

**FACTORS ASSOCIATED WITH PHYSICAL ACTIVITY PARTICIPATION AMONG STUDENTS  
OF UGANDA CHRISTIAN UNIVERSITY, MUKONO**

**EDSON MONDAY**

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**A DISSERTATION SUBMITTED TO THE FACULTY OF PUBLIC HEALTH,  
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THE AWARD OF A DEGREE OF MASTER OF SCIENCE IN NURSING SCIENCE OF UGANDA  
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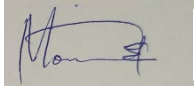


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## Declaration

I Monday Edson declare that this dissertation is my original work and has not been published and or submitted to any other university or institution of higher learning for a degree or any academic award

A rectangular box containing a handwritten signature in blue ink, which appears to read "Monday Edson".

Date 30<sup>th</sup> May 30, 2024

Monday Edson

Rm16m11/421

## Approval

This dissertation titled “facilitators and barriers to participation in physical activity among university students at Uganda Christian University, Mukono” prepared and submitted by Edson Monday in partial fulfillment for the requirements of the Degree of Master of Nursing Science has been examined and approved.



Dr. Mary Grace Nakate

## **Dedication**

I dedicate this dissertation to my friend and sponsor Mr. Mark Bartels, Dr. Nakate Grace, madam Jemimah Mutabazi, Dr. Karen Drake and finally to my dear lovely wife Nahurira Allen for the physical, psychological and financial support throughout my years of my studies. May God Lord bless you abundantly.

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I thank the Almighty God for giving me the grace; guidance and strength throughout the whole study period because without him I would not have been successful.

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## **List of Acronyms**

HAW: - Health Awareness Weeks

LMICs: - Low- and Middle-Income Nations

NCDs: - Non-Communicable Diseases

SDGs: - Sustainable Development Goals

SPSS: - Statistical Package for the Social Sciences

UCU: - Uganda Christian University

UN: - United Nations

WHO: - World Health Organization

PI: Physical Inactivity

## Abstract

**Background:** Physical activity is integral to the overall health and well-being of university students. Understanding the factors that influence their participation in physical activity is crucial for fostering a healthy and active student community. This study aims to identify facilitators and barriers to engaging in physical activity among students at Uganda Christian University (UCU).

**Methods:** A descriptive cross-sectional research design, employing a quantitative research approach, was utilized to collect data through questionnaires. The study involved 207 respondents, students at UCU, selected through consecutive sampling. The questionnaires were designed to capture perceptions of preventive health benefits, venue accessibility, and safety, social advantages, as well as barriers like time constraints, fatigue, and inconvenient schedules for exercise facilities.

**Results:** Key facilitators for physical activity at UCU include students' perceptions of preventive health benefits, accessibility and safety of venues, and social advantages associated with physical engagement 94.7% (Mean = 3.44; SD = 0.643). Conversely, identified barriers encompass time constraints, fatigue, and inconvenient schedules for exercise facilities.

**Discussion:** The findings suggest that students at UCU are motivated to engage in physical activity when they perceive preventive health benefits, accessible and safe venues, and social advantages. However, challenges arise due to time constraints, fatigue, and inconvenient schedules for exercise facilities. Comparisons with existing literature and discussions on the practical implications of these findings are essential for a comprehensive understanding.

**Conclusion:** To address these challenges, there is a pressing need to implement flexible exercise facility scheduling, expand and maintain exercise facilities, and foster peer-led activity groups. Recognizing these facilitators and barriers provides a foundation for tailored interventions to promote physical activity among students at UCU.

**Keywords:** Physical activity, preventive health benefits, time constraints, students, Uganda Christian University.

## **Chapter One: Introduction**

It is widely recognized that engaging in physical activity (PA) is crucial for a healthy lifestyle (WHO, 2022). The two most critical things a person can do to lower the risk of illness are exercise and a good diet (Steineke, 2019). According to the 2015 United Nations (2015) report, many of the Sustainable Development Goals (SDGs) like; No Poverty, Zero Hunger, Good Health and Well-Being, Quality Education, Gender Equality, Clean Water and Sanitation, Affordable and Clean Energy, Decent Work and Economic Growth and industry for 2030 have the potential to be achieved with the help of PA. These include and not limited Sustainable Development Goals (SDGs)

In 2008, Physical Inactivity (PI) was thought to have contributed to 6%–10% of premature deaths, breast and colon cancer, type 2 diabetes, and coronary heart disease worldwide (Lee et al., 2012). Furthermore, the cost of treating these non-communicable diseases due to physical inactivity was predicted to be INT\$53.8 billion globally in 2013, of which INT\$31 billion was covered by the public sector (Ding et al., 2016).

Health and Wholeness course at Uganda Christian University exposes students to health topics like first aid, importance of physical activity, personal hygiene and good nutritional habits and choices, gives knowledge concerning a state of personal physical, emotional/mental, spiritual, and social health among others and students are empowered to make good health decisions. Despite all these interventions, some students at UCU still live a sedentary life. This study therefore identified facilitators and barriers to engagement in PA among university students at UCU (Fountain et al., 2016).

## **Background of the Study**

PA is the bodily movement of any kind that requires energy expenditure (WHO, 2022). Moderate- intensity PA is recreational activities or leisure time activities such as brisk walking, household chores, or dancing whereas vigorous-intensity activities include running, cycling, fast swimming, and heavy lifting (WHO, 2018). Both Ministry of health Uganda and WHO recommends at least 150 minutes of moderate-intensity PA per week or 75 minutes of vigorous-intensity PA per week for adults aged 18-64 years where university students belong.(WHO, 2014).

According to the WHO 2022 report, 1 in 4 adults worldwide do not meet the recommended levels of physical activity, 1 in 3 women and 1 in 4 men do not engage in enough physical activity, and in 2016, 28% of adults aged 18 and over and 81% of adolescents aged 11 to 17 did not engage in enough physical activity (WHO, 2022).

Participation in PA has been shown to prevent a number of chronic illnesses, including cancer (especially breast and colon cancer), diabetes, obesity, hypertension, and ischemic heart disease in particular (Anderson & Durstine, 2019) and mental illnesses such as stress and depression (Schuch & Vancampfort, 2021). There is a serious public health concern on the rising incidence of NCDs and related deaths particularly in low- and middle-income nations (LMICs) (Robinson & Hort, 2012). NCDs are responsible for about 70% of deaths worldwide, 87% of which occur in LMICs (WHO, 2014). The prevalence of NCDs has been gradually rising in Uganda in recent years. For instance, statistics from the country's health facilities' outpatient departments revealed that between 2012 and 2016, the number of cases of hypertension increased from 60,000 to 85,000, while the number of cases of diabetes increased from 30,000 to 32,000, an increase of 42 and 7%, respectively (Musoke et al., 2021).

Globally, 3.2 million people died in 2012 as a result of physical inactivity (WHO, 2014). Nearly 21- 25% of breast and colon cancer, 27% of diabetes, and 30% of ischemic heart disease are caused by physical inactivity (WHO, 2013). The prevalence of NCDs and the health of the population generally are significantly impacted by the increasing levels of physical inactivity in many countries (WHO, 2010). Yet a population-based study of 1208 adults in Uganda's Iganga-Mayuge Health and Demographic Surveillance Site found that 37.6% of the participants were physically inactive (28.5% of men; 46.6% of women, P .001) and 18.8% were sedentary (10.6% of men; 26.9% of women, P .001) (Kirunda et al., 2016).

PA patterns during university years are important influences on individual behavior, and during full span of adult life and, consequently, have significant implications for short and long-term health outcomes (Booth et al., 2014). According to Bray & Born (2004), one third of active students in high school became insufficiently active upon transitioning to university life. Researchers have suggested that the university students have similar issues of physical inactivity for example in Spain, the amount of physical activity carried out by university students is low (Rajappan et al., 2015).

Rajappan et al. (2015) conducted a survey on PA index among Malaysian teens revealed that they were more active than the rest of the ages at the age of 21. However, at 22 years of age and above, these young people attempted to decrease their PA, and at this age, most of them were university students. More Surveys by university students and staff report that the decrease in PA while at university could be because of lack of access to desirable places, such as parks and playgrounds, lack or poor condition of pavements and bike paths, are concerns and obstacles to people's participation in physical activity (Hasan, et al. 2021). Another study by Arzu et al. (2006) showed that the perceived lack of time is a major barrier for physical activity among University

students. Apart from that, other barriers or facilitators for movement in the University environment have hardly been investigated. Understanding the contextual influences that shape sedentary or movement behavior of University students is critical for planning needs- based interventions (Von Sommoggy et al., 2020).

Uganda Christian University (UCU) a faith-based institution of higher learning in Uganda offers health initiatives (packages) like Health Awareness Weeks (HAW), Health and Wholeness Course Unit as foundation course aiming at preparing healthy graduates. HAW is a week set apart by the University every semester particularly for health education from health experts from across the continent, and engage staff and students in physical activities including marathon, football games, cleaning of the community, hospitals and personal hygiene.

Health and Wholeness course exposes students to health topics like first aid, personal hygiene and good nutritional habits and choices, gives knowledge concerning a state of personal physical, emotional/mental, spiritual, and social health among others and students are empowered to make good health decisions (Booth et al., 2014). Despite all these interventions, there isn't any study at UCU that identifies facilitators and barriers to engaging in PA by students and yet this information is critical to support policy formulation and/or designing appropriate community-based interventions to promote and maintain good health. This research will therefore focus on identifying facilitators and barriers to engaging in PA among students at UCU, Mukono campus.

## **Problem Statement**

In 2008, PI was estimated to be responsible for more than 5.3 million of the 57 million deaths worldwide and 9% of premature mortality (Xu et al., 2022). Recent research shows that physical inactivity caused 7.2% of all-cause deaths, especially in middle-income nations, where it

was responsible for 69% of all deaths (Katzmarzyk et al., 2022). Additionally, the burden of disease from coronary heart disease, ischemic heart disease, type 2 diabetes, breast cancer, and colon cancer is increased by 6%, 30%, 7%, 10%, and 6%, respectively, due to PA (Gichu et al., 2018). Yet according to the 2019 WHO report (2019), NCDs accounted for 33% of all Ugandan deaths.

PA has been shown to reduce NCDs related mortality (Haileamlak, 2019), economic burden related to NCD management (Ding et al., 2016) and good academic performance among university students (So, 2012; Zhang et al., 2022). However, a number of researchers have found that there is a noticeable decline in PA among students who enroll in Universities (Bray & Born, 2004; Kwan et al., 2012; Vella-Zarb & Elgar, 2009); with one-third of high school students being inadequately active once they make the transition to University life (Kljajević et al., 2021). At Uganda Christian University HAW report January 2017 and May 2017, 73 students had their BMI taken, and 48% of them had a BMI above 25 while 4.1% had BMI below 18.5. In addition, the university health awareness week report for trinity semester 2017, 109 (25.6%) had their BMI above 24.9 thus overweight (HAW report 2017) Allan Galpin clinic UCU. It is on this basis that this study intended to determine the facilitators, and barriers to engaging in physical activity among university students at UCU.

