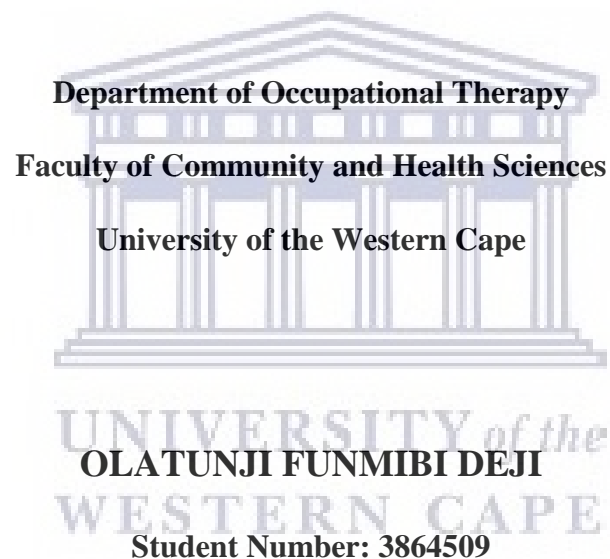


**INVESTIGATING THE PREVALENCE OF HEALTH RISK BEHAVIOR AND THE
ASSOCIATION WITH LEISURE BOREDOM AMONG HIGH SCHOOL STUDENTS IN
LAGOS, NIGERIA.**

**A THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENT FOR THE
DEGREE MASTER OF SCIENCE IN OCCUPATIONAL THERAPY**



SEPTEMBER 2019

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DECLARATION

I, OLATUNJI FUNMIBI DEJI, hereby declare that the work on which this thesis: Investigating the prevalence of health risk behavior and the association with leisure boredom among high school students in Lagos, Nigeria, is my own original work (except where acknowledgements indicate otherwise), and that neither the whole work nor any part of it has been, or is to be submitted for another degree in this or any other university.

All sources that I have used or quoted have been indicated and acknowledge by mean of complete references.

OLATUNJI FUNMIBI DEJI

Signature:



Date: 10 March, 2020



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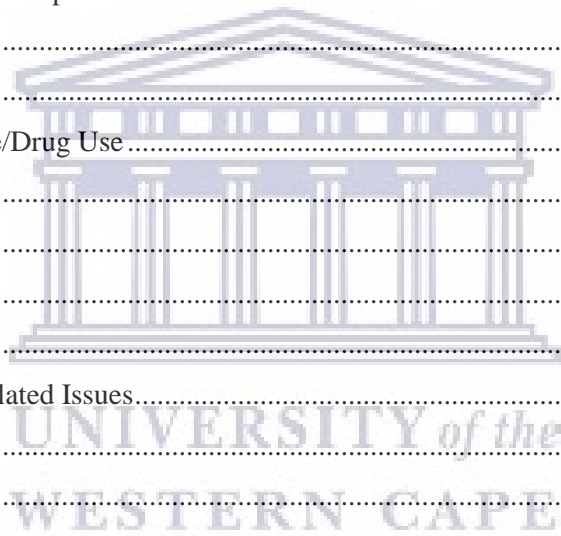


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DEDICATION

I dedicate this work to my late father, Pastor Fowora Onaolapo Olatunji.

Rest in Peace Dad.



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DEFINITION OF TERMS

Adolescence: adolescence is defined as the period from 10 to 19 years of age. It is also a period that is characterized by social, psychological and physical change. It is generally classified into two phases which are: early adolescence between 10 to 14 years and late adolescence between 15 to 19 years (WHO, 2005).

Disability: it is the negative aspect of interactions that exists between an individual who has a health condition and the individual's contextual factors which includes environmental and personal factors (Harrison et al., 2017).

Health risk behaviors are described as “behaviors that aid to the leading causes of disability, morbidity and mortality among adolescents, youths and adults,” (Center for Disease Control and Prevention, 2008, p.1). Across this study, the term health risk behaviors and risk behaviors will be used interchangeably.

Leisure is describe as the purposeful and intentional use of individual's free time to engage or participate in self-selected activities that are meaningful and essentially motivating to the individual in that they are pleasurable, refreshing, enjoyable and entertaining (Wegner & Caldwell, 2012).

Occupation: occupation is everyday engagement of an individual to occupy themselves, or series of activities engage in consistently frequently, bringing forth structure on time and energy use. Occupations are given values and meaning by peoples and their custom (Radomski, 2008).

Occupational engagement: Participation in meaningful occupation, activities of daily living, or play that are part of individual's sociocultural background and that are desired and/or necessary to one's quality of life and well-being (Varela et al., 2017).

Occupational performance: The ability to identify, wish for, recall, plan and carry out routines, roles, tasks and sub-tasks for the purpose of sustainability, productivity, self-maintenance, leisure and rest in response to need of both the internal and/or external environment (Ting, 2012).

Occupational therapy: Occupational therapy can be described as a health care profession established on the understanding that participating in purposeful occupations promotes health, quality of life, and well-being of an individual. Occupational therapy is also “the art and science of helping people do the day-to-day activities that are important and meaningful to their health and well-being through participation in valued occupations” (Huot & Rudman, 2010, p.68).



LIST OF ABBREVIATIONS

A.I.D.S: Acquired Immunodeficiency Virus

C.D.C: Centres for Disease Control and Prevention

D.S.H: Deliberate Self Harm

E.O: Environment Occupation

E.H.P: Ecology of Human Performance

F.T.B: Free Time Boredom

G.S.H.S: Global School Based Health Survey

H.I.V: Human Immunodeficiency Virus

I.T.E.A: Integrating Theory Evidence and Action

K.A.B.P: Knowledge Attitude Belief and Practice

L.B.S: Leisure Boredom Scale

M.O.H.O: Model of Human Occupation

N.D.L.E.A: Nigeria Drug Law Enforcement Agency

N.G.O: Non-Governmental Agency

P.B.S: Precursors Boredom Scale

P.E.O: Person Occupation Environment

P.E: Person-Environment

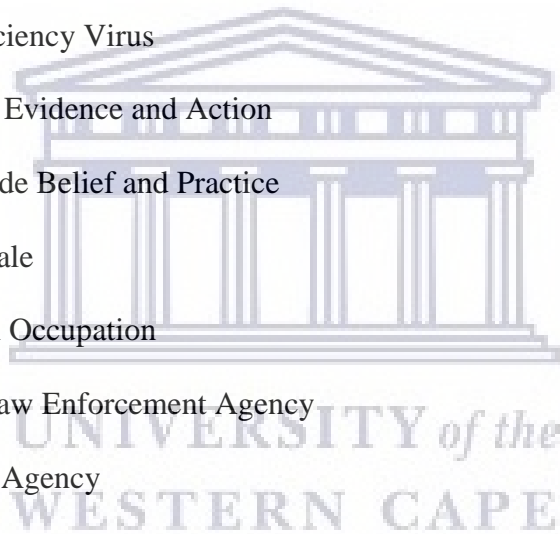
P.O: Person-Occupation

S.A.H.W.S: South Africa Health Wise Survey

S.S 1: Senior Secondary Class 1

S.S 2: Senior Secondary Class 2

S.S 3: Senior Secondary Class 3



S.P.S.S: Statistical Package for Social Science

U.N.F.P.A: United Nation Fund for Population Agency

W.H.O: World Health Organization

Y.R.B.S: Youth Risk Behaviour Survey



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ABSTRACT

BACKGROUND: Health risk behaviors are public health problems which are of concern in occupational therapy because they tend to be the causes of disability and death among adolescents and youths in the world. Identifying risk factors related to health risk behaviors is therefore an important part of health promotion. The main aim of this thesis was to investigate the prevalence of health risk behaviors and the association with leisure boredom among high school adolescents in Lagos State, Nigeria.

METHODOLOGY: A descriptive quantitative design was used whereby a stratified sample of high school students, including boys and girls between the ages of 12 to 18 years from senior class 1 to senior class 3 was selected to complete standardized self-administered questionnaires which were the Leisure Boredom Scale (LBS) and the Adolescent Health Risk Behavior Survey (AHRBS). Quantitative data was analyzed using Statistical Package for Social Science (SPSS) version 25 programs.

RESULTS: Six hundred and seventy-three (673) high school students, with a mean age of 15.01 years ($SD = \pm 1.33$) participated in the study. The overall response rate of this present was 97.3%. A comparison could only be made with studies from other countries due to the absence of empirical or firsthand nationwide data on adolescent risk behaviors in Nigeria. Regarding personal safety, results showed that 41.2% of the participants do not use a helmet when riding a bike to school and 30% of the participants had driven with someone who had been drinking alcohol. In addition, with reference to violent-related behavior and aggression, 19.6% had carried a weapon, 18.1% had used divider or mathematical compass as a weapon, 33.9% had been

involved in a physical fight. Furthermore, concerning bullying, 29.9% of the participants have been bullied and 15.9% had been bullied electronically. As for sad feeling and attempts of suicide, results showed that 32.2% of the participants have had the thought of committing suicide, 9.8% have attempted suicide and 59.1% have had the experience of the feeling of sadness and hopelessness. The lifetime prevalence of alcohol consumption among the participants was 32.8%, marijuana/SK and drug use was 13.8%, tobacco use was 18.0%, use of inhalant was 13.1%, use of cocaine either in powder or crack form was 12.6%, illegal use of prescription drugs was 17.4%. Sexual behaviors activities among participants were 27.0%, 25.9% have had sex with more than 1 partner and 13.7% had never been taught about AIDS or HIV infection in school. Additionally, 11.3% of the participants had used unhealthy weight control measures. Furthermore, results showed that leisure boredom is positively associated with participants' participation in violence-related behaviors, bullying, sad feeling and attempts at suicide, smoking of cigarette/tobacco, drinking of alcohol, marijuana/drugs use, other drug use, sexual intercourse, body weight, other health-related issues, and dietary behaviors.

CONCLUSION: Age of initiation or introduction of participants to risk behavior has been established, and this could be influential in participants engaging in health risk behaviors. These risky behaviors appeared to have adverse effects on health, quality of life and well-being of an individual. It is imperative to note that the attitude of adolescents toward healthy lifestyle should be taken into consideration. Occupational therapist should consider the role of leisure boredom on adolescent health, well-being, and development, and implement plans to address these challenges.

