationship between the exposure to pornographic materials and premarital sexual behaviour among secondary school students in Lokoja metropolis of Kogi State?

Methodology

The study adopted the survey research design. This design was used because it is best suited for data collection, organization, presentation, and analys is for the purpose of describing the occurrence of an event or phenomenon within a specified group. The population of the study consisted of all public secondary school students in Lokoja metropolis of

Kogi State. The sample consisted of three hundred and twenty (320) respondents who were selected from the population. From the public secondary schools in the metropolis, eight (8) schools were randomly selected for the study, and from each school, simple random sampling was used to select forty (40) students that participated in the study. The instrument used for the collection of data was a self-designed questionnaire, which was validated by three experts in the field of Human Health Education. The reliability of the instrument was ascertained through test-retest method within two-week interval, and the scores were correlated using Pearson Product Moment correlation coefficient of 0.75. to analyse the data collected, inferential t-test was used.

Results

Table1: Relationship between knowledge of sex education as a determinant of premarital sexual behaviour among secondary school students in Lokoja metropolis ofKogi State.

Variables	N	Mean	Std. Dev.	Std. Dev. Error	r–value	P
Knowledge of Sex education	320	3.4637	0.48015	0.00897	-4.705	0.000
Premarital sex	320	3.500	0.0000	0.000		

[*]**p<0.05**

Table 1 shows that the computed r-value (-4.705) is significant at p<0.05 level of significance. The null hypothesis was rejected. This implies that there is significant relationship between knowledge of sex education as a determinant of premarital sexual behaviour among senior secondary school students in Lokoja metropolis of Kogi State. The study also examines the relationship between religious belief and family planning practices among women of reproductive age in Ekiti State. The study found a moderate and statistically significant negative correlation between the knowledge of sex education and premarital sexual behavior among senior secondary school students in Lokoja metropolis of Kogi State.

Table 2: Relationship between family structure and premarital sexual behaviour among secondary school students in Lokoja metropolis of Kogi State.

Variables	N	Mean	Std. Dev.	Std. Error	r-value	P-value
Family structure	320	3.8537	0.54178	0.01012	0.409	0.000
Premaritalsex	320	3.500	0.0000	0.000		

[*]**p<0.05**

Table 2 shows that the computed r-value (0.409) is significant at p<0.05 level of significance. The null hypothesis was rejected. This implies that there is significant relationship between family structure and premarital sexual behaviour among secondary school students in Lokoj ametropolis of Kogi State. The correlation between family structure and premarital sexual behavior among secondary school students in the Lokoja metropolis of Kogi State is moderate and statistically significant in a positive direction. The positive, ordirect, correlation implies that lines of family structure will enhance premarital sexual behavior among secondary school students and vice versa.

Table 3: Relationship between the exposures to pornographic materials as a determinant of premarital sexual behaviour among secondary schools students in Lokoja metropolis of Kogi State.

Variables	N	Mean	Std. Dev.	Std. Error	r-value	Sig.
Exposure to Pornographic materials	320	3.785	0.56907	0.01063	0.479	0.000
Premarital sexual behaviour	320	3.500	0.0000	0.000		

*p<0.05

Table 3 shows that the computed r-value (0.479) is significant at p<0.05 level of significance. The null hypothesis was rejected. This implies that there is significant relationship between exposure to pornographic materials and premarital sexual behaviour among secondary school students in Lokoja metropolis of Kogi State. The correlation between family structure and premarital sexual behavior among secondary school students in the Lokoja metropolis of Kogi State is moderate and statistically significant in a positive direction. The positive, or direct, correlation implies that lines of family structure will enhance premarital sexual behaviour among secondary school students and vice versa.

Discussion

This study discovered a variable of lack of accurate knowledge on sexual reproductive health issues among the respondents on items presented. Note that the majority of the questions regarding respondents 'knowledge of reproductive health issues concentrated on reproductive anatomy and physiology. This could have potentially influenced the study' sresults. However, despite their lack of knowledge, there was evidence that senior school students had engaged in premarital sexual contact. Wangetal. (2012) agree that misinformation and ignorance about sexual issues led to students' unintentional involvement in premarital sexual behavior. Sujay (2019) found that students in secondary schools are particularly vulnerable to unexpected consequences from sexual activity, as they often engage

in premarital sexual behaviour without sufficient knowledge about human reproduction. Conservative societies commonly reported and regarded this knowledge deficit as a complex issue.