### **Research Questions**

- i. What are the facilitators and barriers to engaging in physical activity among university students at UCU, Mukono?

### **Specific Objectives**

- i. To identify the facilitators for engaging in PA among university students at UCU Mukono.
- ii. To identify the barriers to engaging in PA among university students at UCU, Mukono.

## **Significance of the Study**

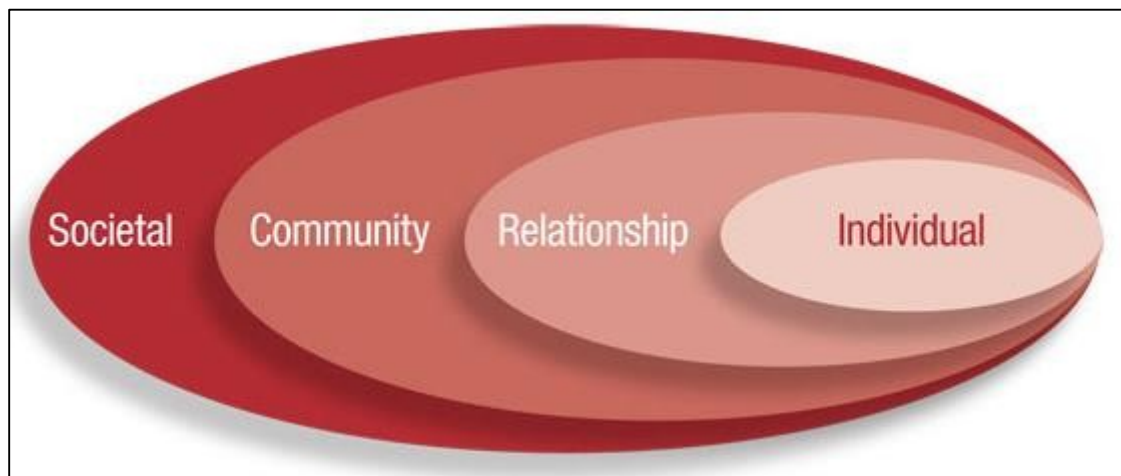
The results of this study are significant in various ways. UCU's code of conduct, regulations, and government guidelines emphasize the university's commitment to providing a conducive environment and promoting physical activities for students to maintain a healthy lifestyle. However, these guidelines do not explicitly address the facilitators and barriers that students might face when engaging in physical activities. Consequently, there is limited understanding of the specific factors influencing UCU students' participation in physical activity.

This lack of clarity has implications for policy makers. Understanding the facilitators and barriers associated with physical activity among students enables nurses to inform university policy makers effectively. Armed with this knowledge, policy makers can develop strategies to strengthen the identified facilitators and address barriers. Ultimately, this has the potential to increase the number of students engaging in physical activity, thereby contributing to improved and/or sustained healthy lifestyles during their university years. Additionally, this proactive approach may positively impact academic performance and reduce the risk of early onset of non-communicable diseases (NCDs), aligning with the broader goals of the 2030 Sustainable Development Goals (SDGs).

Furthermore, the research findings extend beyond UCU, offering insights for other universities. As institutions globally seek ways to enhance student well-being and promote healthy lifestyles, the outcomes of this research provide a valuable basis for curriculum reviews. By incorporating strategies to improve student engagement in physical activity, informed by identified facilitators and barriers, universities can create environments that better support holistic student development.

## The Social Ecological Model of Health

The social ecology model considers many variables that might have an impact on health and conceptualizes health broadly. It recognizes that interactions among an individual, a group or community, and the physical, social, and political contexts have an impact on health. According to the social ecology model, interactions between an individual, a group or community, and the physical, social, and political environments have an impact on one's health. Therefore, instead of focusing just on altering individual health behaviors, this model integrates methods to improve the physical and social environments (CDC, 2007). The figure below shows that different elements of the socio ecological model.



**Figure 1: The Social Ecological Model**

The first level of the model is the individual. This includes the biology and other characteristics such as age, education, income and health history of an individual. These play an important role in determining the PA of an individual for example increase in age is associated with a 40%-80% decrease in PA (Suryadinata et al., 2020), compared to those with higher education, individuals with lower education are more likely to decrease their level of physical

activity (Droomers et al., 2001), and also according to Kari et al. (2015), people in the highest income bracket typically exercise at a 26% higher energy cost and 3% higher intensity than those in the lowest bracket.

The second level is relationship and this includes a person's closest social circle, such as friends, partners, and family members, all of whom influence a person's behavior and contribute to his or her experiences (Sawka et al., 2013). According to a study by Morrissey et al. (2015), family support enhanced the chances of children's engagement in PA. Additionally, in a study by Thomas et al. (2022), marital support was associated with higher odds of more frequent PA in an individual.

The third level, community, explores the settings in which people have social relationships, such as schools, workplaces, and neighborhoods, and seeks to identify the characteristics of these settings that affect health. A study that examined the role of school environment on PA among Brazilian teenagers identified that schools with extracurricular sports programs, sports courts, schoolyards with teacher-led physical activities, and swimming pools were associated with increased PA (Rezende et al., 2015). Increasing employees' physical activity can improve their health, boost their productivity, and lower their chance of contracting expensive, disabling chronic diseases. Lindberg et al. (2018), however, asserts that office workers are at risk for poor health outcomes due to insufficient amounts of physical activity.

Finally, the fourth level examines general sociocultural issues that either improve or harm health. Here, examples include social and cultural standards as well as health, economic, educational, and social policies that contribute to the development, maintenance, or reduction of socioeconomic disparities across groups. According to Mayes et al. (2022), a person's culture

influences their views about and participation in physical activity. Examples of socio-cultural variables that were found to be significantly associated with enhanced PA in a study by Jaeschke et al. (2017) included having a companion for PA and encouragement from significant others.

### **Definition of Variables**

**Physical Activity:** Is any student engagement that involves bodily movement produced by skeletal muscles that require energy expenditure – including activities undertaken while working, playing, carrying out household chores, travelling, and engaging in recreational pursuits?

**Barrier:** Something such as a rule, law, or policy or a fence wall that is put in place by UCU to prevent students from moving easily from one area to another. Things in UCU that make it difficult or impossible for students to engage in Physical activity.

**Facilitator:** Something such as a rule, law, or policy or a pathway, playgrounds that is put in place by UCU to enable students to move easily from one area to another. Things in UCU that make it possible for students to engage in Physical activity.

### **Summary**

In summary, this research is organized into five chapters. However, the first chapter dealt with introductory issues including background of the study, problem statement, research questions, and objectives of the research, significances of the study and conceptual framework. This formed a basis on which other chapters were built.

## **Chapter Two: Literature Review**

This chapter reviewed literature related to facilitators and barriers to engage in physical activities among university students under the following themes: physical activity and its importance, importance of physical activity among university students, facilitators to physical activities and barriers to physical activity participation. The related researches and literatures published by journals, previous dissertations, text books, and authors' articles related to the research topic and its variables were reviewed so as to give an insight of the study hence a better understanding to the readers of the research work.

### **Physical Activity and its Importance**

According to the WHO, physical activity is any skeletal muscle-driven movement that involves the use of energy. All movement, whether done for recreation, transportation to go to and from locations, or as part of a person's job, is considered physical exercise (WHO, 2022).

One of the most crucial things one can do for their health is to exercise regularly. Physical activity can strengthen one's bones and muscles, help one maintain a healthy weight, improve one's ability to carry out daily tasks, and enhance one's brain health (CDC, 2022). Through regular physical activity, the chance of many chronic diseases, including cancer, cardiovascular disease, and type 2 diabetes, is reduced (Warburton et al., 2006). According to the WHO, 3.2 million fatalities worldwide occur each year as a result of physical inactivity. The sedentary lifestyle is the primary contributor to the rising mortality rate worldwide. The balance between energy and weight control is fundamentally influenced by physical exercise. Around the world, 23% of adults and 81% of school-age children engage in insufficient physical exercise. Generally speaking, women

and girls engage in less physical exercise than men and boys, and older adults engage in less physical activity than younger adults (Saqib et al., 2020).

Consistent findings from 20 longitudinal cohort studies show that engaging in regular physical exercise significantly lowers the risk of type 2 diabetes. The magnitude of risk reduction is lessened when differences in body mass index between the active and inactive groups are taken into account, but even then, a high level of physical activity is linked to a 20–30% lower chance of developing diabetes. The data show that a variety of activities of moderate or vigorous intensity can confer protection from diabetes, and that regular light-intensity exercise may also be adequate (Gill & Cooper, 2008). Also according to research that was published in *Diabetologia*, those who engaged in at least 150 minutes of moderate physical exercise each week had a 26% (95% confidence interval 20% to 31%) reduced risk of type 2 diabetes than those who did not (Mayor, 2016).

### **Importance of Physical Activity among University Students**

Students in universities and colleges deal with worry every day. Exams, schedules, and the need to perform well in school can all lead to stress (Herbert, 2022). In addition to their studies, many students have extracurricular activities, volunteer work, and part-time employment, all of which can add to their stress levels. Postsecondary students frequently exhibit poor sleep patterns, substance use, and poor physical exercise choices, all of which have been connected to mental illness (Wiens et al., 2020).

A study of 2116 students, including 1286 women and 830 men, who belonged to the National Trade Foundation for Education revealed that PA assisted students in forming healthy habits, such as eating three nutritious meals per day, improving concentration in class, and

performing better academically (Ibarra Mora et al., 2019). In another cross-sectional study conducted among 601 New Zealand children aged 6–11 years, it was reported that PA had a direct effect on the academic performance of the students (standardised coefficient = 0.225,  $p < 0.001$ ) (McPherson et al., 2018).

### **Facilitators to Physical Activities**

Facilitators of PA are defined as interventions, programs, or factors that may improve participation in PA (Yu et al., 2022). In a systematic review that assessed eight reviews of studies which were looking at the barriers and facilitators of PA participation among adolescent girls, the most reported facilitators were weight loss, and support from peers, family, and teachers (Duffey et al., 2021). Another systematic review that included 44 systematic reviews that were published up until September 2020 reported facilitators such as, intrapersonal factors like better skills, higher motivation and goal-setting, positive beliefs about the benefits of physical activity, enjoying oneself while engaging in PA, having more/better knowledge about PA, and social and interpersonal factors like social and family support, among others (Garcia et al., 2022).