RECOMMENDATION: It is recommended that further studies be conducted on health risk behavior participation among adolescents in Nigeria to gain more insight and draw more information that would enable planning and development of appropriate school-based intervention programs. Integrating planning and design of intervention strategies to delay the age of introduction of adolescents to health risk behaviors, could lead to an improved quality of life and well-being in adulthood.



KEYWORDS

Adolescence,

Boredom,

Disability,

Health Risk Behaviours,

High School Students,

Leisure,

Nigeria,

Occupation,

Occupational Engagement,

Occupational Performance,

Occupational therapy,

Quantitative research.



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CHAPTER ONE

BRIEF OVERVIEW OF THE STUDY

1 BACKGROUND

Despite the common knowledge of health risk involved, many adolescents choose to adopt behaviors such as drinking of alcohol, smoking and other substance use (Felner & DeVries, 2013). A greater understanding of young individuals' motivations to participate in these health risk behavior will put the researcher in a better position to design intervention programs that tackle this major public health problem in Lagos State, Nigeria. During the researcher's visits to secondary schools, some tutors reported an increase in alcohol drinking, substance use, smoking of cigarettes, acts of violence, suicide attempts and engagement in sexual activities at an early age among adolescents at their schools. This was centered on their personal opinion, reason been that there had been no study conducted in Lagos State, Nigeria; therefore clearly highlighting the need for such a study.

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1.1 INTRODUCTION

Health risk behaviors are public health problems which are of concern in occupational therapy because they tend to be the causes of disability and death among adolescents and youths in the world. It also contributes to the social and educational problems (Eaton, Kann, Kinchen, Ross, Kawkins, 2010; Schwartz, Forthun, Ravert, Zamboanga, Umaa-Taylor, Filton, 2010). Health risk behaviors can become potent health risk habits and are usually established during adolescence. This lifestyle, known and understood as behaviors adopted day-to-day, can cause various health

problems and disabilities in adolescence or adulthood but also causes chronic non communicable diseases (Barbosa, Casotti, & Nery, 2016).

There is a rapidly developing body of literature on health risk behaviors among youths and adolescents as researchers attempt to understand these happenings. However, most of the literature focuses on what is incorrect with the individuals and pays little or no attention to the environmental affects that make adolescents and youths get involved in health risk behaviors. There is a scarcity of previous studies acknowledging the relevance and the feasible influences of social environments on adolescents' health behaviors (Felner & DeVries, 2013).

It has also been extensively and widely recognized within the occupational therapy profession that if individuals engage in purposeful and meaningful occupations or activities, healthy quality of life and well-being will surely be accomplished (Feicht, Wittman, Jose, Mock, von Hirschhausen & Esch, 2013). This therefore implies that participating in purposeful and meaningful activities has a tremendous positive effect on health, quality of life and well-being. As an occupational therapist, the researcher developed an interest in finding the health risk behaviors in which adolescents in Nigeria are engaged. For instance, adolescents who participate in some risk behaviors could also derive some significant values or meaning from activities such as smoking of cigarettes or cannabis, or drinking of alcohol with friends, and the intention or purpose could be leisure or entertainment (Felner & DeVries, 2013). However, for the adolescents participating in these behaviors, it could have negative effects on their quality of life and well-being, as these risky behaviors have the possibility or what it takes to result in disability or premature death. As a result, these health risk behaviors may perhaps affect the occupational

performance and occupational capacity of adolescents in the occupational areas of education and leisure (Arbesman, Bazyk, & Nochajski, 2013). Additionally, the risk behaviors might influence adolescents' occupational potential, capabilities, and quality of life, therefore placing these adolescents at the possibility and danger of experiencing the outcome of occupational injustice (Galvaan, 2015). This is of interest to the occupational therapy line of work, as one of the main domains of occupational therapy is the occupational area of leisure (Pendleton & Schultz-Krohn, 2017).

Leisure provides adolescents' opportunities for development of skills such as assertiveness, decision-making, problem-solving, planning, social skills, emotional expression, relationship-building, social interaction, and lastly physical movement (Wegner, 2011). However, leisure can also afford a context (time, place and space) for unhealthy or risky behavioral experiences, activities and behaviors such as cigarette smoking, substance use, unintentional injuries and violence, physical inactivity, behaviors that can contribute to unintended adolescent pregnancy, alcohol drinking, depression, stress and boredom (Wegner & Caldwell, 2012).

In the developed world, leisure boredom has been associated with health risk behavior in adolescents (Sharp, Coffman, Caldwell, Smith, Wegner, Vergnani & Mathew, 2011; Trainor, Delfabbro, Anderson, & Winefield, 2010). However, in developing countries such as Nigeria there is a noticeable scarcity of study in this area, despite the concerning occurrence of health risk behaviors among young people. Nigeria has a unique historical, socio-economic, political and diverse cultural context. Therefore, we should not assume that study findings from research carried out in the developed countries can be generalized to people living within the context of

developing countries such as Nigeria. It is imperative that exploration of health risk behaviors and their association with leisure boredom should be undertaken in urban cities such as Lagos State, Nigeria to better comprehend the local situation and establish culturally-relevant services, policies and interventions to meet the needs of the Nigeria population.

1.2 RATIONALE

My main reason for choosing this topic emanated from the lack of research into the incidence and occurrence of health risk behaviors among youth in Shomolu Local Government, Lagos, Nigeria. Despite the identification of the importance of implementing positive health behaviors (Omotowo, Ndu, Umahi, Ezeoke, Arthur & Ancilla, 2017), the prevalence of health risk behaviors and the association with leisure boredom among high school students in Lagos State was unknown prior to this study. To investigate the relationship between boredom in leisure and health risk behaviors, Omotowo et al., (2017) conducted a survey in Enugu, South-East Nigeria between May and July, 2017 among 348 high school students (mean age of 15.2 years) randomly selected in six high schools in rural and urban areas in 2017. It was found that 44.5% of the students had taken alcohol, while 13.5% had smoked cigarette and 40.8% had sex before. Also, 59.8% had experienced one form of violence, while 37.6% of them preferred fast food to food prepared at home. Age, gender and class did not significantly influence participants that had taken alcohol. It shows from these studies that the prevalence of health risk behaviors was high among students in high schools both in rural and urban areas. Another research study by Adegoke and Olasupo (2014) in Ibadan Metropolis, South-West Nigeria among 917 Senior Secondary School male adolescents with a mean age of 16 years, established that leisure has an advantageous contribution to the well-being and quality of life of youths and adolescents,

because it provides opportunities for social-networking, relationship with friends and self-identity. In addition, in a study conducted by Biolcati, Mancini and Trombini (2017) in Northern Italy, these researchers confirmed that evidence of boredom proneness is predictive of adolescents' binge drinking and other forms of health risk behaviors (n = 721, age range 13 to 19 years).

The prevalence of adolescents' health risk behaviors in Nigeria has only been documented in the Eastern geopolitical region of Nigeria and no studies have been conducted in the remaining geopolitical region in Nigeria. Knowing the extent of the problem is important, but it seems equally necessary to understand the factors that are associated with, and predict, health risk behavior. One such factor is leisure boredom; however, nearly all the studies investigating leisure boredom and health risk behavior have been conducted in developed countries. Consequently, in developing countries such as Nigeria, very little is known about the experience of leisure boredom and how this is associated with health risk behavior in adolescents. Although many of the developmental tasks of adolescence are similar for adolescents all over the globe, there are differences, not least of which arise due to the different contexts, such as socio-economic environments and living conditions. On a similar observation, Caldwell and Faulk (2013) postulated that leisure activities may have helpful or harmful effects on the process of identity information. These positions reflect the significance of leisure as an important context for the development and significant indicators of the overall health, quality of life and well-being of the individual. Studies conducted by Idache (2008) and Omotowo et al., (2017) have recommended that concerted efforts should be made to investigate prevalence, and correlates of

health risk behaviors, as well as the measures that could be adopted to eradicate manifestations of health risk behaviors among adolescents in high schools in Nigeria.

To put into perspective, and provide a better understanding of, health risk behaviors and the association with leisure boredom among adolescents in this study, the Person-Environment-Occupation Model (PEO) (Law, Cooper, Strong, Stewart, Rigby & Letts, 1996) was utilized as the theoretical framework. This model provides a useful framework to facilitate optimal occupational performance through interventions that target people, the environment and occupations and also help us understand how the leisure experience including boredom contributes to adolescents' health risk behaviors. According to the PEO model, the environment consists of socioeconomic, social, cultural, institutional, and physical domains. Each domain is considered from the distinctive perspective of the person, household, neighborhood, and community. Occupational performance is the outcome of the transaction between the person, the environment and the occupation (Law et al., 1996). The environment is continually shifting and changing over time and space, which requires individuals to adapt and change their behavior, and thus, their occupational performance. The information provided in this present study could be used by the occupational therapist to create an intervention program that will help promote adolescents' healthy leisure participation. Chapter Two of this research gives more details as regards the theoretical framework used in this study.

1.3 STATEMENT OF PROBLEM

Health risk behaviors place a considerable public health burden on the occupations of adolescents in African countries including Nigeria. To date, various studies have been conducted

in South-East Nigeria to highlight the prevalence of health risk behaviors among high school adolescents (Idache, 2008; Omotowo et al., 2017). However, there are limited studies that investigated health risk behaviors and the association with leisure boredom in the South-West, South-South, North-Central, North-East and the North-West of Nigeria. Furthermore, little is known about the factors related to those risk behaviors among adolescents in rural and urban high schools from this part of the country. Therefore, it becomes necessary to investigate the prevalence of the health risk behaviors and the factors associated with it among high school students in urban areas in Lagos, South-West Nigeria in order to improve or at worst maintain the status quo in their personal health risks profile. Health risk behavior among young people in Nigeria is a concern that requires the full attention of those involved in adolescent health, education and research. It is envisaged that the findings of this study will make a contribution to the occupational therapy intervention programs that promote healthy leisure participation.