The study also revealed that family structure significantly influences senior secondary school students' premarital sexual behavior. The study shows that students from polygamous families, divorced families, and students who lack parent-child relationships are likely to engage more in premarital sexual behavior. In alignment with these findings, Slapetal. (2013) and Defo (2013), in their study on sexual behaviour of secondary school adolescent students in Nigeria and Cameroon, found that premarital sexual behaviour is more common among adolescent students from polygamous families, one parent, broken homes, and whether a parent was dead. Hallman (2004) and Togun (2012) also agreed with these findings, stating that teenagers living in single parents or reconstituted families (i.e., families with step parents) had higher risks of premarital sexual intercourse compared to those whose two parents are living together or those who have intact families.

The exposure of students to pornographic materials significantly influences the determinants of premarital sexual behaviour in this study. Massmedia, both electronic and print, was the major source of information about sexual and reproductive health issues for a majority of the students. In line with these findings, Algaa (2014) and Dingeta (2012) stated that the influence of modernization,

western culture, changes in the market economy, wide spread availability and use of electronic appliances, and communication technology have changed the cultural values among people in developing countries. Also, the finding of this study tends to be in agreement with Adewale (2010), who reported that adolescents would always want to follow Western concepts presented in media without going deeper into the underlying issues, like culture, personal values, and family norms, as well as pregnancy and other consequences of unsafe sex.

Conclusion

The following conclusions were drawn from the result of the study:

1. The results of the present study show that family structure has an effect on premarital sexual behavior among senior secondary school students.
2. The study's outcome reveals a highly significant influence of respondents' opinions on the impact of exposure to pornographic materials on premarital sexual behaviour among senior secondary school students in Nigeria. In other words, respondents were able to establish strong link between exposure to pornographic materials and premarital sexual behaviour.
3. Finally, the study concludes that various factors, such as knowledge on sexual and reproductive health, were not significant to the likelihood of secondary school students' premarital sexual behavior. The study's results suggest that family structure and exposure to pornographic materials likely play a major role in influencing premarital sexual behavior among secondary school students in Lokoja metropolis of Kogi State.

Recommendations

The following recommendations were made based on the findings ofthe present study:

i. Students have clearly prepared sources of information for various aspects of sexual and reproductive health, so strengthening the current school-based sexual education program is necessary to address all aspects of sexuality and reproductive health, including the consequences of premarital sexual behavior.
ii. Parents have a considerable role to play in ensuring that their children lead healthy sexual and reproductive lives. Parents should focus their efforts on influencing their children's reproductive health and sexual education. Additionally, parents should make sure their behavior aligns with societal sexual standards, setting a positive example that can positively impact their children's sexual development. Additionally, parents and other adults responsible for students should actively monitor their children's friends, especially regarding habits such as alcohol consumption and early indications of sexual activity.
iii. The mass media should focus its efforts on ensuring the correct and appropriate dissemination of information on sexual and reproductive health issues. Mass media outlets that are popular with adolescents should place more emphasis on the dissemination of correct information about reproductive issues. Parents should also counsel and monitor their children to ensure that the materials they view on television and the internet at home are not detrimental to their sexual health or future.
iv. The study also recommends that schools enrich health guidance so that students learn every thing they need to know as a protective factor.

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PHYSICAL ACTIVITIES AS A PANACEA TO HEALTHY AGEING BY PERSONS WITH DISABILITIES

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Abstract
People's participation in physical activities is gradually decreasing, potentially due to the global economic recession. People do not generally see the benefits associated with participation in physical fitness but rather believe there is no need to develop anxiety where there is none. Based on this premise, the purpose of this paper is to emphasize the advantages of physical activities which include healthy ageing among individuals living with disabilities, with the ultimate goal of motivating them to participating in physical activities. The paper explores various physical activities that individuals with disabilities can engage in and the advantages they can reap from therein. The paper concluded that physical activities are essential to human existence and, consequently, to individuals living with disabilities. Therefore, the paper recommended that individuals living with disabilities should always find time to participate in physical activities, as their nature may require them to remain stationary for extended periods as well as encourage healthy ageing among them.