In a qualitative study that conducted in-depth interviews among 31 adults between the ages of 20 and 60 who resided in an urban area in Sri Lanka, participants reported that PA facilitators included health-related factors like expectations of preventing diseases, improving health, physical fitness, psycho-social wellbeing, optimizing body functions, increasing lifespan, and social factors like positive attitudes toward others (Perera et al., 2022). Another qualitative study that involved 10 retired Chinese retirees aged 54 to 74 years old in Hong Kong identified several facilitators to PA such as physical and mental health factors such as the participant's on their current physical conditions, such as cardiovascular disease (i.e., heart attack), would encourage him/her to exercise,

socio-economic factors such as social interaction with others, and environment-related factors such as good weather conditions and having a fixed place or route for doing exercise (e.g., sports center) among others (Ghența et al., 2022).

An additional qualitative study that explored the barriers and facilitators of physical activity among school-going adolescents in Lagos State, Nigeria conducted semi-structured interviews among 21 decision-makers who were in charge of developing the physical and health education curricula in secondary schools. Among the facilitators of PA that were reported in this study include; students' interests, students' awareness of the benefits, and school initiatives, among others (Adebusoye et al., 2023). The facilitators of physical activity in another qualitative study that involved 39 community-dwelling participants in Taiwan included motivation from the health benefits of physical activity, participation in preferred types of activity, support from family and friends, encouragement from health professionals, and easy access to exercise equipment and facilities (Chen et al., 2022).

Last but not least, in another qualitative study that employed focused group discussions with 13 participants in each focused group, participants reported that access to reasonably priced, practical, and stimulating PA options and motivation to maintain physical and mental health were among the PA facilitators (Bethancourt et al., 2014).

### **Barriers to Physical Activity Participation**

Insufficient time, inconvenience, a lack of enjoyment or greater boredom with physical activity, fear of injury, and feelings of self-consciousness or shame when being physically active are just a few of the personal factors that prohibit people from engaging in PA (CDC, 2022). Also, physical and psychosocial environmental factors may have an impact on a person's participation

in physical exercise. For example, physical barriers may include; inadequate sidewalk coverage, a lack of parks or green spaces, or a lack of walking or biking trails that are safe and conveniently located and psychosocial barriers may include; a lack of encouragement, social support, or company from family and friends when attempting to start a physical activity program (CDC, 2022).

A systematic review of 59 studies published between 1989 and 2021 found that 38,319 young people from 31 countries who participated in the studies reported barriers to participating in PA, including a lack of time, a lack of motivation, and a lack of convenient locations (Ferreira Silva et al., 2022). In another systematic review that was conducted among 8 studies with the aim of summarizing evidence from studies examining the barriers and facilitators of PA participation in adolescent girls, the most frequent barriers identified were the lack of support from peers, family, and teachers, and the lack of time (Duffey et al., 2021).

A mixed-methods study that examined the facilitators and barriers to PA participation among 375 female university students in Saudi Arabia came to the conclusion that the lack of facilities for physical activities, the academic load, gender roles, and the need to uphold cultural standards were the barriers to PA participation for these female students (Aljehani et al., 2022). Lack of time, lack of energy, and lack of self-efficacy were among the major barriers to PA identified in a study of 303 students at Baskent University's Faculty of Health Sciences. For instance, students stated that they were unable to participate in PA due to a busy class schedule, a lack of time due to obligations related to their families and social environments, and a lack of energy to engage in any physical activity (Arzu et al., 2006).

In a qualitative study, 43 HIV-positive individuals between the ages of 23 and 61 reported having difficulty engaging in PA due to a lack of time, money, access to PA facilities and social support networks, and inadequate information on PA from healthcare professionals in HIV clinics (Kitilya et al., 2023). The main obstacles cited in a different qualitative study that involved semi-structured focus groups with 25 female students from Emirati University were lack of convenient access to women-only facilities, low family support, competing time demands from domestic and academic activities, and hot weather (Burton et al., 2021).

## **Summary**

In this chapter, a review of the literature was presented. It depicted how non communicable diseases are a global concern and demonstrate how physical activity is one of the means of reducing the risk of developing NCDs. It also points out the possible facilitators and barriers to engaging in physical activity among different groups of people students inclusive. The next chapter describes the method used to conduct this study including ethical considerations to be undertaken in data gathering and analysis.

## **Chapter Three: Methodology**

Chapter three addresses the methodology used in the study to identify the facilitators and it includes; design, study population, and sample selection into the study, setting where the study took place, how data collection was carried out, the tool that was used, how the analysis

### **Study Design**

The study was descriptive cross-sectional research where data was collected from university students. A cross-sectional study is a type of observational study that describes data gathered from a given population at a designated point in time (Setia, 2016). In this study, a Cross-sectional design provided information from groups. Because it is a snapshot of a moment in time, this type of research was used because it doesn't influence the knowledge of barriers and facilitators among students but merely describe them.

### **Study Setting**

Uganda Christian University was established in 1997 by the Anglican Church, It is the second largest private institution of higher learning and the first private university to be chartered by the Government of Uganda. It has five major campuses i.e. UCU main campus, Bishop Barham University College – Kabale, UCU Mbale University College, UCU Arua Campus, and UCU Kampala Campus (Timbiti, 2014). The UCU's main campus has approximately 8,000 students and is located in Mukono Municipal council, 25-kilo meters (KM) east of Uganda's capital city, Kampala, on the Kampala-Jinja Highway.

UCU was purposively selected to serve as the study setting. The specific campus was selected as a study site because UCU puts more emphasis on health promotional programs like HAW and Health and wholeness courses. The above health promotional activities emphasize engaging in physical activities. However, the facilitators and barriers to engaging in PA at UCU's main campus are not known.

### **Study Population**

All students enrolled in undergraduate programs at all schools and faculties at UCU's main campus in Mukono and have been exposed to Health and wholeness course followed or Health awareness weeks.

### **Accessible Population**

All UCU students in their third or fourth years of study enrolled from January 2019 to December 2022 who met the eligibility criteria.

### **Sampling Strategy**

Consecutive sampling was employed to select participants who meet the eligibility criteria. The participants were consecutively selected in order of appearance according to their accessibility. The sampling process came to an end when the total number of participants (sample saturation) and/or the time limit (time saturation) was reached (Martínez-Mesa et al., 2016). Consecutive sampling was advantageous in this study because it allows for the efficient recruitment of participants who meet the eligibility criteria, making the best use of available resources. It also ensures a diverse range of participants as they are selected based on their convenient accessibility, reducing potential bias in participant selection. Additionally, this

approach was particularly suitable for time-sensitive research, ensuring that the sample size was reached within the study's time constraints.

### **Inclusion Criteria**

The inclusion criteria included all students at UCU both male and female aged 18- 60 years in their second, third and fourth year that had a university ID. This was because this was based on the assumption that this group of students that have been exposed to health and wholeness course for a minimum of 1 or more years which is enough to impact behavior change.

### **Exclusion Criteria**

The exclusion criteria included students who don't provide written consent to participate in this study. It also included university students at Uganda Christian University in third or fourth year that were not Ugandans.

### **Sample Size Determination**

In order to get the number of the participants to answer IPAQ questionnaire, the Kish (1965) method was used (Charan & Biswas, 2013);

$n = p(1-p)z^2/d^2$ , Where;

$n$ = is the estimated sample size of participants needed.

$p$ = the estimated proportion of PA among university students, 0.855 ([70].  $1-p$ = the probability of PI among university students.

$Z^2$ = standard normal deviate at 95% confidence interval corresponding to 1.96  $d^2$ = absolute error between the estimated and true population 5%

The calculated sample size is:  $n = 0.855 (1-0.855)1.962 / 0.052 = 190.5 \approx 191$  students

After adjusting for a non-response rate of 10%;  $N = 191 + (0.1*191) \approx 211$  students

Consequently, the minimum sample size for the study will be 211 students.

## **Data Collection**

Data Collection tool was adopted from Health Promotion Model Instrumentation Group and permission granted. A copy of permission is attached in appendix. The tool comprised of the section 1: Demographic data of the participants including their course undertaken and section 2: Individual perceived environment.

## **Data Collection Procedure**

After obtaining permission, one-week training for research assistants was immediately commenced who supported the data collection process. The list of third or fourth-year students was obtained from the director of teaching and learning/ academic registrar and used for the sampling procedures. We visited the third- and fourth-year students in their lecture rooms and requested them to give us 10 minutes after the class session. Students availed us consent to participate in the study then a questionnaire was accorded. We sampled and approached every fourth and third-year student to participate in the study until the desired sample size for each school and faculty was reached. We sampled the next student on the list if the sampled students declined or were unavailable to participate in the study. A self-administered questionnaire was given to the student to complete at the end or start of class. The modified International Physical Activity Questionnaire. IPAQ questionnaire was adopted from related studies with little editing made based on the research objectives. The questionnaire was filled out anonymously in privacy and completed

questionnaires were collected by the research assistant or class representative and examined for completeness and accuracy.

### **Data Quality Control**

For validity and reliability, the data collection tool was piloted on 10 students before the conduct of the study. This aided in the establishment of any edits that were needed as well as setting clear rules on how missing data would be handled and any conflicting variables. The research assistants were also trained on communication skills, participant recruitment criteria, questionnaire administration, and research ethics before commencement of the research.

The questionnaires were verified by the RAs for completeness before returning them to the Principal Investigator. Regular fortnight meetings were also held between the PI and the RA to share experiences, challenges, performance, and progress on data collection. Regular meetings with the statistician were also conducted. Confidentiality was observed by assigning identification numbers. The questionnaires were also double entered by trained data entrants, and then the discrepancies resolved before a final dataset was created.

### **Data Management**

All raw data was backed up at all data entry and analysis stages on password protected laptops and an external drive. Data was also treated with confidentiality of the highest order as no participant names were used, instead IDs were assigned.

### **Data Analysis**

Data was entered using Epi data version 3.1. Double data entry was done by the principal investigator. Checks were added to the data entry forms. Data was checked for completeness in all

questionnaires. Data was backed up in both hard copies and soft copies using a cloud such as Dropbox or google one drive. Statistical analysis was performed using SPSS Version 20.

The data analysis involved the use of Epi Data version 3.1 for data entry, with double data entry conducted by the principal investigator and checks added to ensure accuracy. Data completeness was verified for all questionnaires, and both hard and soft copies were backed up using cloud storage.