1.4 RESEARCH QUESTION

The study addresses the following research question: What is the prevalence of self-reported health risk behaviors, and what is the association with self-reported leisure boredom among high school adolescents in Lagos, Nigeria?

1.5 AIM OF THE STUDY

To establish the prevalence of adolescents' self-reported health risk behaviors and the association with self-reported leisure boredom among high school adolescents in the city of Lagos state, Nigeria.

1.6 OBJECTIVES

The objectives are to:

- Describe the socio-demographic profile of high school adolescents who engage in various self-reported health risk behaviors in schools in the urban city of Lagos.
- Determine the prevalence of self-reported health risk behaviors including personal safety, violence-related behaviors, expressed feeling of sadness and suicidal ideation, substance use, drinking of alcohol, sexual behaviors, physical activity among high school adolescents.
- Determine the degrees of self-reported leisure boredom.
- Identify potential associated factors of self-reported health risk behaviors and self-reported leisure boredom among adolescents.

1.7 OVERVIEW OF SUBSEQUENT CHAPTERS

CHAPTER ONE: BRIEF OVERVIEW OF THE STUDY

The first chapter of this thesis provides the background for the study and introduces health risk behaviors and leisure boredom as a public health problem. It also describes the rationale for the study, statement of problem, research question, aims of the research as well as the research objectives. It further provides an overview for the subsequent chapters.

CHAPTER TWO: THEORETICAL FRAMEWORK

The second chapter of this thesis described the PEO model (Law et al., 1996) which serves as the theoretical framework of this study. In addition, Ecology System for Human Development (Bronfenbrenner, 1979), Ecology of Human Performance (Dunn, Brown, & McGuigan, 1994) and Model of Human Occupation (Kielhofner, 1985) were also discussed. Furthermore, chapter

two also described the occupational perspective of health risk behaviors i.e., the understandings of doing, being, becoming and belonging, and occupational risk factors related to the occupational perspective of health risk behavior (occupational justice and occupational injustice).

CHAPTER THREE: LITERATURE REVIEW

In chapter three, a review of existing literature relating to health risk behavior during adolescence is provided. Adolescence, stages of adolescence, domains of adolescent development, and health risk behavior are defined, explored, and discussed in the context of Nigeria. In addition, the prevalence of different kinds of health risk behaviors in different context is reviewed. Health risk behaviors that were studied include those related to sexual behavior, alcohol, personal safety, substance use, violence, tobacco use, physical inactivity, and other drugs use, as well as aggression. Leisure, leisure activities, leisure boredom and the association with health risk behavior were also discussed in this chapter.

CHAPTER FOUR: RESEARCH METHODOLOGY

This chapter describes the methodological principles of the study. It provides clarification about the study design, study setting, the sampling strategy used for selecting the participants for the study, data collection technique and data analysis processes. Furthermore, the methods through which the research ethics for the study were achieved are discussed in this chapter.

CHAPTER FIVE: FINDINGS

This chapter focuses on the findings of the study. It describes the patterns, trends and relationships that emerged from the analysis of the study.

CHAPTER SIX: DISCUSSION

In this chapter, the findings of the study are discussed in relation to relevant literature. Thereafter, the findings are interpreted and discussed within the framework of the Person-Environment-Occupation model.

CHAPTER SEVEN: CONCLUSION AND RECOMMENDATIONS

Chapter seven serves as the concluding chapter for this study. A summary of the entire study is presented, and recommendations and the conclusion of the present study are discussed.



CHAPTER TWO

THEORETICAL FRAMEWORK/ASSUMPTION

2 INTRODUCTION

This chapter deals with the theoretical assumption/stance underpinning the research which investigates factors influencing the participation of adolescents in health risk behavior and the association with leisure boredom. Therefore, the Person-Environment-Occupation (PEO) model (Law, Cooper, Strong, Stewart, Rigby & Letts, 1996) served as the key theoretical assumption for this study. The PEO model is informed by various theories including Ecological Systems by Bronfenbrenner, (1979), Ecology of Human Performance (EHP) by Dunn, Brown and McGuigan, (1994) and Model of Human Occupation (MOHO) by Kielhofner (1985). These theories will be summarized and integrated at the end of the chapter to provide a better understanding of, and insight into, adolescent health risk behavior and the association with leisure boredom in Lagos, Nigeria.

2.1 SYSTEM STRUCTURE IN BRONFENBRENNER'S THEORY

Bronfenbrenner established in his theory that socialization and development are influenced by the different circle of the environment in which a person actively relates (Bronfenbrenner, 1979).

Bronfenbrenner's ecological system theory includes three significant assumptions which are;

- i. Person as an individual is an active player who is exerting influence on his or her environment.
- ii. Environment is compelling individual to adapt or become accustomed to its conditions and restrictions.

iii. An individual's environment interacts with the individual and the individual with the environment, while various environment influence one another concurrently.

According to Bronfenbrenner (1979), there are certain social and cultural factors within an individual's immediate environment that influence development. Within the immediate environment of an individual, there are various levels of systems that can affect and influence the individual's development. Bronfenbrenner (1979) identified five systems with the ecological theory, which are discussed in the sections below.

2.1.1 THE MICROSYSTEM

The microsystem consists of the person's entire immediate environment including physical, social and psychological environment. It is a form of activities, roles and interpersonal dealings experienced by developing person in a given face-to-face situation with particular and material features, and containing other persons with distinctive characteristics of temperament, personality, and system of belief (Bronfenbrenner, 1989, p.227). This is often seen as the initial foundation for primary learning about oneself and the world and it is these close relationships that becomes the person's point of reference (Preece, 2013). In the microsystem, the focus is on individuals' friends, families, relations, neighborhoods, and religious groups. The family of the individual is one of the core microsystemic factors that influence an individual's development. For the adolescent, the microsystem includes friends and school.

2.1.2 THE MESOSYSTEM

The mesosystem provides the link or connection between the structures and buildup of the person's microsystem (Bronfenbrenner, 2005). It was further defined as "the set of microsystems constituting the individual's development niche within a given period of development" (Lerner, Dowling, & Chaudhuri, 2005, p.8). This means that the mesosystem refers to the connection and the interactions between the structures of the microsystem that form and inform an individual's current developmental position. Thus, an individual's developmental niche might be influenced by the connection(s) between peers and parents, or between parents and school. This system then looks at how the different structures of the microsystem interact and then influence development.

2.1.3 THE EXOSYSTEM

The exosystem is the larger social system that the person is not directly involved in but still impacts the person's development (Lerner et al., 2005). Bronfenbrenner views this system as one in which specific social structures that are not immediately in contact with an individual, still impinge upon an individual's immediate setting and may thus define, determine or influence the occurrences within this setting (Bronfenbrenner, 2005; Lerner et al., 2005). An exosystem consists of the systems or networks that indirectly influence individuals. It includes individuals' larger community, neighborhoods, health care systems, and the mass media (Hoffman & Kruczek, 2011). Adolescents' exosystems consist of their parents' work, family social networks, neighborhood, and community contexts (Bronfenbrenner & Morris, 2006). Parents live outside their home environment, even though not influencing the adolescent directly, but play an important role in adolescents' psychological development (Bronfenbrenner, 1979).

2.1.4 THE MACROSYSTEM

The macrosystem is the “outermost layer” of the person’s environment, comprised of community practices, laws, political trend, lifestyles, customs and religious- and cultural values (Berk, 2000). It is said to overshadow the other ecological levels, as these are influenced by the principles of the macrosystem, and development is perceived as steered by religious- and cultural values, norms, laws and customs (Paquette & Ryan, 2015; Lerner et al., 2005).

2.1.5 THE CHRONOSYSTEM

The chronosystem encompasses the dimension of time as it relates to a person’s environment. The dimension of time within this theory relies on aspects, such as chronological age, duration and nature of periodicity. Bronfenbrenner (1989) revealed that the chronosystem is a description of evolution, or stream of individual development of the external systems in time. Bronfenbrenner (1989) came to realize that timing can also have an impact on the development of a person and as a consequence on other ecological systems.

2.2 ECOLOGY OF HUMAN PERFORMANCE

Ecology of human performance (EHP) emphasizes that the environment is the primary context within which performance needs to be understood and the lens through which human performance should be viewed (Turpin & Iwama, 2011). The term ecology was defined as the “interrelationships of organisms and their environments” (Dunn et al., 1994, p.595). The ecology of human performance model emphasizes the inter relatedness of the person, the context, the task and the performance. In the first publication of the EHP model in 1994, the authors stated, “the primary theoretical hypothesis fundamental to the EHP framework is that ecology, or the

synergy and relations between person and the environment, affects human behaviors and performance, and that performance cannot be understood outside of context” (Dunn et al., 1994, p.598). Thus, context is central to human performance. In this model, there are three important constructs; person, task and context (initially called environment) which contribute to an understanding of the fourth construct: human performance (Turpin & Iwama, 2011).

2.2.1 PERSON

Dunn, Brown, Youngstrom, Kramer, Hinojosa and Royeen, (2003, p.225) stated that Ecology of Human Performance is an individually focused, client-centered framework and revealed individuals as unique and complex. Personal variables contributed to the distinctiveness of individuals. These are listed in the EHP model as values, interest, experience, as well as sensorimotor, cognitive and psychosocial skills. These personal variables influence both the selection of tasks and the quality of task performance (Turpin & Iwama, 2011). These personal variables are also continually influenced by the person’s (continually changing) context.

2.2.2 TASK

The EHP model takes the view that a multitude of tasks are potentially available to all people. Personal and environmental variables influence the task that form part of an individual’s actual repertoires of tasks. Therefore, personal variables such as values, interests, experience, perceptions as well as cognitive, sensorimotor and psychosocial skills and abilities influence the selection of tasks in which the person participates (Turpin & Iwama, 2011). Environmental variables also influence persons’ task selection and performance. Furthermore, a person might participate in a selection of tasks that are required in order to fulfill the particular social roles

expected of the person. The set of tasks in which a particular person engages will depend on the unique relationship between the person and his or her specific context (Dunn et al., 1994). This set of tasks is referred to as the performance range. The performance range is influenced by a person's skills and abilities and the supports and barriers created by the particular context. As people and context change, so too do their performance ranges (Turpin & Iwama, 2011).