Key Words: Accident, Malformation, Wheel-Chair, Correctional, Developmental

Introduction

Ageing generally presents unique challenges for the aged and those growing old, most especially among persons with disabilities due to their nature. Individuals with disabilities, who face various challenges, may require assistance from others in their daily activities. According to Ocloo et al. in Oyeniyi et al. (2019), disability refers to a complete or partial loss of behavior, mental, physical, or sensory functioning, which can be caused by diseases, malformations, accidents, or hereditary factors. Therefore, persons with disabilities are individuals living with one form of deformity or another, which may include orthopaedic or physical deviation, mental retardation, emotional or behavioral disorder, intellectual impairment, visual impairment, auditory impairment, speech impairment, and health impairment. According to WHO (2022), an estimated 1.3 billion people worldwide experience significant disability, accounting for 16% of the global population or 1 out of every 6 individuals.

Researchers have discovered that physical activity is essential to human survival and existence. Physical activity, an important aspect of physical education, is crucial to human existence and serves as a means to reduce obesity and sudden death associated with inactivity (Oyeniyi, 2018). It is also an aspect of human life that helps in keeping an individual in good shape. It is important to understand that man, whether voluntarily or involuntarily, cannot exist without engaging in physical activities, as these activities form the foundation of every individual's life. In fact, these activities occur in every individual's daily tasks and even predate human existence, as the spermatozoan that fertilizes the egg undergoes a number of physical activities prior to fertilization. The spermatozoan engaged in numerous physical activities such as running and

swimming before finally making contact with the egg in the fallopian tube's ampulla. It is also important to note that the human activities between a man and a woman, which ultimately lead to conception, involve numerous physical activities. Based on this premise, individuals, regardless of their disability, should consistently engage in some form of physical activity.

However, the current global economic situation has left many individuals without access to adequate nutrition, leading them to forego participating in physical activities. Individuals, particularly those with disabilities, have seen the detrimental effects of this life of inactivity, as it can lead to degenerative diseases like obesity, cancer, stroke, hypertension, diabetes, among others. Individuals with disabilities, due to their inherent nature and sedentary lifestyle, may be susceptible to these hypokinetic diseases. Torabi and Luegers (2010) posited that physical activity is a vital component of maintaining a healthy and active lifestyle regardless of age and ability. According to Oyeniyi (2016), physical activity is an important aspect of human life that helps in keeping an individual in good shape and good form for healthy living. He stated further that, to keep the body and soul on the same pedestal and live an active life, there is a need for every individual, whether persons with disability or without disability, to take part in regular physical activities to promote healthy living. Adegun (2005) asserts that both males and females naturally engage in physical activities, meeting the demands of daily life through occupation and maintaining a healthy body-soul connection. He stated further that the biological and social nature of human beings make it mandatory for mankind to engage in one form of physical activity or the other from birth to death. Regular exercises continue to be an important behavior in promoting,

postponing, or preventing the prevalence of neuromuscular disorders such as mechanical back pain, neck and shoulder pain, and in reducing the risk of developing coronary heart disease, hypertension, diabetes, osteoporosis, obesity, and column cancer (Vuori, 1995; Jones, Ainsworth & Croft, 1998).

Place of Physical Activities in the Life of Persons Living with Disabilities

The roles of physical activities in the lives of persons living with disabilities cannot be over emphasized because they are sine qua non to the development of every individual, which may include but are not limited to the following:
1. improved physical function and mobility
2. enhances mental health and reduces stress
3. encourages social interaction and community development
4. helps manage degenerative diseases.
5. improves cognitive function
6. promotes self-esteem
7. instill self-confidence

1. Improvement Physical Function and Mobility

Engaging in physical activity can help individuals with disabilities enhance their ability to move from one place to another. Physical activity avails every participant the great opportunity of moving the body or any part of the body either through locomotor or non locomotor movements, most especially individuals living with disabilities that are confined to static positions. It also serves as a form of mobility for individuals living sedentary lives. Participation in regular physical activities can also help in preventing regular falls associated with the elderly and persons with disabilities.