Statistical analysis was performed using SPSS Version 20, focusing on univariate analysis for continuous and categorical baseline characteristics. SPSS Version 20 was used because it was able to provide the researcher with the descriptive statistics like percentages, frequencies, means and standard deviations that the researcher intended to use in presentation of the findings. Continuous variables were summarized as mean and standard deviation or median and interquartile range based on distribution, while categorical variables were presented as frequencies and percentages. Pie charts and bar graphs visually illustrated levels of engagement in physical activity, as well as facilitators and barriers. Graphical representations were utilized to enhance the presentation of data, including pie charts and bar graphs for categorical variables. The analysis considered both data completeness and quality assurance during the data entry process. The demographic characteristics of respondents were presented using frequencies and percentages whereas the two research objectives were presented using frequencies, percentages, means and standard deviations

### **Ethical Considerations**

Ethics are the norms or standards for conduct that distinguish between right and wrong. They help to determine the difference between acceptable and unacceptable behaviors (Devlin,

2006). Ethical standards prevent against the fabrication or falsifying of data and therefore, promote the pursuit of knowledge and truth which is the primary goal of research (May, 2011). Ethical behavior is also critical for collaborative work because it encourages an environment of trust, accountability, and mutual respect among researchers. The handling of these ethical issues greatly impact the integrity of the research results.

The researcher sought ethical clearance from Uganda Christian University Research Ethics Committee (UCU-REC) after the proposal and the data collection instruments were approved. However, executive endorsements were obtained from the DOSA and Guild Government of UCU who represents the students of UCU.

Honesty, objectivity, respect for intellectual property, social responsibility, confidentiality and non-discrimination were observed by the researcher. Voluntary participation and informed consent were catered for. The purpose of the survey was fully explained and the respondents politely requested to participate in the study.

Sensitivity of the organization records, no harming of the respondents was ensured. According to (Cohen et al, 2000), it is very important that the participants have the option to refuse to participate in the study and the researcher has to provide this option. This was provided for in the introduction part of the questionnaire and consent form.

Anonymity was another concern. To this end, promise and principle of anonymity together with confidentiality was assured, after, the names of the respondents were not requested, and emphasis was noted that the information would be treated in aggregate and purely for research purposes. Appreciation was ensured to the respondents after participation for ethical

considerations. The researcher promised to share the findings of the study with the respondents since these findings would be useful to the entity where the study was carried out.

Anti-plagiarism: Finally, in adherence to ethical standards, stringent anti-plagiarism measures were implemented throughout the study. To ensure originality and proper attribution, all sources and references were meticulously cited following established academic conventions. Moreover, plagiarism detection software (Turnitin) was utilized to verify the integrity of the research, thereby maintaining the highest standards of academic and research ethics.

## **Summary**

Chapter three covered the methodological part of this research. It reviewed the research design, population of the study, sampling and sampling techniques, research instrument and its validity, data collection methods and data analysis methods. This formed a basis on which data analysis was done.

## Chapter Four: Presentation and Interpretation of Results

This chapter presents and interprets findings of analysis that has been done to look at the specific objectives of the study and in relation to the reviewed literature. The study was carried out using questionnaires with a sample of 207 out of 2016 expected students of Uganda Christian University giving response rate was 96%. The findings are presented with the help of tables and figures for purposes of clarity and interpretation.

### Findings on demographic characteristics of respondents

The background information of respondents solicited data on the samples and this has been presented below categorized into; gender, age, level of education and marital status, occupation and religion of the respondents among others.

**Table 1: Descriptive statistics on the demographic characteristics of respondents**

Item	Description	Frequency	Percentage (%)
Age	18-30 years	186	89.9
	31-40 years	17	8.2
	41-50 years	4	1.9
	<b>Total</b>	<b>207</b>	<b>100.0</b>
Gender	Male	119	57.5
	Female	88	42.5
	<b>Total</b>	<b>207</b>	<b>100.0</b>
Year of study	Year 2	90	43.5
	Year 3	110	53.1
	Year 4	7	3.4

	<b>Total</b>	<b>207</b>	<b>100.0</b>
Hall of residence	Resident	71	34.3
	Non-resident	136	65.7
	<b>Total</b>	<b>207</b>	<b>100.0</b>
Religion	Protestant	122	58.9
	Catholic	47	22.7
	Born Again	5	2.4
	Muslim	4	1.9
	Others	29	14.0
	<b>Total</b>	<b>207</b>	<b>100.0</b>
School/ Faculty	Divinity & Theology	20	9.7
	Education	21	10.1
	Health sciences	12	5.8
	Engineering, design & tech.	32	15.5
	Law	22	10.6
	Journalism & Communication	19	9.2
	Business	30	14.5
	Social sciences	25	12.1
	School of medicine	26	12.6
	<b>Total</b>	<b>207</b>	<b>100.0</b>

**Source:** *Primary data*

From table 1 above, the study revealed that majority of respondents represented by 89.9% are 18-30 years, followed by 8.2% of the respondents who are 31-40 years of age, whereas those who are 41-50 years of age constituted the minority, 1.9% of the total respondents. The reason as to why most of the respondents were below 30 years is because the study was focusing on university students. The age distribution of the respondents was necessary in this study as it helped in determining the facilitators and barriers to participation in physical activity among university students at UCU of the different age groups.

From table 1 above, the study also revealed that majority of respondents, represented by 57.5% were male, whereas female constituted the minority, 42.5% of the total respondents. Therefore, there were more males involved in the study compared to their female counterparts. The high number of male compared to female was due to the fact that men were more eager to give response and their concerns about the topic under study compared to their female counterparts who often shied away from response. The gender distribution of the respondents was necessary in this study as it helped in determining the facilitators and barriers to participation in physical activity among university students at UCU for each gender.

Furthermore, the study revealed that majority of respondents represented by 53.1% are in their third year of study at Uganda Christian University, followed by those who are in their second year of study at Uganda Christian University represented by 43.5%, whereas 3.4% of the respondents noted that they are in their fourth year of study at Uganda Christian University. It can therefore be noted that data was collected from students in different years of study which helped in obtaining different views concerning the topic under study. The years of study for the respondents was necessary in this study as it helped in determining the facilitators and barriers to participation in physical activity among university students at UCU who are in different years of study.

More so, concerning the hall of residence that the respondents reside in, majority of the respondents represented by 65.7% noted that they are non-residents, whereas 34.3% of the respondents noted that they are residents in either the halls owned by the university or halls affiliated to the university. The inclusion of both residents and non-residents in the study helped the researcher in getting varying views from the respondents on what they feel about the topic under study. The residence distribution of the respondents was necessary in this study as it helped

in determining the facilitators and barriers to participation in physical activity among university students at UCU by the residents and non-residents.

In addition, the study revealed that majority of respondents, 58.9% are from the Protestant religion (Anglicans), followed by 22.7% who noted that they are Catholics, followed by 14.0% who noted that they are from other religions like the Seventh Day Adventists and the Orthodox, followed by 2.4% who noted that they are Born Again Christians, where those who are from the Muslim religion constituted the minority represented by 1.9% of the total respondents. The reason as to why most of the respondents are from the Anglican religion is due to the fact that Uganda Christian University is based on the foundation of the Anglican religion. The religion distribution of the respondents was necessary in this study as it helped in determining the facilitators and barriers to participation in physical activity among university students at UCU of different religious denominations.

Finally, the study established that most of the respondents represented by 15.5% are from the school of engineering, design & technology, followed by 14.5% who are from the school of business, followed by 12.6% who are from the school of medicine, followed by 12.1% who are from the school of social sciences, followed by 10.6% who are from the school of law, followed by 10.1% who are from the school of education, followed by 9.7% who are from the school of Divinity and theology, followed by 9.2% who are from the school of journalism and communication, whereas 5.8% noted that they are from the school of health sciences. This therefore implies that the researcher was able to get different views from the students in different schools in UCU hence getting unbiased, reliable and valid data about the topic under study.

## Facilitators to Participation in Physical Activity among University Students

Students' perceptions on the individual/ perceived environment as a facilitator to participation in physical activity among university students.

Table 2 summarizes respondents' responses on individual/ perceived environment as a facilitators to participation in physical activity among university students by using a Likert scale where 4=SA (Strongly Agree), 3=A (Agree), 2=D (Disagree) and 1=SD (Strongly Disagree).

**Table 2: Individual/ perceived environment as a facilitator to participation in physical activity among university students**

Statement	Agree (%)		Disagree (%)		Total percentage		Mean	Std. Dev.
	SA	A	D	SDA	Agree	Disagree		
I enjoy exercise	106 51.2%	90 43.5%	8 3.9%	3 1.4%	<b>94.7</b> %	<b>5.3%</b>	3.44	0.643
Exercise decreases feelings of stress and tension for	121 58.5%	75 36.2%	10 4.8%	1 0.5%	<b>94.7</b> %	<b>5.3%</b>	3.53	0.614
Exercise improves my mental health	109 52.7%	88 42.5%	9 4.3%	1 0.5%	<b>95.2</b> %	<b>4.8%</b>	3.47	0.606
I will prevent heart attacks by exercising	100 48.3%	92 44.4%	13 6.3%	2 1.0%	<b>92.7</b> %	<b>7.3%</b>	3.40	0.653
Exercise increases my muscle strength	110 53.1%	87 42.0%	7 3.4%	3 1.4%	<b>95.1</b> %	<b>4.8%</b>	3.47	0.637
Exercise gives me a sense of personal accomplishment	76 36.7%	107 51.7%	22 10.6%	2 1.0%	<b>88.4</b> %	<b>11.6%</b>	3.24	0.675
Exercising makes me feel relaxed	100 48.3%	90 43.5%	15 7.2%	2 1.0%	<b>91.8</b> %	<b>8.2%</b>	3.39	0.666
Exercising lets me have contact with friends and persons I enjoy	74 35.7%	90 43.5%	36 17.4%	7 3.4%	<b>79.2</b> %	<b>20.8%</b>	3.12	0.810
Exercising will keep me from having high blood	89 43.0%	96 46.4%	17 8.2%	5 2.4%	<b>89.4</b> %	<b>10.6</b>	3.30	0.722
Exercising increases my level of physical fitness	133 64.3%	67 32.4%	5 2.4%	2 1.0%	<b>96.7</b> %	<b>3.3%</b>	3.60	0.590
My muscle tone is improved with exercise	91 44.0%	99 47.8%	16 7.7 %	1 0.5%	<b>91%</b>	<b>9%</b>	3.35	0.643
Exercising improves functioning of my cardiovascular	84 40.6%	110 53.1%	12 5.8%	1 0.5%	<b>93.7</b> %	<b>6.3%</b>	3.34	0.609
I have improved feelings of wellbeing from exercise	79 38.2%	100 48.3%	24 11.6%	4 1.9%	<b>86.5</b> %	<b>13.5%</b>	3.23	0.725
Exercise increases my stamina	84 40.6%	101 48.8%	18 8.7%	4 1.9%	<b>89.4</b> %	<b>10.6%</b>	3.28	0.703

**Source:** *Primary data*

The findings from table 2 reveal a strong consensus among the respondents, as the majority represented by 91.3% of them agreed with various statements related to individual and perceived environmental facilitators for participation in physical activity among university students. For instance, the statement “Exercising increases my level of physical fitness.” received a highest response of 96.7% and mean score (Mean =3.60 SD= 0.590). Similarly, participants strongly agreed that exercise has positive effects on their well-being, with statements like “Exercise improves my mental health” with agreement rate 95.2% (Mean = 3.53; SD = 0.614), “Exercise improves mental health” (Mean = 3.47; SD = 0.606), and “Exercise makes one feel relaxed” (Mean = 3.39; SD = 0.666) all scoring above 3 on the Likert scale.