2.2.3 ENVIRONMENT OR CONTEXT

A central feature of this model is the primary importance to human performance of environment or context. The model conceptualizes the environment as broader context that is integral to and shapes both the person and his or her task performance (not limited to the physical context in which a task is performed). This understanding of the environment has two aspects that are considered in this model. These are: (a) the environment includes more than just the physical environment; (b) the environment has the capacity to shape task performance. It was further established that the concept of the environment should be expanded to include, "physical, social, temporal, personal, virtual, spiritual and cultural element" (Brown, Stoffel & Munoz, 2019, p.374; Dunn et al., 1994, p.596). In addition, the EHP model also emphasizes that the environment also shapes both the person and the tasks in which the person engages.

2.2.4 HUMAN PERFORMANCE

Human performance is the result of the interaction between person, context and task.

2.3 MODEL OF HUMAN OCCUPATION (MOHO)

The Model of Human Occupation or MOHO (Kielhofner, 1985) as it is well known, is the longest and the most published model in occupational therapy. MOHO was unique in that it addressed issues relevant to other areas of practice such as mental health and intellectual disability through its detailed description of volition and habituation. The Model of Human Occupation was established to explore, organize and make explicit the concept of human occupation, which was considered the foundation of occupational therapy. Environmental impact, habituation, volition, performance capacity, performance, skills, participation, occupational competence, and occupational identity were listed as the core concept of the MOHO model (Kielhofner, 2009, p. 149).

Three concepts are considered to be internal to the person. These concepts have been associated with the model of human occupation (MOHO) since its origins, and these are performance capacity, habituation, and volition. In addition, human occupation is hypothesized as having three dimensions. These dimensions are occupational participation, occupational performance, and skills. When a person participates or engages in occupation, it establishes a change in the person occupational competence and occupational identity, both of which are conceptualized as the components of occupational adaptation (Kielhofner, 2009). All of this occurs in the context of an environment that shapes and is shaped by all aspects of the process.

Kielhofner (2009) states that MOHO aim to provide a framework for conceptualizing how people “select, organize and undertake their occupations” (p. 12). The MOHO model addresses each of these intentions through the ideas of habituation, volition and performance capacity,

respectively. Habituation outlines how people organize their occupation; volition explains why they select the occupations and performance capacity address the skills and the abilities that enable people perform their occupations. Human occupation is also hypothesized as existing within an environmental perspective that influences all aspects of occupation. These environments provide opportunities, as well as support, demand and constrain occupation. In discussing environment, the model details physical and social environments and uses the term occupational settings to refer to the overall context surrounding occupation.

2.3.1 VOLITION

Volition is the process by which individual are motivated toward and choose the activities they do (Kielhofner, 2009). It begins with the universal human desire to do things and is shaped by life experiences. Volition consists of thoughts and feelings that occur in a cycle of:

- Anticipating possibilities for doing (e.g., looking forward to a weekend outing, worrying about an upcoming exam and feeling challenged)
- Choosing what to do (e.g., starting a new hobby, deciding to spend another hour studying for an exam in order to be better prepared)
- Experiencing what one does (e.g., enjoying a favorite pastime, feeling confident about how one completed a work task)
- Subsequent interpretation of the experience (e.g., reflecting on how well one performed during an activity or recalling how enjoyable it was to do an activity).

The thoughts and feelings that make up volition are referred to as personal causation, values, and interests; they concern with how capable and effective an individual feels, what an individual

holds as important or meaningful, what an individual finds enjoyable and satisfying (Kielhofner, 2009).

Personal causation refers to the thoughts, ideas, and feelings about personal physical abilities and effectiveness that people possess as they perform and engages in everyday activities. These include, for example, recognizing strengths and weaknesses, feeling confident or anxious when faced with a task, and reflecting on how well one did following performance (Kielhofner, 2009, p.13).

Values are beliefs and commitments about what is right, good, and important or essential to do. They reflect one's beliefs about what is worth doing, how to perform, and what goals or aspirations deserve commitment. People experience a sense of worth and belonging when they participate in activities that enact their values (Kielhofner, 2009, p.39).

Interests are generated and brought into existence through the experience of those things that people find enjoyable or satisfying in occupation. They begin with natural dispositions (e.g., the propensity to enjoy physical or intellectual activity). They further develop through the knowledge of artistic pleasure and satisfaction gain or derived from occupational participation or engagement. Therefore, the development of interests relies or depends on the available opportunities to participate in occupations (Kielhofner, 2009, p.42).

Volition (i.e., the cycle of thoughts and feelings that reflect one's personal causation, interests, and values) has a pervasive influence on occupational life (Kielhofner, 2009). It shapes how

people see the opportunities and challenges in their environment, what people choose to do and how they experience and make sense of what they have done.

How people experience life and regard themselves and their state of existence is largely a function of their volition. Importantly, when people experience impairments, their volition can be severely affected. People may experience themselves as losing capacities and being unable to perform as they feel is important. They may not develop or no longer enjoy activities of interest.

When volition is negatively impacted, people may make decisions that worsen or amplify the impact of their impairments. For instance, feelings of people helplessness and hopelessness may lead them to avoid activities that could build their confidence and abilities. Such volitional decisions may also contribute to further loss of skills.

2.3.2 HABITUATION

Habituation is a process whereby individuals organize or systematize their actions into patterns and routines (Kielhofner, 2009). Through recurrent action within specific contexts, individuals establish habituated patterns of doing. These patterns of action are ruled by habits and roles. Habits and roles shape how individuals go about the routine aspects of their daily activities and because of roles and habits, most routines of daily life unfold automatically and predictably.

Habits are patterns of behavior that have a level of consistency about them and, often performed automatically (Kielhofner, 2009). It is the individuals' decision to engage in them and, often, to carry them out requires little thought. Furthermore, once begins, habits require low levels of

conscious effort, which frees up thought for other things while undertaking habitual activity. Habits depend on a familiarity with the environment that allows people to internalize rules and guidelines for behavior. For example, habits shape how one intuitively goes about self-care each morning. One's weekly routine is largely a function of habits. Even the way one completes a familiar activity is influenced by habits.

Roles give individuals identity and outlook, and a sense of the responsibilities or obligations that go with that identity (Kielhofner, 2009). People may see themselves as workers, students, or volunteers and know how they should behave or act in order to fulfill those roles bestowed on them. Much of what people perform is guided by the roles they dwell in or inhabit. Roles are defined by the social system of which the role is a part (e.g., school, workplace, family, community) and by the expectations of others in that system. For example, a child entering the role of student in school learns what it means to be a student from expectations given by teachers as well as attitudes and behaviors displayed by other students. Learning a new role entails internalizing an identity, an outlook, and an expected way of behaving.

The habits and roles that make up habituation guide how people interact with their physical, temporal, and social environments. When habituation is challenged by environmental circumstances or impairments, people can lose a great deal of what has given life familiarity, consistency, and relative ease. For example, chronic conditions such as mental illness may interfere with developing normal roles and with establishing a functional routine guided by habits. One of the most important commissions of therapy is to construct or reconstruct habits and roles so that the person can more readily take part and engage in everyday occupations.

2.3.3 PERFORMANCE CAPACITY

Performance capacity refers to underlying mental and physical abilities and how they are used and experienced in performance (Kielhofner, 2009). The capacity for performance is affected by the status of neurological, musculoskeletal, cardiopulmonary, and other bodily systems that are called on when a person does things. Performance also calls on mental or cognitive abilities such as memory (Kielhofner, 2009).

2.3.4 MODEL OF HUMAN OCCUPATION CONCEPTS CONCERNING THE ENVIRONMENT

MOHO stresses that occupation results from an interaction of the inner characteristics of the person (habituation, volition, and performance capacity) with the environment (Kielhofner, 2009). The environment includes the particular physical, social, cultural, economic, and political features within a person's context that influence the motivation, organization, and performance of occupation. Several dimensions of the environment may have an impact on occupation. These include physical spaces, objects, and people, as well as expectations and opportunities for doing things. Moreover, culture, economic conditions, and political factors also have an influence.

Accordingly, the environment includes:

- The objects that people use when they perform things
- The spaces within which people do things
- The occupational forms or tasks that are available, expected, and/or required of people in a given context
- The social groups (e.g., friends, family, coworkers, neighbors) that make up the context
- The surrounding culture; political and economic forces

For example, political and economic conditions determine what resources people have for doing things and culture shapes beliefs about how one should perform and what is worth doing. Further, the demands of a task can determine the extent to which a person feels confident or anxious. How well objects and spaces are suited to capacity of the individual influences how the person performs. In these and many other ways, the environment influences what people do and how they think and feel about their doing. In turn, people also may choose and modify their environments. For instance, people select environments that match and allow them to realize their values and interests.

2.3.5 DIMENSIONS OF DOING

MOHO identifies three dimensions of doing, all of which are influenced by volition, habituation, personal capacity and environmental conditions (context). These are:

- Occupational participation
- Occupational performance
- Occupational skill (Kielhofner, 2009)

2.3.6 OCCUPATIONAL PARTICIPATION

Occupational participation refers to individuals' engagement in activities of daily living, work, or leisure or play that are component of one's sociocultural circumstance and that are desired and/or necessary to one's quality of life and well-being (Kielhofner, 2009, p.101). Furthermore, occupational participation is also refers to broad categories of doing, includes both performance and its subjective experience and has both personal and social significance. Examples of occupational participation are pursuing a hobby, doing routine self-care, and attending school.

2.3.7 OCCUPATIONAL SKILLS

Skills are goal-directed actions that a person uses while performing (Forsyth, Lai, & Kielhofner, 1999). In contrast to performance capacity, which refers to underlying ability (e.g., range of motion and strength), skill refers to the purposeful actions that make up or constitute occupational performance.