2. Enhances Mental Health and Reduces Stress

Participation in physical activities enables one to be free from unnecessary stress associated with inactivity. Engaging in a variety of activities reduces unnecessary thinking, which can potentially lead to suicide or other negative mental activities in individuals with disabilities who become disabled later in life. Every individual, including exceptional persons, benefits from constant physical activity as it produces endorphins in the brain, known to promote feelings of well-being. Researchers have also established that regular physical activities can reduce symptoms of anxiety and depression, potentially preventing suicide. Torabi and Luegers (2010) assert that clinical settings employ physical activity to manage nervous tension. They also observed that, following an exercise session, clinicians had seen a significant decrease in the electrical activity of tensed muscle fibers. They further proposed that participants may experience reduced jitteriness or less hyperactivity after engaging in physical activity. Chin-hug and Hsiu-Lin (2010) proposed that engaging in physical activity is a healthy habit that can alleviate feelings of fatigue and low energy. Regular physical activity, fitness, and exercise are critically important for the health and well-being of people of all ages, which is also essential to aid growth in adolescents (Olubayo-Fatiregun, 2010).

3. Encourages Social Interaction and Community Development

Involvement in physical activity by persons with disabilities enables participants to come in contact with other people from other spheres of life, either with disabilities or without. At this level, there is usually a cross-fertilization of ideas that could solve issues that may result in sudden death or a suicide mission.

4. Helps manage degenerative diseases.

People with disabilities can manage degenerative diseases through well-managed and prescribed physical activity. Physical activities such as walking, jogging, running, arm twisting, and swinging can help reduce tension and prevent participants from suffering from various degenerative diseases such as peptic ulcer, stroke, hypertension, among others.

5. Improves Cognitive Function

Participation in physical activity helps proper functioning of the brain. It has been established that many physical activities help in developing the brain because participants have always been performing better in academic activities after participating in such exercises. There are many physical activities that can be used to teach rudimentary aspects of mathematics like multiplications for example "ten ten" or singing games like two one two and others.

Physical Activities that can be done by Persons Living with Disabilities

There are varieties of physical activities that can be done by persons with disabilities depending on the age and nature of disabilities. The activities may include adaptive sports, developmental sports, correctional sports, cycling and hand-cycling, chair yoga, accessible fitness classes, walking and hiking with assistive devices, swimming, and water-based activities.

1. Adaptive Sport

These are sporting activities that are worked out from the regular programme to encourage the participation of individuals living with disabilities. The activities are adapted to the individual needs of persons with disabilities. For example, wheelchair volleyball, badminton, or tennis. In this form of activity, the participants are allowed to use their equipment, such as the wheelchair.

2. Developmental Sports

This has to do with activities that are done to work on certain parts of the body of person with disability that need to be repaired. For example, an individual that has an accident and has a fracture that has been rehabilitated but needs to be brought back to near normal will have to undergo a developmental programme to restore it to near normal, if not normal.

3. Correctional Sports

These are sporting activities that are done to make corrections to any part of the body that is suffering from deformity. For example, an individual with a flat foot can be asked to constantly walk on a pipe to rectify such deformity as a form of exercise to correct the deformity.

Barriers to Physical Activities by Persons Living with Disabilities

There are many barriers that can debar persons with disabilities from participating in physical activities which may include any of the following:
vii.   Lack of Facilities
viii. Poor Transportation
ix.   Social Stigma and Discrimination
x.   Financial Problem
xi.   Lack of Significant Other's Support
xii.   Lack of Trained Personnel

Strategies to Promoting Physical Activities among Persons with Disabilities

iii.   Provision of Inclusive Facilities
iv.   Accessible Infrastructural Development
v.   Training of Instructional Personnel/ Caregivers
vi.   Support from significant others
vii.   Provision of Technology-Based Exercise

Conclusion and Recommendations

Physical activities have been discovered to be sin-qua-non to human existence whether an individual is living with disability or not. It is therefore pertinent to state that individuals living with disability need it more because of their nature, which may compel them to be on the same spot for a long period. Generally speaking, physical activity is essential for healthy ageing, which makes it mandatory for persons with disabilities to always find time to partake in any of the suggested physical activities for healthy ageing.

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PHYSICAL EXERCISE AS A PANACEA FOR UNPRODUCTIVE AGEING AMONG THE ELDERLY.