Moreover, respondents acknowledged the health benefits of physical activity, with strong agreement that exercise can prevent heart attacks (Mean = 3.40; SD = 0.653) and increase muscle strength (Mean = 3.47; SD = 0.637). Additionally, participants believed that exercise enhances physical fitness (Mean = 3.60; SD = 0.590), improves muscle tone (Mean = 3.35; SD = 0.643), and boosts cardiovascular functioning (Mean = 3.34; SD = 0.609). Overall 91.3% agreement with the above statements, high, mean scores and low standard deviations reflect a remarkably positive and consistent perception among university students regarding individual/ perceived environment as a facilitator to participation in physical activity among university students plus the multifaceted benefits of engaging in physical activity for their physical and mental well-being.

## Students' perceptions on settings access and institutional factors as facilitators to participation in physical activity among university students

Table 3 summarizes respondents' responses on settings access and institutional factors as facilitators to participation in physical activity among university students by using a Likert scale where 4=SA (Strongly Agree), 3=A (Agree), 2=D (Disagree) and 1=SD (Strongly Disagree).

**Table 3: Settings access and institutional factors as facilitators to participation in physical activity among university students**

Mean	Agree (%)		Disagree (%)		Total percentage		Std. Dev.	
	SA	A	D	SDA	Agree	disagree		
Places for me to exercise are accessible	65 31.4%	99 47.8%	35 16.9%	8 3.9%	<b>79.2%</b>	<b>20.8%</b>	3.0 7	0.798
Its fun to be in the gym	62 30.0%	91 44.0%	46 22.2%	8 3.9%	<b>74%</b>	<b>26%</b>	3.0 0	0.824
Places for me to exercise are safe	56 27.1%	107 51.7%	41 19.8%	3 1.4%	<b>78.8%</b>	<b>21.2%</b>	3.0 4	0.726
Health tips: I will live longer if I exercise.	72 34.8%	104 50.2%	23 11.1%	8 3.9%	<b>85%</b>	<b>15%</b>	3.1 6	0.769
Exercise helps me decrease fatigue.	76 36.7%	91 44.0%	34 16.4%	6 2.9%	<b>80.7%</b>	<b>19.3%</b>	3.1 4	0.793
Exercising is a good way for me to meet new people	67 32.4%	101 48.8%	31 15.0%	8 3.9%	<b>81.2%</b>	<b>18.8%</b>	3.1 0	0.788
My physical endurance is improved by exercising	82 39.6%	99 47.8%	22 10.6%	4 1.9%	<b>87.4%</b>	<b>12.6%</b>	3.2 5	0.720
Exercising improves my self-concept	60 29.0%	118 57.0%	27 13.0%	2 1.0%	<b>86%</b>	<b>14%</b>	3.1 4	0.664
Exercise allows me to carry out normal activities	68 32.9%	103 49.8%	27 13.0%	9 4.3%	<b>82.7%</b>	<b>17.3%</b>	3.1 1	0.790
Exercise improves the quality of my work.	60 29.0%	99 47.8%	39 18.8%	9 4.3%	<b>76.8%</b>	<b>23.2%</b>	3.0 1	0.809
Exercise is good entertainment for me.	48 23.2%	98 47.3%	46 22.2 %	15 7.2%	<b>70.5%</b>	<b>29.5%</b>	2.8 6	0.854
Exercising increases my acceptance by others	43 20.8%	80 38.6%	58 28.0%	26 12.6 %	<b>59.4%</b>	<b>40.6%</b>	2.6 8	0.943

**Source:** Primary data

The findings in table 3 shed light on university students' perceptions of settings access and institutional factors as facilitators for their participation in physical activity. Across the various

statements, it is evident that respondents generally displayed a favorable attitude toward these factors. For instance, they agreed that places for exercise are accessible 79.2% (Mean = 3.07; SD = 0.798), indicating that most students find exercise facilities within reach. Additionally, respondents viewed exercising as enjoyable, as indicated by the statement “it’s fun to be in the gym” 74% (Mean = 3.00; SD = 0.824). They also felt that exercise environments were safe 78.8% (Mean = 3.04; SD = 0.726) and believed that engaging in physical activity could lead to longevity 85% (Mean = 3.16; SD = 0.769) and decreased fatigue 80.7% (Mean = 3.14; SD = 0.793).

Students saw exercise as a means to meet new people 81.2% (Mean = 3.10; SD = 0.788) and improve physical endurance 87.4% (Mean = 3.25; SD = 0.720). Moreover, they agreed that exercise has positive effects on self-concept 86% (Mean = 3.14; SD = 0.664) and the ability to carry out normal activities 82.7% (Mean = 3.11; SD = 0.790). However, some statements, such as “Exercise improves the quality of my work” 76.8% (Mean = 3.01; SD = 0.809) and “Exercise is good entertainment for me” 70.5% (Mean = 2.86; SD = 0.854), received slightly lower mean scores, suggesting a somewhat lesser degree of agreement. Lastly, respondents were less convinced that exercising increased their acceptance by others 59.4% (Mean = 2.68; SD = 0.943). Overall, these findings indicate generally positive attitudes toward exercise settings and institutional factors, with some variations in the degree of agreement across different aspects of physical activity facilitation.

## Barriers to Participation in Physical Activity among University Students

### Students' perceptions on the individual/ perceived environment as a barrier to participation in physical activity among university students

Table 4 summarizes respondents' responses on individual/ perceived environment as a barrier to participation in physical activity among university students by using a Likert scale where 4=SA (Strongly Agree), 3=A (Agree), 2=D (Disagree) and 1=SD (Strongly Disagree).

**Table 4: Individual/ perceived environment as a barrier to participation in physical activity among university students**

Statement	Agree (%)		Disagree (%)		Total percentage		Mean	Std. Dev.
	SA	A	D	SDA	Agree	Disagree		
	Exercising takes too much of my time.	37 17.9%	67 32.4%	80 38.6%	23 11.1%	<b>50.3%</b>		
Exercise tires me.	36 17.4%	77 37.2%	79 38.2%	15 7.2%	<b>54.6%</b>	<b>45.4%</b>	2.65	0.851
I am fatigued by exercise.	32 15.5%	54 26.1%	93 44.9%	28 13.5%	<b>41.6%</b>	<b>58.4%</b>	2.43	0.911
I am too embarrassed to exercise.	20 9.7%	41 19.8%	85 41.1%	61 29.5%	<b>29.5%</b>	<b>70.5%</b>	2.10	0.935
Exercise is hard work for me.	13 6.3%	52 25.1%	87 42.0%	55 26.6%	<b>31.4%</b>	<b>68.6%</b>	2.11	0.871
I think people in exercise clothes look funny.	18 8.7%	31 15.0%	88 42.5%	70 33.8%	<b>23.7%</b>	<b>76.3%</b>	1.99	0.916

**Source:** *Primary data*

The findings in table 4 shed light on university students' perceptions of individual and perceived environmental barriers to their participation in physical activity. The responses indicate that various barriers are influencing their engagement in physical activity. For instance, majority of the respondents agreed that exercising can be time-consuming 50.3% (Mean = 2.57; SD =

0.910), indicating that many students perceive time constraints as a significant obstacle. They also expressed agreement with the statements that exercise can be tiring (Mean = 2.65; SD = 0.851) and fatiguing 54.6% (Mean = 2.43; SD = 0.911), suggesting that feelings of physical exhaustion pose the greatest barrier challenges to their participation in physical activity.

Moreover, students indicated a high level of disagreement with the idea that embarrassment is a barrier to exercise 70.5% (Mean = 2.10; SD = 0.935), reflecting concerns about self-consciousness while engaging in physical activity. Additionally, they disagreed that exercise is perceived as hard work 68.6% (Mean = 2.11; SD = 0.871) and that people in exercise attire can look funny 76.3% (Mean = 1.99; SD = 0.916), highlighting psychological barriers related to the perceived effort and social stigma associated with exercise. These findings suggest that addressing these barriers, such as time constraints and social self-consciousness, may be crucial in promoting physical activity among university students.

**Students’ perceptions on the settings access and institutional factors as barriers to participation in physical activity among university students**

Table 5 summarizes respondents’ responses on settings access and institutional factors barriers to participation in physical activity among university students by using a Likert scale where 4=SA (Strongly Agree), 3=A (Agree), 2=D (Disagree) and 1=SD (Strongly Disagree).

**Table 5: Settings access and institutional factors as barriers to participation in physical activity among university students**

Statement	Agree (%)		Disagree (%)		Total percentage		Mean	Std. Dev.
	SA	A	D	SDA	Agree	disagree		
Places for me to exercise are too far away.	28 13.5%	48 23.2 %	88 42.5 %	43 20.8%	<b>36.7</b> %	<b>63.3%</b>	2.29	0.948
Exercise facilities do not have convenient schedules	40 19.3%	59 28.5 %	65 31.4 %	43 20.8%	<b>47.8</b> %	<b>52.2%</b>	2.46	1.027

**Source:** *Primary data*

The findings presented in table 5 highlight university students’ perceptions of settings access and institutional factors as barriers to their participation in physical activity. In terms of the distance to exercise facilities, the mean score indicates that respondents generally disagreed that these facilities are too far away 63.3% (Mean = 2.29; SD = 0.948). This suggests that while there is some disagreement among students, on average, they do not perceive distance as a significant barrier. However, when it comes to the convenience of exercise facility schedules, the mean score indicates average agreement with the statement that facilities do not have convenient schedules 47.8% (Mean = 2.46; SD = 1.027). This finding suggests that a substantial portion of respondents sees scheduling as a barrier to their participation in physical activity. Overall, these results emphasize the importance of addressing scheduling issues to enhance physical activity

opportunities for university students, while also acknowledging that distance to exercise facilities may be less of a concern.

**Students’ perceptions on social environment or active living domain as a barrier to participation in physical activity among university students**

Table 6 summarizes respondents’ responses on social environment or active living domain as a barrier to participation in physical activity among university students by using a Likert scale where 4=SA (Strongly Agree), 3=A (Agree), 2=D (Disagree) and 1=SD (Strongly Disagree).