2.4 PERSON – ENVIRONMENT - OCCUPATION MODEL OF OCCUPATIONAL PERFORMANCE

The PEO hypothesizes the relationship between the person and the environment as “transactive” rather than interactive (Law et al., 1996, p.10). The dissimilarity between these two concepts relates to whether person and environment are conceptualized as distinct entities that could be studied separately or whether they should be studied together. An interactive approach would take the former position and consider the two as separate entities that are able to be measured separately and that influence the other in a cause and effect way. Furthermore, in an explanation by Law et al., (1996) “An interactive approach allows behaviors to be predicted and controlled, by influencing change at the level of an individual or environment characteristics” (p.10). In contrast, a transactive approach presents the person and environment as interdependent and proposes that a person’s behavior cannot be separated from the context within which it occurs (including temporal, physical and psychological factors). Therefore, occupational performance is a context, person and occupation-specific process. That is, it is the results of particular people doing particular things in particular times and places.

The relationship between the person and the environment is understood to be mutually influencing. Law et al., (1996) stated that “a person’s contexts are continually shifting and as contexts change, the behaviors necessary to accomplish a goal also changes” (p.10). Therefore, rather than the person and the environment being examined separately, in a transactive approach, an event becomes the unit to study. As such, the observable features of the environment in which the event took place would be investigated as well as the event’s meaning to those participating. This process provides for an affluent understanding of the interconnectedness of the person and the environment and it helps to provide an understanding of how a person’s behavior shapes and is shaped by the environment. Occupational performance is considered to be the outcome of the transaction of the person, environment, and occupation (Law et al., 1996). It is defined “as the dynamic experience of a person engaged in purposeful activities and tasks within an environment” (Law et al., 1996, p.16).

2.4.1 COMPONENTS OF THE PERSON - ENVIRONMENT - OCCUPATION MODEL

2.4.1.1 PERSON

The first component of the model that will be discussing in the section is the person. The changing nature of subjective experience and views of self is central to the concept of the person in the PEO model. The person is presented as “a dynamic, motivated and ever-developing being, constantly interacting with the environment” (Law et al., 1996, p.17). People change over time as the environment surrounding them evolve. They change in their attributes, characteristics, abilities, skills and in the ways they think and feel about themselves. Their sense of who they are and what they are capable of develops and changes as they interact with the specific environments that surround them.

2.4.1.2 ENVIRONMENT

Consistent with the richly connected and contextualized view of the person is a broad definition of environment. Environment refers to “the particular physical and social, cultural, economic and political of one’s contexts that impact upon the motivation, organization and occupational performance” (Kielhofner, 2009, p.86). Despite the fact that occupational therapists and other health workers have traditionally emphasized the influence of the physical environment on what people do and how they do it, this model makes explicit that a range of environment considerations are equally important in influencing human behavior and activity.

The PEO model outlines five aspects of the context surrounding the person; cultural, socioeconomic, institutional, physical and social context that shaped and are shaped by that person. For example, culture shapes what people believe and how they see the world. This, in turn, shapes how they think about themselves and what they might want and/or are expected to do. However, individuals’ views of the world and of themselves are also dependent upon the degree to which each individual internalizes the views of the culture and the people surrounding them. What they actually do, then, influences and is influenced by the environment within which they act.

Their socioeconomic circumstances will also influence individuals’ perception of what they can and can’t do as well as their access to resources. As a person grows and ages and there is a change in their skills, abilities, character, and experiences, so too their circumstances are likely to change over the course of their lives. Environments can change because people physically relocate; change their roles, habits, and routines; change their social and cultural groupings, etc.

or because local, national and world circumstances change. For example, the environment surrounding a person living at the beginning of the twentieth century will differ greatly from that of a person living during the twenty-first century.

2.4.1.3 OCCUPATION

Occupation, the third component of the PEO model considers what people do within their environmental contexts. Law et al., (1996) considered three aspects of human action; activity, task, and occupation under this category.

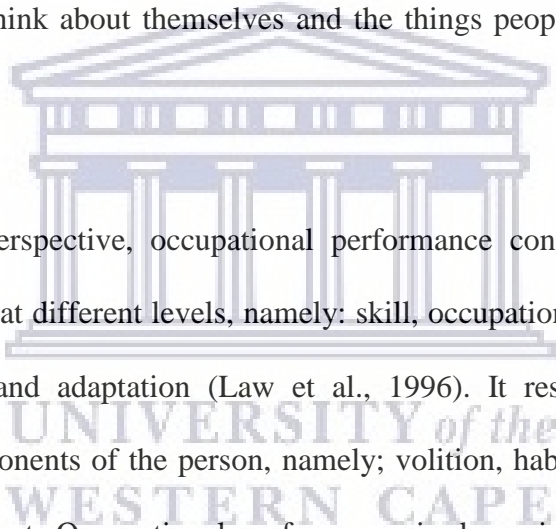
Activity: Activity is defined as “a singular pursuit in which a person engages as part of his or her daily occupational experiences” and was considered to be the “basic unit of a task” (Law et al., 1996, p.16). An example of an activity is the act of writing.

Task: Task is defined as “a set of purposeful activities in which a person engages” (Law et al., 1996, p.16). An example of a task is the individual’s obligation to write a report.

Occupation: Occupation is defined as “groups of self-directed, functional task and activities in which the person engages over the lifespan” (Law et al., 1996, p.16). Occupation can further be defined as those clusters of activities and tasks in which the person engages in order to meet his or her intrinsic needs for self-maintenance, expression, and fulfillment (Law et al., 1996). Additionally, occupation is linked to the roles of an individual’s and is conducted in the context of multiple environments. Furthermore, the definition of occupation highlighted that person self-maintenance and expression, and fulfillment are understood as intrinsic need and that person engage in occupation within the context of their specific roles and environments.

2.4.1.4 OCCUPATIONAL PERFORMANCE

Occupational performance results from the interconnectedness of the person, what he or she is aiming to do and where it will be done (Law et al., 1996). However, the rich connections between these three factors, the person, environment and occupation are evident when realizing that even individuals' decisions about what to do are shaped by the broader context in which they live their lives. Occupational performance is the result of a complex process in which people determine the purpose of occupations in their lives; a process that is shaped by their perceptions, goals, responsibilities and desires and the demands of the context in which they live. In a reciprocal way, how they think about themselves and the things people do also influence their environments.



Furthermore, from PEO perspective, occupational performance constitutes the actual doing which can be demonstrated at different levels, namely: skill, occupational performance, identity, participation, competence and adaptation (Law et al., 1996). It results from a hierarchical contribution from the components of the person, namely; volition, habituation and performance capacity and the environment. Occupational performance is dynamic in nature, because it is influenced and shaped by external environment that is continuously changing. It is also spontaneous and must be understood within the context of emerging action and conditions.

In summary, the PEO model presents the three major components of occupational therapy's domain of concern (person, environment, and occupation) and conceptualizes their relationship as transactive (Figure 2.1). This means that they should not be considered separately but are considered mutually influencing, in that a change in any one or more domains leads to a change

in the others. While such change is expected, the model suggests that the exact nature of the change cannot be predicted or controlled (a change will definitely occur but a particular type of change cannot be predetermined). The degree to which these three components fit together influences occupational performance. That is, if the congruence among person-environment-occupation is high, then occupational performance will be enhanced. If the fit is poor, occupational performance is reduced. The aim of occupational therapy is to facilitate occupational performance by intervening in any one or more of these areas to enhance the congruence between person, environment, and occupation (Figure 2.2).

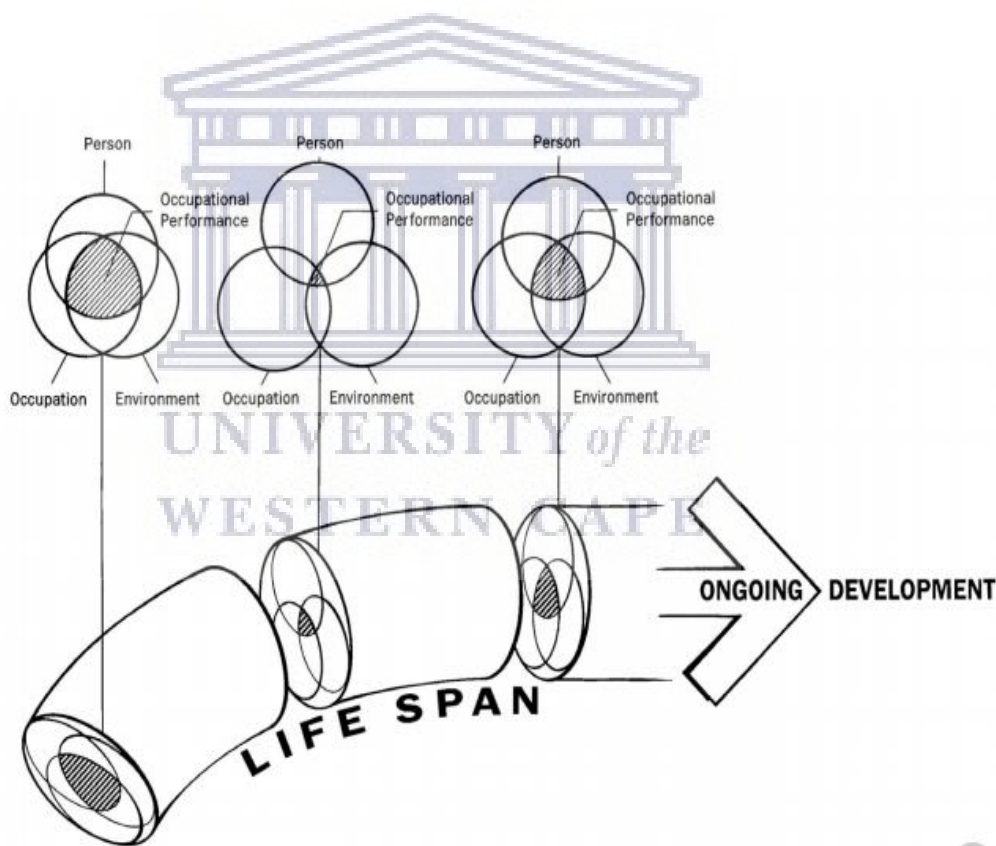


Figure 2.1: The Person-Environment-Occupation Model: a transactive approach to occupational performance (Law et al., 1996).