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Abstract.
Physical exercise has been described as any physical activity that is planned, structured and performed for the main purpose of achieving improving physical fitness of an individual or group. It involves physical exertion that can increase the heart rate beyond resting levels. Regular participation in physical exercise has been found to prevent onset and cure of various diseases and other health issues thereby preserving physical and mental health. Moreover scientific evidence has supported the power of physical exercise in the prevention and treatment of numerous chronic and/or age related diseases such as musculoskeletal, metabolic and cardiovascular disorders. Exercises have helped in the context of reducing the risk of their onset and counteract their progression. This paper therefore discussed regular participation in physical exercises as a panacea for unproductive ageing in Nigeria. It explained the terms, physical activity and exercise, ageing and ageing process. It further discussed profitable and unprofitable ageing and recommendations were made.

Keywords: Physical Activity, Physical Exercise, Profitable Ageing and Unprofitable Ageing.

Introduction

Human body is designed for movement in all ramifications. Lack of it usually results in diseases and malfunctioning of the body organs and systems. In other words, man needs a modicum of physical activities to grow, develop and maintain a healthy status. Throughout ages, man has always pursued his means of survival through active movement experiences. This has made man's movements to be purposeful because of the diverse purposes for such physical activities. Despite the insight of man to this basic truth, it seems that engaging in structured physical activities for good life and healthy living has become difficult for most people especially the adults while even the youths are most unconcerned. The reasons for this attitude is not farfetched, they are improved standard of living, increased affluence and advances in modern technology which have almost completely eliminated the penchant for manual labour in daily living.

The typical engagement in manual labour culture of Nigerians seems to have been limited to the rural areas. Even in the rural areas, sedentary pastimes such as watching television, playing computer games and other uses of modern day technological devices seem to be increasingly popular. In the words of Emiola (2009), the result of the new sedentary lifestyle is the increase in the hypokinetic diseases such as obesity, hypertension, stroke and related ailments which are now prevalent among the citizens especially the city dwellers. The unattended to problem appears to be not only restricted to the adults and elders as children and youths also share in the problem.

Physical Activity and Exercise Explained: Physical activity and physical exercise are related concepts. Physical

activity is any form of bodily movement that requires a modicum of energy expenditure while physical exercise is any physical activity planned and structured towards the goals of wellness and physical fitness. However, the two concepts can be used interchangeably where adequate clarification is made in respect of the usage.

Physical exercise falls into four categories namely: aerobics or endurance, strength, balance and flexibility exercises. The endurance exercise usually refers to as aerobic increases breathing and heart rates, the strength exercise increases the force by which muscles exert against resistance. The balance exercises are those used to develop and maintain stability both at work and rest. The flexibility exercises are those to improve and maintain adequate stretch and easy movements of the joints.

Ageing and Ageing Process

Ageing is a natural but complex and intra-individual process. It is a global phenomenon that is occurring faster in developing countries with its social and economic challenges. It is usually defined as a time-dependent progressive loss of individuals' physiological integrity which eventually leads to deteriorated physical functioning (Roberts et al 2017). Ageing can also be seen as a progressive decline, or a gradual deterioration of physiological functions with age, including a decrease in fecundity (Arem et. al 2015). Human ageing is associated with a wide range of physiological and social changes that not only make people more susceptible to death but limit normal functioning and render people more susceptible to number of diseases (Belikov, 2019). Ageing is a gradual and continuous process of natural changes that begin at early childhood. Ageing reflects all the changes taking place over the course of life. Accordingly to the 'World Health Organization (WHO) (2018) , it is a course of biological reality which starts at conception and ends with death. It is a known fact that people do not become old or elderly at any specific age, but age 55 years has been traditionally designated as the beginning of old age and age 60 years was adopted as the official age for retirement in Nigeria.

With increasing age, numerous underlying physiological changes occur and the risk of chronic diseases rises by age 60 years. In the words of World Health Organization (WHO) (2021), the major burdens of disability and death arise from age-related losses in hearing, seeing and moving and non-communicable diseases such as stroke, chronic obstructive pulmonary disease, diabetes, depression and dementia. From the foregone, advancing age is the major risk factor for a number of chronic diseases in humans.