**Table 6: Social environment or active living domain as a barrier to participation in physical activity among university students**

Statement	Agree (%)		Disagree (%)		Total percentages%		Mean	Std. Dev.
	SA	A	D	SDA	Agree	Disagree		
My family members do not encourage me to exercise	16 7.7%	24 11.6 %	100 48.3%	67 32.4%	<b>19.3%</b>	<b>80.7%</b>	1.95	0.866
It costs too much to exercise.	16 7.7%	33 15.9 %	92 44.4%	66 31.9%	<b>23.6%</b>	<b>76.4%</b>	2.00	0.890
Exercise makes tired.	18 8.7%	35 19.6 %	92 44.4%	62 30.0%	<b>28.3%</b>	<b>71.7%</b>	2.04	0.905
My spouse (or significant other) does not encourage	8 3.9%	25 12.1 %	82 39.6%	92 44.4%	<b>16%</b>	<b>84%</b>	1.75	0.814

**Source:** *Primary data*

The findings in table 6 provide insights into university students’ perceptions of social environment and active living domain factors as barriers to their participation in physical activity. Across the various statements, it is evident that most respondents disagreed with these factors acting as significant barriers. For instance, they generally disagreed that family members do not encourage them to exercise 80.7% (Mean = 1.95; SD = 0.866), indicating that family support is

not seen as a substantial hindrance to their physical activity engagement. Similarly, students disagreed with the idea that the cost of exercise is prohibitive 76.4% (Mean = 2.00; SD = 0.890) and that exercise is too costly for them. Furthermore, they disagreed that their spouse or significant other discourages them from exercising 84% (Mean = 1.75; SD = 0.814), suggesting that, on average, romantic relationships do not pose a significant obstacle to their physical activity. Overall, these findings indicate that, according to the respondents, social and financial factors do not appear to be major barriers to their participation in physical activity, with a majority expressing disagreement with these statements.

## **Summary**

In summary, this chapter presents and interprets the findings related to the demographic characteristics of the 207 students from Uganda Christian University who participated in the research. The chapter then delves into the facilitators and barriers to physical activity among university students. Findings indicate a strong positive perception among students regarding the benefits of physical activity for their physical and mental well-being, with varying degrees of agreement across different aspects of facilitation. Barriers include time constraints, physical exhaustion, and concerns about self-consciousness. Students also express some concerns about scheduling at exercise facilities. Overall, addressing these barriers may be crucial in promoting physical activity among university students.

## **Chapter Five: Discussion of Findings, Conclusions and Recommendations**

Chapter five provides a discussion of the results related to Facilitators and Barriers to Participation in Physical Activity among University Students at Uganda Christian University, Mukono. The discussion was presented under the following headings demographic characteristics of the participants and then followed by facilitators to participation in physical activity among university students and lastly barriers to participation in physical activity among university students.

### **Discussion of findings**

#### **Demographic characteristics of the respondents**

In relation to the age distribution of the respondents, the study's findings align with existing literature, as studies by (Sallis et al., 2016) who emphasized that younger individuals, particularly those within the 18-30 age range, are more likely to engage in physical activities, attributed to higher energy levels and a generally healthier lifestyle. Regarding gender distribution, the study's discovery that more males participated compared to females resonates with the observations of (Warburton et al., 2006) who noted that males tend to be more forthcoming in responding to surveys or participating in research studies related to physical activity.

In the context of years of study, the study's findings align with the work of (Hernandez et al., 2017) who argued that varying academic pressures and commitments across different academic years can influence students' engagement in physical activities. Concerning the residence

distribution, the study's inclusion of both residents and non-residents aligns with the literature, particularly studies by (Mutz and Müller, 2016) which highlight the diverse perspectives that students from different living arrangements bring to discussions on physical activity.

Regarding religious denominations, the study's identification of a higher percentage of respondents from the Anglican religion corresponds with the university's foundational affiliation. This finding resonates with research by Brudzynski et al. (2018), emphasizing the influence of religious affiliation on lifestyle choices, including participation in physical activities. Finally, in terms of the distribution across academic schools, the study's findings echo the insights of Taylor (2015), who argued that students from different academic disciplines may have unique perspectives and experiences related to physical activity.

### **Facilitators to participation in physical activity among university students**

The findings related to university students' positive perceptions regarding factors influencing their participation in physical activity align with existing literature on the subject. For instance, the strong agreement among students that exercise is enjoyable and contributes to stress reduction resonates with previous research. Scholars like Sevil et al. (2018) have highlighted the importance of intrinsic motivation and the pleasure associated with physical activity, suggesting that these factors are critical for sustaining exercise habits. Moreover, the positive correlation between exercise and mental health, as reflected in the students' agreement on statements related to stress reduction and improved mental well-being, is consistent with numerous studies (Rebar et al., 2015; Stubbs et al., 2017). This body of literature emphasizes that physical activity serves as an effective tool for managing stress, anxiety, and depression among university students, reinforcing the importance of these findings.

The students' belief in the preventive aspects of exercise, such as reducing the risk of heart attacks and increasing muscle strength, corresponds with established literature on the health benefits of physical activity (Warburton et al., 2006). The idea that exercise can enhance muscle strength aligns with the principles of resistance training, which has been shown to improve muscle health and function (Folland et al., 2014). Furthermore, the findings corroborate the notion that university students are increasingly health-conscious and place value on activities that contribute to their overall well-being (El Ansari et al., 2011). This aligns with the literature's emphasis on health-related motivations as key drivers of physical activity participation in the young adult population.

The positive perceptions regarding the accessibility and safety of exercise facilities resonate with previous research that underscores the importance of creating conducive environments for physical activity (Sallis et al., 2016). The availability and proximity of exercise facilities are recognized facilitators of physical activity engagement (Giles-Corti et al., 2005), and the students' agreement with these statements reflects the significance of convenient access. Similarly, the belief that exercise allows for social interactions and enhances physical endurance aligns with the literature emphasizing the role of social support and companionship in promoting physical activity (Hernandez et al., 2017). The idea that physical activity can improve physical endurance is well-founded, as consistent exercise leads to increased fitness levels (Warburton et al., 2006).

However, the findings indicating slightly lower levels of agreement concerning exercise's impact on work quality and its role as entertainment are also consistent with existing literature. Some studies have highlighted that the relationship between exercise and work-related outcomes can be complex and context-dependent (von Thiele Schwarz et al., 2017). While physical activity

can boost productivity and cognitive function, individual experiences may vary. Additionally, the notion of exercise as entertainment might be influenced by personal preferences and the diversity of recreational activities available to students. This finding aligns with the understanding that enjoyment of physical activity is subjective and influenced by individual factors (Carraro and Gaudreau, 2013).

Lastly, the students' lower level of agreement regarding exercising increasing acceptance by others corresponds with research suggesting that the social benefits of exercise may not always be perceived uniformly (Mutz and Müller, 2016). Factors such as self-confidence, social anxiety, and the specific social context in which exercise occurs can influence individuals' perceptions of how exercise impacts their social acceptance. This finding underscores the need for a nuanced understanding of the social dimensions of physical activity, considering the individual differences and social dynamics that shape these perceptions.

### **Barriers to participation in physical activity among university students**

The study findings that university students perceive various barriers to their participation in physical activity align with the existing literature on this topic. The concern expressed by students about exercise being time-consuming corresponds with research by Rhodes et al. (2019), which highlights that time constraints are a common barrier to physical activity, particularly among young adults. Time management challenges associated with academic commitments and other responsibilities can make it difficult for university students to allocate sufficient time for exercise.

The findings related to students' concerns about exercise-induced fatigue resonate with previous research by Kandola et al. (2019) and Puetz et al. (2006), which emphasize that feelings

of tiredness or fatigue can act as significant barriers to physical activity engagement. Fatigue can result from various factors, including academic stress, inadequate sleep, and overall workload, and it may discourage students from participating in regular physical activity.

Regarding the perception of embarrassment as a barrier, the findings align with the work of Hausenblas and Symons Downs (2001), who discussed the influence of social physique anxiety on exercise behavior. The fear of being judged or feeling self-conscious in exercise settings can deter individuals from engaging in physical activity. This finding underscores the need for supportive and inclusive exercise environments within university campuses to alleviate these concerns.

However, the disagreement among students that exercise is perceived as hard work is consistent with research by Brudzynski et al. (2018), who found that individuals who engage in regular physical activity tend to develop positive attitudes towards exercise, viewing it as a rewarding and enjoyable endeavor rather than a burdensome task. This suggests that students who have experience with exercise may have a more positive outlook on its perceived difficulty.

Turning to the findings related to settings access and institutional factors, the students' concerns about the convenience of facility schedules align with existing literature highlighting the importance of flexible and accessible exercise options (Hernandez et al., 2017). University students often have diverse schedules, and facilities with limited hours may not accommodate their needs. This emphasizes the need for universities to consider extended operating hours or alternative scheduling options to promote physical activity.

In the social environment and active living domain, the findings indicating that students generally disagreed that family members, the cost of exercise, or their significant others discourage

them from being physically active align with the literature on social support and financial barriers. Research by Trost et al. (2002) suggests that family support can be a facilitator of physical activity, and this finding underscores the importance of creating a supportive home environment. Moreover, the perception that exercise is not prohibitively expensive corresponds with studies highlighting the importance of affordable physical activity options for college students (Stubbs et al., 2017).

### **Study Strengths and Limitations the Limitations**

Some questionnaires were handed back empty and some not filled in properly

Questionnaires with insufficient data were difficult for the author to analyze therefore they were excluded and as a result, the estimated sample size reduced. This resulted from the fact that participation in the study was voluntary. The youth in Uganda would wish to engage in activities that directly/financially benefit them. The time duration of collecting data was limited because the students were in session for study. Since more time was focused on the theoretical part of the study such as the proposal and ethical approval to carry out the study.

The selection of participants is not random. However, the researcher tried to access potential participants. The students at UCU representative of the desired population with a 96% response rate.

#### **Strength**

Participants were given information about the study as well as a consent form that they signed before taking part in the study. There was no known risk of participating in the study and all data was analyzed anonymously

## **Conclusion**

In conclusion, the facilitators to participation in physical activity among university students at Uganda Christian University, Mukono are primarily rooted in their positive perceptions of exercise. Students at the university generally view physical activity as enjoyable and stress-reducing, recognizing its potential to enhance their mental and physical well-being. They also acknowledge the preventive aspects of exercise, such as its role in reducing the risk of heart-related issues and increasing muscle strength. Additionally, the accessibility and safety of exercise facilities contribute to their engagement in physical activity, as does the social dimension, which offers opportunities to meet new people and enhance physical endurance. However, it is worth noting that while university students exhibit these positive perceptions, there are variations in their agreement levels regarding exercise's impact on work quality, its entertainment value, and its role in increasing acceptance by others. Nonetheless, these facilitators collectively emphasize the multifaceted benefits of physical activity for university students, underscoring the importance of tailored strategies and support to promote regular exercise on campus.