THE PEO MODEL'S APPLICATION FRAMEWORK

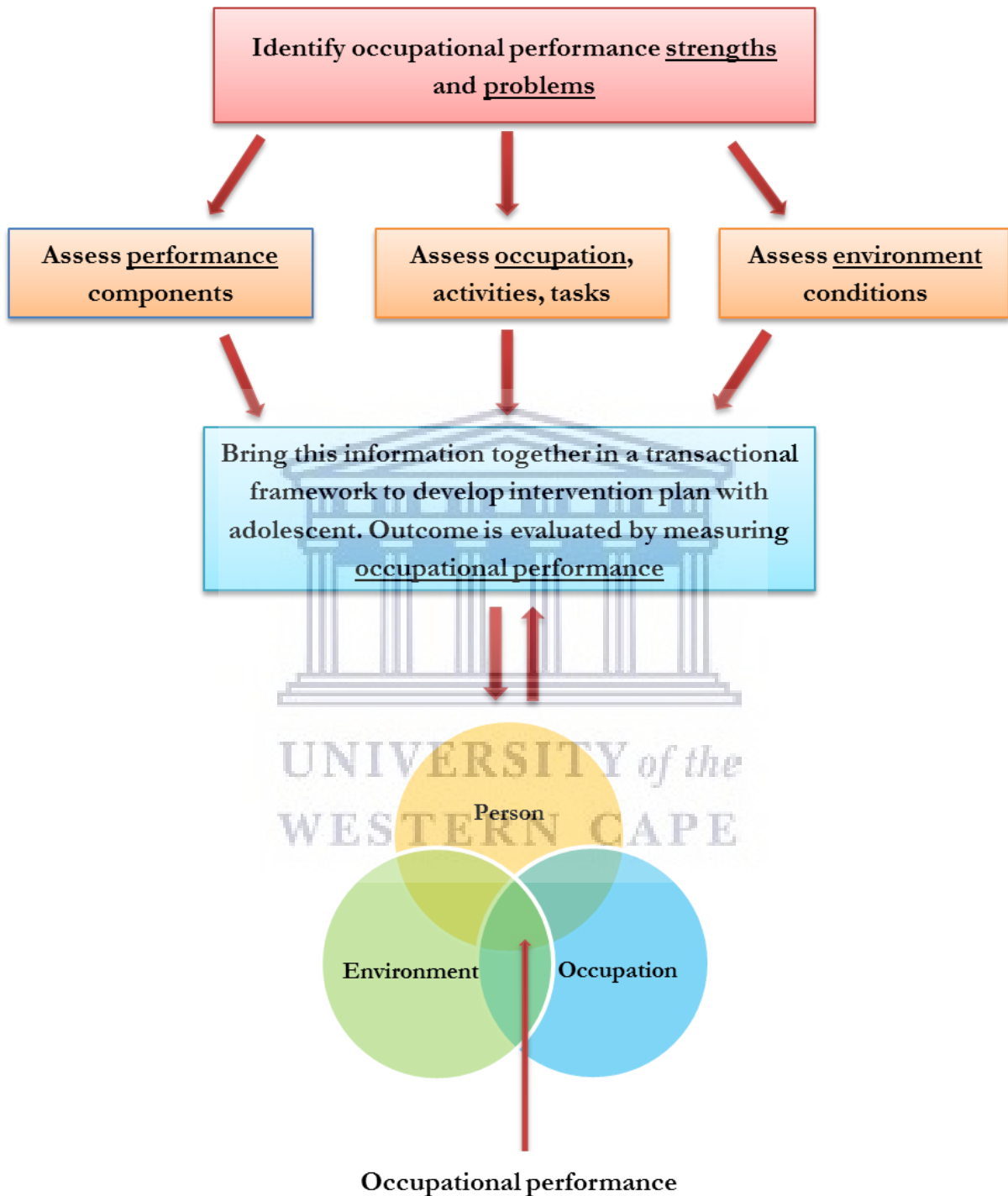


Figure 2.2: The PEO model's application framework (adapted from Law et al., 1996).

2.5 AN OCCUPATIONAL PERSPECTIVE OF HEALTH

An occupational perspective could be defined as a way of seeing or considering the influence of engagement in occupations on well-being and illness and the occupational nature of human is embraced by this view. Ann Wilcock's model "An Occupational Perspective of Health" describes the relationship between activity and health through the concepts "doing, being, becoming and belonging" (Wilcock, 1999, p.3).

Wilcock (2006) accentuates that we become what we do and it is through what we do that we are shaped and changed, and develop into what we become. Whether we strive for it or we are conscious of such, we are in a continuous process of change. We can increase the awareness of what we do, why we do it and what the consequences are. Our doing is to enable us to strive better towards our natural, individual and biological potential and also to strive for and achieve social, mental and physical wellness.

Furthermore, Wilcock (1999) describes the relationship between health and activity as a synthesis of doing, being, becoming and belonging and further asserts that is through "doing" that people become what they have the capacity to be.

2.5.1 DOING

Doing refers to all human activities and all the activities that we engage in daily (Wilcock, 2006). Man spends most of his time engaged in some form of meaningful activities of work, self-care, and leisure (Forhan, 2010). The motives of our doing are different, we do things because we

need to or we are forced sometimes. Sometimes people do things for the sake of pleasure. Man is an active being and needs to be engaged in doing things to feel good.

All our doings shape our days and lives, and have also shaped the entire human evolution. Human activity has been the basis for and characterized our survival, development, and growth of our society (Wilcock, 1999). Whether we reflect on it or not, our lives and society are created and shaped as a consequence of what people have done and are still doing, either for good or evil.

Human nature is distinguished by its unique ability to adapt to different conditions. In contrast to many animals, we are not bound by innate, “compulsive” behavioral patterns, but we are constantly able to choose what we do and on what grounds (Wilcock, 2006). While this ability gives us unique opportunities to choose what we engage in, and this leads to the fact that in the absence of an understanding of what is good for us, we can choose to engage in actions that can harm us and our surroundings.

2.5.2 BEING

Being is the balancing component of doing, which helps us reflect on the motives and consequences of our actions. With being, Wilcock refers to a person’s basic nature, his or her essence or substance, soul, spirit, psyche, and core. Being is about being true to oneself, to its nature, to its innermost essence, and to what is distinctive of one's being, to be able to convey this in our relationships and in our actions, in what we do (Wilcock, 1999, p.3-4). Being takes the form of emotion, creativity, humor, and playfulness. Being is also about being in itself, present in

the present, in a state that "does not need any future because it is already" (Wilcock, 2006, p.114).

In today's society, with the increasing demands for achievement, we are often concerned with living up to various external dimensions, that is, the attributes of roles to play as parents, women, men, friends, students, professionals, etc. and the feeling of what and who we should live up to. We are easily pressed to overlook our inner, natural needs, but we are often guided by habits, cultural pressures, and wrong attitudes.

Wilcock's point of view on being was based on hypotheses about the perception of health. People engaged in activities that are more based on natural biological needs compared with activities based on socio-cultural development (Wilcock, 2006, p.5). There is a large accumulation of information in recorded history that suggest that people living in a natural state, apart from the corrective intervention of today's medical science, were able to enjoy a greater sense of health and well-being and had more time for themselves and for the mere "being" than the people of today's western society (Wilcock, 2006, p.20).

Furthermore, Wilcock asks the question of whether a man has changed so much that the natural needs would no longer be relevant. She claims that many of today stress-related and degenerate disease can be derived from a lack of understanding of man's "being" as well as ours "doing needs" (Wilcock, 2006, p.5).

2.5.3 BECOMING

Becoming is the dimension related to change and development. Becoming is about becoming, being in a process of change, and developing self towards something. Becoming is a consequence of our “doing” and “being”, a continually unfinished process of change, and a process with cycles of achieving goals and aspiration before setting new ones (Hitch, Pépin, & Stagnitti, 2014). All we do, everything that happens to us in our lives shapes us and is part of our becoming, whether we are aware of it or not (Wilcock, 2006, p.148).

Becoming is a dynamic and emergent perspective on identity, embodied by changing self. In relation with being, becoming reflects the person’s self-creation, self-concept and aspiration to experience efficacy, competence, and consequence (Hitch et al., 2014). The ultimate health and well-being is about people becoming aware of and striving for their full potential by making the most of their personal capacity and strength (Wilcock, 2006). Becoming also include learning new things, challenging oneself, strengthening self-ability and becoming aware of their potential and self-development toward something.

2.5.4 BELONGING

Belonging is about the feeling of belonging. Belonging can be about belonging to a physical, mental and social environment. Belonging is an important component of the process of becoming and enabling health and well-being; most people need stimuli and responses from their environment to find out about themselves and have the opportunity to develop their capacity (Wilcock, 2006).

Wilcock, (2006) claims that "without belonging we can truly become our potential" and describes belonging as an important component for us to be able to develop towards becoming more ourselves and gaining access to all our potential. Although there is documentation on people who, in solitude and isolation, managed to overcome their circumstances and in exceptional ways maintain and develop their abilities. Most of us still need response and affirmation from our environment to evolve towards our optimal potential and really find out about ourselves.

2.6 OCCUPATIONAL JUSTICE AND OCCUPATIONAL INJUSTICE

2.6.1 OCCUPATIONAL JUSTICE

The term occupational justice became known in the late 1990s with the integration of research conducted by Wilcock and Townsend (Durocher, Gibson, & Rappolt, 2014; Stadnyk, 2010; Nilsson & Townsend, 2010; Townsend & Wilcock, 2004; Wilcock & Townsend, 2000). In a study conducted by Wilcock and Townsend (2009), it was established that, values attached to occupations are dependent on socio-political and cultural determinants. It was further revealed that occupations are central to human existence, and any restrictions in engagement in occupation or purposeful and meaningful activities are a matter of unfairness or injustice (Townsend & Wilcock, 2004).

Moreover, occupational justice can also be described as focusing on purposeful and meaningful activities or task that the person want to do, need to do, and can also do considering their situational and personal circumstances (Standnyk, 2010). Thus, occupational justice perspectives recognizes persons as occupational beings and also acknowledge each person as having unique

occupational aspiration, customs and wants based on his or her distinctive set of circumstances and capacities, and that each person will require different occupational opportunities to utilize their capabilities and flourish (Wilcock, 2006; Townsend & Wilcock, 2004; Wilcock & Townsend, 2000). In the research, identified needs that may be met through person participation in occupation included “choice and control, exerting individual empowerment” (Townsend & Wilcock, 2004, p.80); “health, quality of life and the sustenance of families and communities, i.e., looking after self and others, doing something that feels or is acknowledge by others to be productive, enjoying life” (Standnyk et al., 2010, p.218); “nourishment of human spirit and spirituality” (Wilcock, 2006, p.85).