Profitable and Unprofitable Ageing

People usually wonder whether what they are experiencing as they age is normal or abnormal. As it has been stated earlier, people age somewhat differently as some changes result from internal processes that is from ageing itself. Although some of these changes are not pleasant and undesired, they are considered normal and are sometimes referred to as pure ageing. These changes occur in everyone who lives long enough and they are to be expected and are generally unavoidable. Some of these changes are benign such as grey hair, thickening and stiffening of the lens of the eye, loosing of teeth etc. All these changes can be referred to as normal ageing or what I term "Profitable Ageing". People can live healthily with these changes as they can sometimes take actions to compensate for them. e.g. seeing dentists regularly, brushing and flossing may reduce the chances of tooth loss. All the psychophysiological changes that enable wellbeing in older age can be termed profitable ageing. Profitable ageing means preserving life quality and reducing the healthy burden caused by ageing. These

are the abilities to meet basic needs, learn, grow and make decisions, build and maintain relationship and contribute to the society in one way or another.

On the other hand, going through the process of ageing in a detrimental or unbalance manner can be regarded as unhealthy which I term "Unprofitable Ageing".. This kind of ageing according to American Geriatrics Society (2021), has harmful impacts on adults physiological and metabolic health, physical capability, cognitive functions and so on. It is worth mentioning that functional decline that is part of profitable ageing sometimes seems similar to functional decline that is part of disorder. For example, forgetfulness in respect of details of an event is considered healthy ageing. But it becomes exagerated to forgetting the entire events, it is dementia and thus unprofitable. People with dementia have difficulty attending to normal daily tasks such as driving, cooking and handling finances, including understanding the environment, knowing what year it is and where they are. Thus, dementia is considered a disorder even though it is common in late life. Profitable ageing refers to postponement of or reduction in the undesired effects of ageing.

Physical Exercise for Productive Ageing

Regular participation in exercise and accumulation of physical activity have been shown to result in improvements in physical fitness which is operationally defined as a state of wellbeing with a low risk of premature health problems and energy to participate in a variety of physical activities. People who participate in moderate to high levels of physical exercise have a lower mortality rate compared to individuals who are not physically active (Roberto et.al, 2022). Physical exercise has been found to delay the onset of chronic diseases, increase longevity and survival and improve cognitive and physical functions in the

older people. (Boutton et. al, 2018 & Zhou et al, 2018). In short a strong positive correlation between physical activity and productive aging has been established. For productive ageing, promotion of physical exercise among the younger population is very crucial as it has been confirmed that being active at the younger age is beneficial to productive ageing (Yi Hsuan Lin et al, 2020).

Regular participation in exercise by older population especially aerobic and resistance exercise plays important roles at a multisystem level, preventing severe muscle atrophy, maintaining cardio respiratory fitness, boosting metabolic activity and improving functional independence`. Regular participation in physical exercise may increase life expectancy as people who participate in moderate to high levels of physical exercise have a lower mortality rate compared to individuals who are not physically active (Gremaux et.al, 2012). Moderate levels of exercise have been correlated with preventing ageing and improving quality of life by reducing inflammatory potentials. Physical exercise participation has other multiple benefits in older age. These include improving physical and mental capacity Birgitta et.al..(2018) (maintaining muscle strength and cognitive functions, reducing anxiety and depression, improving self esteem, preventing diseases and reducing risk of coronary heart diseases, diabetes and stroke) thereby preserving life and ensuring longevity.

Conclusion

Physical exercise has a positive anti-ageing impact at the cellular level and its specific role in each ageing hallmark. In other words, individuals must practice exercise to maintain health related quality of life and functional capabilities that mitigate physiological changes and comorbidities associated with ageing. Physical exercise regime includes aerobic

exercise, muscle strengthening and endurance, flexibility and neuromotor exercises that can lead to reduction of risk of osteoporosis and osteomalacia and improvements in postural stability.

To this extent therefore, regular physical exercise/activity seems to be the only lifestyle behavior identified to date other than caloric restriction which can favourably influence a broad range of physiological systems and chronic disease risk factors and may also be associated with better mental health, social and cultural activities.

Recommendations

Exercise is as effective as some medications in preventing or managing conditions such as heart diseases, diabetes and all other psycho-physiological challenges that make ageing unproductive.

The general recommendation for older people on exercise is accumulation of 30 minutes or more of moderate intensity physical exercise on most, and preferably all days of the week.

Older people should also go on a longer warm up and cool down periods as their cardiac respiratory systems adjust to the work and adjust back to the resting state.

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