Additionally, the study underscores the importance of considering the multifaceted nature of these perceptions. While students generally held positive attitudes towards physical activity, there were variations in their agreement levels across different aspects, such as exercise's impact on work quality, entertainment value, and social acceptance. These variations highlight the need for tailored strategies and interventions that address specific concerns and motivations related to physical activity among university students. Overall, the findings provide valuable insights for universities and policymakers seeking to promote physical activity on campus, emphasizing the significance of understanding and addressing both facilitators and barriers to create a supportive environment that encourages regular exercise among university students.

## **Recommendations**

The study offers several key recommendations for Uganda Christian University, Mukono, to enhance the identification of facilitators and barriers to students' engagement in physical activity:

**Flexible Scheduling:** Implement flexible scheduling for exercise facilities to accommodate diverse student timetables, ensuring convenient access to physical activity opportunities.

**Wellness Events and Classes:** Organize regular fitness and wellness events, workshops, or classes to sustain and enhance students' interest in physical activity, emphasizing its benefits for stress reduction, mental well-being, and overall health.

**Addressing Fatigue:** Provide information and resources on proper exercise techniques and emphasize the importance of rest and recovery to mitigate issues related to fatigue.

**Expansion of Exercise Facilities:** Consider expanding and improving existing exercise facilities or creating additional spaces for physical activity on campus, ensuring accessibility, maintenance, and modern amenities.

**Peer-Led Groups:** Establish support systems or peer-led physical activity groups to encourage communal exercise, fostering motivation and camaraderie among students.

**Inclusive Events:** Combat feelings of embarrassment by organizing inclusive physical activity events and promoting a culture of acceptance and non-judgment within the campus community.

**Collaboration for Affordability:** Collaborate with local fitness centers, sports clubs, or organizations to provide discounted or subsidized fitness memberships, making exercise more affordable and accessible for students.

**Policy and Program Updates:** Regularly assess and update physical activity policies and programs to align with students' evolving needs and preferences, fostering a campus environment that consistently promotes a culture of physical activity and well-being.

**Faculty and Staff Role Modeling:** Encourage faculties, schools, and staff to serve as role models for physical activity by actively participating in campus-wide fitness initiatives, setting an example for students to follow.

### **Areas for Further Research**

The study's findings indicate the need for further research in several areas:

**Cultural and Socio-demographic Factors:** Explore the role of cultural and socio-demographic factors in shaping students' perceptions of facilitators and barriers to physical activity at Uganda Christian University and other institutions of learning.

**Longitudinal Studies:** Conduct longitudinal studies to track students' physical activity patterns and perceptions over time, evaluating the long-term effectiveness of interventions and policies aimed at promoting physical activity on campus.

**Digital Technology and Social Media Influence:** Investigate the influence of digital technology and social media on students' exercise behaviors and body image perceptions, providing contemporary insights into the evolving dynamics of physical activity engagement among university students.

## **Results Dissemination**

Data collection took place in the UCU main campus Mukono and study results were disseminated through publication in peer-reviewed journals, as well as presentations at meetings, seminars, or national and international conferences with relevant stakeholders at Uganda Christian university post-graduate school of research.

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## Annexes

### Annex 1: Sample size according to the different schools

**Table 1: The distribution of the sample size according to the schools**

<b>School</b>	<b>Population</b>	<b>Sample</b>
Divinity & theology	50	24
Education	41	24
Health sciences	61	24
Engineering, Design & technology	178	24
Law	592	24
Journalism & Communication	105	24
Business	235	24
Social sciences	127	24
School of medicine	56	24
Total	1445	216

## **Annex 2: Consent form**

### **Study of Title: Facilitators and barriers for engaging in Physical Activity A among students at Uganda University Mukono, Uganda**

#### **Investigators:**

Principal investigator: Monday Edson a graduate student from UCU school of Medicine masters in nursing science.

#### **Background and rationale for the study:**

Physical activity of moderate intensity has been known to have significant health benefits which improve levels of functional health on many different levels. Physical inactivity on the other hand is associated with several life-threatening risk factors such as hypertension and overweight that could be prevented through adequate and regular physical activity. Health promotion programs and policies should focus on increasing physical activity in societies to prevent and control non-communicable diseases (NCDs). NCDs such as cardiovascular diseases (CVD), diabetes, and cancer have increased globally; they are listed as the main cause of death in adult mortality.

#### **Purpose:**

The purpose of this project is to identify facilitators and barriers to engaging in physical activity among students at Uganda Christian University Mukono, Uganda.

#### **Procedures /who will participate in the study:**

The study is part of my master's studies in masters of nursing science at Uganda Christian University. The study consists of one part which is a self-administered questionnaire the International Physical Activity Questionnaires (IPAQ). I need two hundred sixteen volunteers for the questionnaire both men and women. To participate in the study, you should be a citizen of Uganda and student at UCU.

#### **Risks/ Discomforts:**

There are minimal risks for participating in this study. You have the right to withdraw from the study at any point.

**Benefits:**

There will be no direct benefit to you however the study could help promote physical activity and increase awareness regarding risk factors related to behavioral characteristics. Findings could be used in further investigations on the topic and perhaps be of value to policymakers in Uganda while developing national guidelines and recommendations.

**Confidentiality:**

If you do choose to participate in this study the principal investigator can assure you that all collected data is confidential and will only be used for the purpose of this study. Giving out your personal details is not required while answering the questionnaire.

**Alternatives:**

Participating in the study is not mandatory; your participation is completely voluntarily.

**Cost:**

There are no identified costs to participate in this study.

**Compensation for participation in the study:**

Unfortunately, there will not be any direct benefit and participants will not be compensated for participating in the study due to the fact that the principal investigator is also a student doing his master's degree in nursing science and has no means to compensate a hundred participants.

**Reimbursement:**

The principal investigator will meet students at the university so no extra costs will be required for participants in terms of travels to the study site.

**Questions:**

If you have any further questions regarding the study or about your rights as a participant, please contact Mr. Edson Monday +256782719457 E-mail [edsonmonday502@gmail.com](mailto:edsonmonday502@gmail.com)

**Thank you for your participation Consent**

**Monday Edson Consent Declaration:**

Statement of consent after understating the study and a signature portion

I confirm that I have read and understand the Information letter for participants for the above study.

I understand that my participation is voluntary and that I am free to withdraw at any time.

I understand that the data will be made anonymous and not traceable back to me. I hereby sign consent –to- participate

Signatures:

\_\_\_\_\_

**Name of Participant**

\_\_\_\_\_

**Signature**

**Date** \_\_\_\_\_

**Annex 3: Questionnaire**

**Facilitators and Barriers to Participation in Physical Activity among University Students at  
Uganda Christian University, Mukono**

**STUDY QUESTIONNAIRE**

<b>PART 1: STUDENT DEMOGRAPHICS</b>	
Date of birth	____/____/____ Day/Month/Year
Age (in completed months)	_____
Sex	1. Male <input type="checkbox"/> 2. female <input type="checkbox"/>
Year of study	Year 3 <input type="checkbox"/> Year 4 <input type="checkbox"/>
Hall of residence	_____
Religion	1. Protestant <input type="checkbox"/> 2. Catholic 3. Muslim 4. Other (specify).....
	Divinity & theology Education Health sciences  Engineering, Design & technology Law Journalism & Communication Business Social sciences  School of medicine

## Facilitators to Participation in Physical Activity among University Students

Tables below summarizes respondents' responses on various factors as facilitators to participation in physical activity among university students by using a Likert scale where 4=SA (Strongly Agree), 3=A (Agree), 2=D (Disagree) and 1=SD (Strongly Disagree).

<b>PART 2: FACILITATORS</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
<b>Individual/ perceived environment</b>				
I enjoy exercise.				
Exercise decreases feelings of stress and tension for				
Exercise improves my mental health				
I will prevent heart attacks by exercising				
Exercise increases my muscle strength.				
Exercise gives me a sense of personal accomplishment				
Exercising makes me feel relaxed.				
Exercising lets me have contact with friends and				
Exercising will keep me from having high blood				
Exercising increases my level of physical fitness.				
My muscle tone is improved with exercise				
Exercising improves functioning of my cardiovascular				
. I have improved feelings of wellbeing from exercise.				
Exercise increases my stamina.				
<b>Settings access and Institutional Factors</b>				
Places for me to exercise are accessible				
Its fan to be in the gym				
Places for me to exercise are safe				
Health tips: I will live longer if I exercise.				
Exercise helps me decrease fatigue.				
Exercising is a good way for me to meet new people				
My physical endurance is improved by exercising				
Exercising improves my self-concept				
Exercise allows me to carry out normal activities				

Exercise improves the quality of my work.				
Exercise is good entertainment for me.				
Exercising increases my acceptance by others				

### Barriers to Participation in Physical Activity among University Students

<b>PART 3: BARRIERS</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
<b>Individual/ perceived environment</b>				
Exercising takes too much of my time.				
Exercise tires me.				
I am fatigued by exercise.				
I am too embarrassed to exercise.				
Exercise is hard work for me.				
I think people in exercise clothes look funny.				
<b>Settings access and Institutional Factors</b>				
Places for me to exercise are too far away.				
Exercise facilities do not have convenient schedules				
<b>Social environment or active living domain</b>				
My family members do not encourage me to				
It costs too much to exercise.				
Exercise takes too much time from school				
My spouse (or significant other) does not encourage				

## Plagiarism Test Results

### Facilitators and Barriers to Participation in Physical Activity among University Students at Uganda Christian University, Mukono

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#### ORIGINALITY REPORT

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<b>9%</b>	<b>9%</b>	<b>%</b>	<b>%</b>
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

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#### PRIMARY SOURCES

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<b>1</b>	<b>www.diva-portal.org</b> Internet Source	<b>5%</b>
<b>2</b>	<b>umispace.umi.ac.ug</b> Internet Source	<b>2%</b>
<b>3</b>	<b>jewlscholar.mtsu.edu</b> Internet Source	<b>2%</b>

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# UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa

To: Monday Edson

Uganda  
Christian  
university  
0701618732

**Type:** Initial Review

**Re: UCUREC-2023-571: Facilitators and Barriers to Participation in Physical Activity among University Students at Uganda Christian University, Mukono**

I am pleased to inform you that the Uganda Christian University REC, through expedited review held on **27/07/2023** approved the above referenced study.

Approval of the research is for the period of **02/08/2023** to **02/08/2024**.