In addition, individuals have the claim and entitlement to equal opportunities to participate in varied and purposeful and meaningful occupations within an occupational justice in order to meet essential needs and make the most of their potential (Wilcock & Townsend, 2000). An occupationally just world is envisioned and visualized as one that would be presided and rule in way that enables individuals to flourish by doing what they decide is most useful and meaningful to themselves and to their family, environments, and nations (Wilcock & Townsend, 2000). This would necessitate to fair allocation of resources among the individuals to enables the equal distribution of rights and privileges that can results from engagement in meaningful occupations, while recognizing the distinctive occupational wants of individuals. Encroachment or intrusion of the freedom to participate in these occupations is injustice (Wilcock & Townsend, 2000).

2.6.2 OCCUPATIONAL INJUSTICE

Occupational injustice can be defined as “socially organized, socially shaped conditions that results to stressful occupational experiences” (Townsend & Wilcock, 2004, p.80). In addition, occupational injustice is further defined by Nilsson and Townsend, (2010, p.58) as “an outcome of social guiding principles and other forms of governance that structure how control is exerted to limit or constrain engagement in the daily occupations of individuals and population. More recently, it has been affirmed that by definition “occupational injustice refers to ongoing dispossession or patterns of disruption that put at risk the children development, create substantive health issues, and reduce individual’s life expectancy” (Wilcock & Hocking, 2015, p.392). Occupational injustices have in this manner been portrayed both as the conditions that produce stressful occupational experiences and as the outcomes of these conditions.

In a study by conducted by Townsend and Wilcock (2004), three outcomes of occupational injustice were identified which are occupational imbalance, occupational alienation, and occupational deprivation (which was at first termed and described by Whiteford, 2000). Furthermore, an additional outcome which is occupational marginalization was subsequently added by the same duo of researchers (Townsend & Wilcock, 2004). Additionally, in a study conducted by Simó-Algado, Mehta, Kronenberg, Cockburn and Kirsh (2002), an idea of occupational apartheid was identified. Therefore, the existing literature identifies five outcomes of occupational injustice: occupational deprivation, alienation, imbalance, marginalization, and apartheid.

2.6.3 OUTCOMES OF OCCUPATIONAL INJUSTICE

2.6.3.1 OCCUPATIONAL DEPRIVATION

Occupational deprivation is the most prevalent example of occupational injustice found in the reviewed literature. The idea of occupational deprivation was firstly defined by Whiteford (2000) as “a state of preclusion or prevention from participation in occupations of basic requirement and/or meaning due to factors standing outside the immediate control of the individual” (p.201). Furthermore, Townsend and Wilcock (2004) offered a different point of view on the idea of occupational deprivation, proposing that “occupational deprivation may also arise when people have limited choice in occupational participation because of their ability, isolated location or other circumstances” (p.81). In addition, Whiteford (2000) and Wilcock (2006) both suggested that these external circumstances may include environmental, social, economic, cultural, political, geographic, historical or interpersonal factors. Whiteford (2000) distinguished the concept of occupational deprivation from occupational disruption which is a temporary condition or circumstance that may be due, for example, to ailment. Occupational deprivation is argued to have a pervasive and long term effect on individuals and also have significant health implication (Whiteford & Townsend, 2011; Wilcock, 2006).

2.6.3.2 OCCUPATIONAL ALIENATION

According to Townsend and Wilcock (2004), occupational alienation is defined as “the consequence or outcome when individuals experience everyday life as purposeless and meaningless (p.252). It was further defined as a “prolonged experience of emptiness, isolation, lack of a sense of identity, disconnectedness, a sense of meaningless or a limited or restrained expression of spirit,” (Townsend & Wilcock, 2004, p.80) and in relation to limited (or forced)

engagement in occupations that are viewed as purposeless and meaningless (Standnyk, 2010). In a study by Stadnyk (2010) it was argued that meaningful occupations may be spiritually and mentally enriching and help shaped one's identity. As such, engagement in activities or occupations that do not provide positive experiences can impede information of positive identities and is therefore unjust. Additional injustice is implied in a research by Wilcock's (2006) on the examination of potentially highly detrimental health effects of occupational alienation. Stadnyk (2010) contended that situations or circumstances where some individuals are subjected to deprivation or alienation from highly values and meaningful occupations while others are of advantage with the same (possibly at the expense of those being alienated or deprived) may perhaps lead to situations of occupational apartheid.

2.6.3.3 OCCUPATIONAL IMBALANCE

Townsend and Wilcock, (2004), described occupational imbalance as an occupational injustice, quoting the assumption that human healthiness and well-being rely upon a variation in people's occupational participation. In addition, Nilsson and Townsend (2010) also described occupational imbalance as a form of social omission or exclusion resulting from holding back the population with the goal that some people have too little to do every day while others have too much to do.

At the individual level, occupational imbalance implies too much time spent or occupied in one area of life at the expense of other areas (Stadnyk, 2010); for example, individuals spending an overabundance of his or her time in partying with friends at the expense of attending to school work or house chores. Wilcock (2006) further argued that occupational imbalance can occur

when the timing of occupation is out of alignment with personal or physiological needs or routines; for example working the right. At the societal level, occupational imbalance is described as circumstances or states where some individuals within a population are offered many opportunities for occupation while others are offered few which results in individuals within the population being over occupied, under occupied, or even unoccupied (Stadnyk, 2010; Wilcock, 2006). All this form of occupational imbalance can have harmful effects on health and well-being (Wilcock, 2006), with political, economic and cultural structures largely accountable for situation of imbalance (Townsend & Wilcock, 2004).

In addition, if those structures establish or maintain situations of occupational imbalance, the outcomes could be seen as occupational apartheid. In a situation of occupational imbalance, not only will occupations be unequally distributed the individuals, but also the benefits, rights, reward, and privileges that are associated with these occupations will also be unequally distributed.

2.6.3.4 OCCUPATIONAL MARGINALIZATION

Occupational marginalization is described as circumstances where individuals or groups may not be allowed the choice to participate in valued and purposeful occupations, and may be relegated to those occupations that are less prestigious or allow little choice or control of occupations (Standnyk, 2010), or giving little opportunity for making decision on occupational choice (Townsend & Wilcock, 2004). In addition, occupational marginalization is further described as individual's exclusion from participating in occupations based on "invisible" norms and

expectations about who should participate in the available occupations, how, where, when and why (Standnyk, 2010; Townsend & Wilcock, 2004).

Hammell (2008) added that marginalization can result in social exclusion and limited access to resources and opportunities. Additionally, Townsend and Wilcock (2004) differentiate occupational marginalization from occupational deprivation and occupational apartheid, arguing that occupational marginalization results from informal expectation and norms within the sociocultural infrastructure. That is to say, people are not restricted from participating in occupations because of social policy, explicit law or religious edicts, but rather by habits, traditions and unexamined expectation of behavior.

2.6.3.5 OCCUPATIONAL APARTHEID

Occupational apartheid occurs in circumstances where opportunities for occupations are allowed to some peoples and restricted to others based on personal characteristics such as age, race, gender, social status, disability, nationality, religion, political beliefs and so on (Kronenberg & Pollard, 2005, p.67). Furthermore, occupational segregation may result from individuals occupational restrictions at the social, religious, economic or legal level created through “collusive, unresponsive or exploitative guiding principles or policy measures maintaining privilege over poverty (Kronenberg & Pollard, 2005, p.66).

2.7 INTEGRATION OF THE THEORETICAL ASSUMPTIONS OR STANCE IN RELATION TO HEALTH RISK BEHAVIOR AMONG ADOLESCENTS IN LAGOS, NIGERIA

Adolescents' participation in health risk behaviors may lead to the experiencing of occupational risk factors which are occupational alienation, deprivation, imbalance, marginalization, and apartheid as discussed above. Health risk behaviors could be both a cause and effect of occupational risk factors. Adolescents' engagement in health risk behaviors could result in occupational dysfunction of an individual's occupational life in different areas, hence having an effect on the overall quality of life and wellbeing. In a quantitative study by Ramafikeng (2019) on tobacco use and concurrent engagement in other risk behaviors among adolescents in Lesotho, it was revealed that with reference to obsessive health risk behaviors, occupational risk factors may be experienced among adolescents' because the behavior could have an adverse effect on the health and well-being of the adolescents', and also have a great impact on society as a whole. Adolescents' health, quality of life and well-being may be potentially influenced at the micro, meso, exo and macro levels by engaging in health risk behaviors, as behaviors take place within a social environment. Furthermore, the effects of these risk behaviors may possibly affect the adolescent as a person within the environment. Additionally, Wilcock and Townsend (2009) in their research revealed that adolescents' engagement in occupations is contextual and interdependent and is a determinant of well-being and quality of life.

Adolescents' participation in health risk behaviors could signify that engagement in occupations can have an adverse effect on well-being. This poses a challenge to occupational therapists and other health professionals as it is extensively acknowledged in occupational therapy profession

that engagement in purposeful and meaningful occupations enhance and promote individuals' health, quality of life and well-being. In addition, if well-being and quality of life are to be accomplished, doing needs to provide meaning and purpose (Wilcock, 2006, p.139). Adolescents and youths who participate in health risk behaviors could also draw meaning from activities such as drinking of alcohol, smoking of cigarette and marijuana use with friends and the actual purpose could be of entertaining or seen as participating in leisure activities. In this scenario, these activities do not promote the health and quality of life of the adolescents and youths in question. Recognition and understanding that occupations could be harmful or injurious to health and wellbeing have led to a hypothetical re-examination of the profession's shared assumptions that view participation in occupations from a positive point of view only (Durocher, Gibson & Rappolt, 2014, p.418). This current study could provide support and add to this body of knowledge that is aimed at showing that occupations of choice, which are both purposeful and meaningful can be harmful to health.