As Principal Investigator of the research, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the REC for re- review and approval **prior** to the activation of the changes.
3. Reports of unanticipated problems involving risks to participants or any new information which could change the risk benefit: ratio must be submitted to the REC.
4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by participants and/or witnesses should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits.
5. Continuing review application must be submitted to the REC **eight weeks** prior to the expiration date of **02/08/2024** in order to continue the study beyond the approved period. Failure to submit a continuing review application in a timely fashion may result in suspension or termination of the study.
6. The REC application number assigned to the research should be cited in any correspondence with the REC of record.
7. You are required to register the research protocol with the Uganda National Council for Science and Technology (UNCST) for final clearance to undertake the study in Uganda.

The following is the list of all documents approved in this application by Uganda Christian University REC:

No.	Document Title	Language	Version Number	Version Date
1	Data collection tools	English	1	2023-07-11
2	Informed Consent forms	English	1	2023-07-11
3	Protocol	English	1	2023-07-11

Yours Sincerely



Peter Waiswa  
For: Uganda Christian University REC

SN	COMMENTS BY VIVA VOCE PANNEL	ACTION TAKEN	INDICATOR	PAGE NO.
1	The title sounds like for a qualitative study and yet it was a quantitative cross-sectional survey. Consider rephrasing the title	Title was revised	Factors associated with physical activity participation among students of Uganda Christian University	Title Page
2	Back the identified facilitators and barriers with statistics such this was a cross sectional survey	Statistical quantification has been added to abstract	Key facilitators for physical activity at UCU include students' perceptions of preventive health benefits, accessibility and safety of venues, and social advantages associated with physical engagement 94.7% (Mean = 3.44; SD = 0.643).	X
3	What new thing did you find in your study was un-known and how you filled that gap?	Students of Uganda Christian University participated in physical activity because of the perceived health benefits of engaging in physical activity.	This was reported in the findings with a strong consensus among the respondents, as the majority represented by 94.7%	29
4	What factor was your strong facilitator or perception? We should expect in your recommendation some positive factors that encourage the engagement in the Activities	positive individual perceptions among university students regarding individual/ perceived environment as a facilitator to participation in physical activity plus Perceived health benefits was the strongest facilitator.	The positive individual perceptions among university students regarding individual/ perceived environment as a facilitator to participation in physical activity plus the multifaceted benefits of engaging in physical activity for their physical and mental well-being. This was reported in the findings with 94.7%.This is reflected in the recommendations	29
5	How did you deal with selection bias? There should have been random selection using the already existing data in academics' office. People who are already involved would be the ones to respond.	Data collection was done at several stages different days using different research assistants and during class time. Respondents were not allowed to share questionnaire nor discuss what to fill in questionnaire.	207 responses were consecutively obtained from nine faculties at UCU Mukono main campus	19
6	What will you be using this important information for?	The findings will be disseminated to the University dean of students, UCU health awareness committee, and university management team for reference during policy formulation regard healthy living at UCU.	Presenting this research finding to UCU research committee and score of 75% in agreement with the study. A copy will be uploaded to UCU library repository	6

7	What drove this study and what recommendations would you say to the University committees and how will they help the institution?	The increasing burden of NCDs and relationship between PA and academic performance: recommendations, Wellness Events and Classes, Peer-Led Groups	The recommendations and significance are well documented in this research book	6&44
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# UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa

UGANDA CHRISTIAN UNIVERSITY  
SCHOOL OF RESEARCH & POSTGRADUATE STUDIES

**Dissertation correction compliance report by the candidate (POST VIVA FORM)**

**Date:** ...22/may /2024.....

**Name of Candidate:** ...Edson Monday..... **Reg.No:** RM16M11/421

**Title of Dissertation ...**

**Facilitators and Barriers to Participation in Physical Activity among University Students at Uganda Christian University, Mukono**

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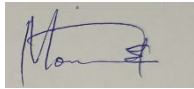
SN	COMMENTS BY INTERNAL EXAMINER	ACTION TAKEN	INDICATOR	PAGE NO.
1	The title sounds like for a qualitative study and quantitative cross-sectional survey. Consider rephrasing the title.	Title was reviewed and rephrased rephrasing the title.	Factors associated with physical activity participation among students of Uganda Christian University	i
2	Abstract: Back the identified facilitators and barriers with statistics such this was a cross sectional survey	Statistical quantification has been added to abstract	Key facilitators for physical activity at UCU include students' perceptions of preventive health benefits, accessibility and safety of venues, and social advantages associated with physical engagement 94.7% (Mean = 3.44; SD = 0.643).	x
3	Define the acronyms PI, INT and UCU in full at first use.	PI and UCU Terms have been defined	PI: Physical Inactivity UCU: Uganda Christian University on page one	1
4	The background should also acknowledge the Ministry of Health and even international WHO policies on PA for people in schools	Ministry of health Uganda and WHO have both been acknowledged.	Chapter one: on page 2	2
5	Specify the target and the number of 2030 Sustainable Development Goals (SDGs) that will be achieved by the project on PA.	SDGs listed below have been added to the background; 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, and Decent Work and Economic Growth	Chapter one page 1	1
	There are a lot of sentences in the sampling method sections that says that students were selected according to their convenient accessibility, and this causes a confusion on whether it was consecutive sampling or convenience sampling method that was used to select students to participate in the study.	The participants were consecutively selected. The word convenience accessibility has been removed order of appearance according to their accessibility.	On page 17. This was so because there were terms attached to permission given to me by REC-UCU and Academics department not to interrupt teaching process	17
	To make the sampling method used clearer, describe how the study was advertised to the	After obtaining permission, one-week training for research assistants was	This information is on page 19 of this book	19

	<p>prospective students and how exactly the students were contacted/ approach, consented and recruited into the study, from which locations within the UCU main campus, and who contacted, consented, and recruited each student</p>	<p>immediately commenced who supported the data collection process. The list of third or fourth-year students was obtained from the director of teaching and learning/ academic registrar and used for the sampling procedures. We visited the third- and fourth-year students in their lecture rooms and requested them to give us 10 minutes after the class session. Students availed us consent to participate in the study then a questionnaire was accorded. We sampled and approached every fourth and third-year student to participate in the study until the desired sample size for each school and faculty was reached. We sampled the next student on the list if the sampled students declined or were unavailable to participate in the study. A self-administered questionnaire was given to the student to complete at the end or start of class.</p>		
	<p>Under the study procedure, there is a mention that the class lists were used to identify and sample the students list wise. Specify how the students name ordered in the class list whether alphabetical order or how?</p>	<p>Class list were used to guide the sampling process. Bearing in mind that this was a non-probability method, so all students were talked too together in a particular class and only those willing to fill the forms signed a consent form and filled questionnaire.</p>	<p>Page 19</p>	<p>19</p>
	<p>About exclusion criteria, please attach reasons as to why you excluded foreign students in third and fourth years.</p>	<p>This was so because the study Included social and societal factors influencing participation in PA. So bearing in mind that different countries have different preventive plans to reduce the rising NCDS, the researcher was interested only in Ugandan social demographics factors.</p>		<p>18</p>
	<p>Specify whether postgraduate students in the age bracket of 18-60 years were excluded and if so, why?</p>	<p>The study was limited to undergraduate students on campus. This was so because it's the group that has undertaken health and</p>	<p>Page 19</p>	<p>19</p>

		wholeness course, they have been exposed to HAW sessions for more than one year. Most post graduate sessions can be online and they usually on campus for a short period of time( module program)																																						
	Specify whether students with physical disabilities especially of lower limbs, deaf, blind, mute and those with mental disabilities (mental retardation, cerebral palsy, etc) in the age bracket of 18-60 years were excluded and if so, why?	These students were never excluded. We did not include disability factor as it be act as basis to discrimination.so the whole class was addressed together as long as a students was Ugandan.	Page 18	18																																				
	The 2s should be superscript and there should be a division sign between Z2 and d2 in this formula n = p	$n = p (1-p)z^2/ d^2$	This has been adjusted	18																																				
	9. In the questionnaire, male, no female; only year 3 and 4 no year two contrary to the information provided under the inclusion criteria. If this was typo, include them	This was typing Error	It has been added.	Annex																																				
	Write IPAQ in full at first use.	This has been written in full	Page 19	19																																				
	It is not clear from which faculties were the students recruited from, whether all or selected faculties?	9 faculties evidence in the annex	<table border="1"> <thead> <tr> <th>Sample size according to the different schools.</th> <th>Annex</th> <th>Population</th> </tr> <tr> <th>School</th> <td></td> <td></td> </tr> </thead> <tbody> <tr> <td>1.Divinity &amp; theology</td> <td></td> <td>50</td> </tr> <tr> <td>2.Education</td> <td></td> <td>41</td> </tr> <tr> <td>3.Health sciences</td> <td></td> <td>61</td> </tr> <tr> <td>4.Engineering, Design &amp; technology</td> <td></td> <td>178</td> </tr> <tr> <td>5.Law</td> <td></td> <td>592</td> </tr> <tr> <td>6.Journalism &amp; Communication</td> <td></td> <td>105</td> </tr> <tr> <td>7.Business</td> <td></td> <td>235</td> </tr> <tr> <td>8.Social sciences</td> <td></td> <td>127</td> </tr> <tr> <td>9.School of medicine</td> <td></td> <td>56</td> </tr> <tr> <td><b>Total 191</b></td> <td></td> <td><b>1445</b></td> </tr> </tbody> </table>	Sample size according to the different schools.	Annex	Population	School			1.Divinity & theology		50	2.Education		41	3.Health sciences		61	4.Engineering, Design & technology		178	5.Law		592	6.Journalism & Communication		105	7.Business		235	8.Social sciences		127	9.School of medicine		56	<b>Total 191</b>		<b>1445</b>	
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	Under data analysis section, also indicate how the mean score and standard deviation for each item should be interpreted, are there cut-off ranges and how each cut-off range should be interpreted in terms of the item being a barrier or not a barrier, a facilitator or not a facilitator.	A column for total agreement or disagreement and percentages has been added to give a clear interpretation of results	<b>28-35</b>
	Under data analysis section, indicate the scores assigned to Strongly Agree, Agree, Disagree and Strongly Disagree that were later used to calculate the mean score and standard deviation. The Likert scale scoring system was also not indicated on the questionnaire, please add it.	Likert scale has been added to questionnaire	First page of the questionnaire.
	Add the UCU-REC Approval number to the ethical consideration section.	UCU-REC Approval number to the ethical consideration Section has been added to annex	Added on page 67
	Covert the 207 participants who participated into the study out of the target 216 participants into a response rate in terms of percentage	Conversion has been added	Page 24
	Study strengths and limitations should be moved to be immediately after the discussion just before the conclusion. 2. Consider add limitations of using a self-administered questionnaire as a data collection method. 3. Consider adding the limitations of consecutive or convenience sampling method used.	Study strength has been moved to follow after discussion Consecutive sampling limitations have added to page 42	Page 42

...Edson Monday.....



Candidate's Name

Signature

.....

Dr. Mary Grace Nakate.....



Supervisor's Name

Signature