Environmental influence on occupational participation could illustrate that behaviors are likely to differ with context. Urbanowski, Shaw and Chemmutter (2013, p.314) shows a relationship that "environment potentially offers opportunities, demands, resources and constraints" for occupational participation. Sometimes, different environments can bring out or evoke the same behaviors and a single environment can bring about or cause multiple behaviors. Cooley, (2017) also includes that there is an inseparable connection between persons and their environments. A considerable amount of literature has been published on health risk behaviors. Previous studies have reported that when unhealthy occupational choices are made by an individual, they will

often be followed by engagement in occupations which will lead to disability and infirmity or illness (Urbanowski et al., 2013).



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CHAPTER THREE

LITERATURE REVIEW

3 INTRODUCTION

Adolescence is regarded as an important and indispensable developmental stage during a person's life. However, health risk behavior tends to be a concern in this developmental stage. Therefore, this chapter presents literature reviewed regarding the developmental stage of adolescence and adolescent health risk behavior. Furthermore, adolescence is defined, and the stages, domain, and tasks of development during adolescence are explained. In addition, health risk behavior is defined, and the various types of adolescent's health risk behavior, leisure, boredom and cause of boredom are discussed.

3.1 DEFINING ADOLESCENCE

Adolescence is the life stage between childhood or infantile and adulthood, described as the link between being a child and an adult (de Jager, 2015). There is a slight difficulty in defining the term adolescence because it is multifaceted and numerous definitions exist for this stage of development. The difficulty is intensified by the fact that individuals tend to experience this stage in different ways, depending on their unique physical, emotional, and cognitive development (Hardman, 2012, p.31). Additionally, a variety of factors, such as legal criteria, chronological age, and physical or social markers, tends to be considered when defining this development period.

It has been highlighted that there are laws set out for the minimum age of involvement in certain activities reserved for adults, such as marriage, voting, property ownership, smoking of cigarette, drinking of alcohol, differ from nation to nation (de Jager, 2015). Most countries would regard individuals who are allowed to get involved in these activities as adults; therefore legal age limit for adolescence is set accordingly (UNICEF, 2011). However, in Nigeria, the law regards anyone above the age of 18 as an adult. Persons above 18 years old can participate in activities such as voting, marriage, alcohol consumption, and accept social responsibility regarding these (Section 12, subsection 1b of the Nigeria Electoral Act of 2010; Child Right Act 2003).

On the other hand, adolescence can be defined in terms of biological and social indicators. According to Curtis (2015), adolescence is described as a stage of life that begins with the commencement of puberty and ends when the person accepts the social tasks of being an adult. Furthermore, adolescence is a developmental stage that begins with the onset of puberty, which is initiated by rapid physical change e.g. height and weight, and followed by the development of secondary sex characteristics and growth of body hair (de Jager, 2015; Morgan & Huebner, 2009; Santrock, 2009). In contrast, personality development seemed to be related to identity formation of during adolescence (Crocetti, Sica, Schwartz, Serafini, & Meeus, 2013), which might be influenced by cognitive maturation (Ojha & Singh, 2015). Social change emphasizes adolescent development through peer relationships and independence from parents watch (Santrock, 2009) that co-occur during this stage of life.

Furthermore, , it should be noted that adolescence can also be defined in terms of chronological age. According to World Health Organization (WHO) (2015), adolescence is described as a stage

of development that occurs following childhood and before adulthood between the ages of 10 years and 19 years. In a study by Santrock (2009), the researcher refers to the ages of adolescence as beginning at above or below 10 to 12 years of age and ending at 18 to 21 years of age. Newman and Newman (2017) argue that adolescence ranges from 12 to 24 years, with an early adolescent stage from 12 to 18 years of age, and late adolescent stage from 18 to 24 years of age. When defining adolescence in terms of chronological age, one similarity exists between the various definitions above, and that is; adolescence is connected to the second decade of a person's life (de Jager, 2015).

3.2 STAGES OF ADOLESCENCE

There are three sub-stages of adolescence which include early adolescence (ages 13 to 14 years), middle adolescence (age 15 to 16 years) and late adolescence (age 17 to 19 years) (Blum, Astone, Decker, & Mouli, 2014).

3.2.1 EARLY ADOLESCENCE STAGE

During early adolescence stage, identity begins to develop. Adolescents start to strive for independence and they will begin to show more preference for friends and show less affection to parents (Glowiak & Mayfield, 2016). Rapid physical changes are noticeable during this phase of life e.g. the development of secondary sex characteristics (Vasilenko, Lefkowitz, & Welsh, 2014). Early stage of adolescents often begins with the experimentation of their bodies and sexuality (e.g. masturbation) (Glowiak & Mayfield, 2016; Perkins, 2001). Furthermore, during early adolescence stage, there is an upsurge in experimentation with alcohol and drugs, and adolescents show an increase in health risk behavior (de Jager, 2015).

3.2.2 MIDDLE ADOLESCENCE STAGE

During middle adolescence, adolescents become more involved with their friends while withdrawing from their parents. During this stage, adolescents strive for independence, privacy and they extremely focused on their appearance (Glowiak & Mayfield, 2016). Similarly, on, sexuality adolescents who associated with deviant peers will begin showing more antisocial behavior (Glowiak & Mayfield, 2016). Furthermore, physical changes and growth for females slow down while that of the male continue to height and have weight gain (Perkins, 2001). In addition, sexuality and sexual leaning of adolescents become prominent and also adolescents can show passion and love, although most relationships are brief in nature (de Jager, 2015).

3.2.3 LATE ADOLESCENCE STAGE

During late adolescence stage, identities of adolescents have been stabilized and they are physically fully developed, although males may possibly continue to grow in height and add body mass. During late adolescence, relationships become more serious than before, and adolescents develop the capacity for affectionate and sensual love, most likely because their sexual identities have been formed (de Jager, 2015). Furthermore, health risk behavior declines towards the end of late adolescence when individuals can assess and weigh the consequences of their risky behavior more competently (de Jager, 2015; Bhandarkan, 2006).

3.3 DOMAINS OF ADOLESCENT DEVELOPMENT

Adolescence as a developmental stage is characterized by multiple transitions (e.g., relationship, school, puberty, abilities), and an increase in health risk behaviors (McCormick, Qu, & Telzer, 2016). It is a critical life stage during which adolescents undergo various rapid changes and have

to master various tasks. The development that takes place during adolescence period includes physical development, cognitive development, personal/identity development, and social development (Craig & Dunn, 2013; Santrock, 2009).

3.3.1 COGNITIVE DEVELOPMENT

According to Piaget and Cook (1952), adolescents are in the formal operational stage of cognitive developing, beginning from approximately 11 years of age and this formal operational stage continues into adulthood. During this developmental stage, adolescents move from thinking only about real and concrete occurrences to more abstract and scientific thinking (de Jager, 2015; Piaget & Cook, 1952).

One of the principal characteristics of this formal operational period is that adolescents begin using hypothetical-deductive reasoning that is, they develop their ability to reason from the general to the specific (Shaffer & Kipp, 2013). Adolescents can start to solve problems by not depending solely on previously learned facts, but also by generating hypotheses. They develop their propositional thinking ability, which means they begin to reason about propositions without referring to everyday circumstances (Hardman, 2013; 2012).

In addition, for the first time, adolescents gain awareness of their ability to think about being thoughtful which is referred to as metacognition. Idealism and possibilities often complement metacognition. This developing ability makes it feasible for adolescents to compare themselves with others (Santrock, 2009).

Furthermore, Elkind (1967) extended Piaget's theory by using two components to describe egocentrism which is the increase in self-consciousness experienced during adolescence. The first is the "imaginary audience", which is the perception adolescents have that others are as captivated by them as they are with themselves. Adolescents think they are constantly being watched or are "on stage" and act in specific ways to get noticed (Santrock, 2009). The second component is the "personal fable" which represents the sense of distinctiveness and indestructibility of adolescents' experience. Adolescents frequently believe that bad things cannot happen to them and that others do not understand them enough (Craig & Dunn, 2013). Due to adolescents' cognitive development, they might engage in health risk behaviors such as having sexual intercourse without any protection (using a condom) or using of drugs without truly realizing the risk associated with such behaviors (de Jager, 2015; Santrock, 2009).

From a cognitive perspective, it is assumed that adolescents are not appropriately able to weigh the risks, advantages, and disadvantages of participating in health risk behavior. Although adolescents are maturing cognitively, some individuals still struggle with social-cognitive immaturity (Galanaki, 2012; Alberts, Elkind, & Ginsberg, 2007). Additionally, an understanding of egocentrism can also explain adolescents' vulnerability to health risk behavior. Elkind (1967) put forward that the personal fable leads to a sense of invulnerability among adolescents with a greater tendency for participation in health risk behavior.

3.3.2 PERSONALITY/IDENTITY DEVELOPMENT

Many researchers describe adolescence as a time of intense emotion and roller-coaster ups and downs, marked with conflict (de Jager, 2015; Crocetti, Scriggano, Sica, & Magrin, 2012; Arnett,

2010). This could be observed when adolescents begin to consider adulthood roles because of their physical and cognitive development. For adolescents to make decisions as regards who they want to be, they have to develop a sense of identity (Shaffer & Kipp, 2013). Various researchers have come to an agreement that the formation of an identity is one of the main psychological tasks during adolescence (de Jager, 2015; Crocetti, Sica, Schwartz, Serafini, & Meeus, 2013; Meeus, van de Schoot, Keijsers, & Branje, 2012; Erikson, 1968).

Furthermore, several researchers have explained personality development during adolescence (de Jager, 2015). For instance, in a study by Erikson (1994), it was identified that adolescents are in a stage of identity versus role misperception (de Jager, 2015). According to Erikson, identity formation involves three major tasks, namely career choice, sexual identity, and the development of beliefs and values (Hardman, 2013). He further explained that adolescents thus investigate, experiment, and inquiry as part of their normal development. He named this period the psychosocial moratorium, where society allows the adolescents to explore and experiment (Erikson, 1994). Additionally, Erikson explains that adolescents can go through a period of identity confusion, where they struggle to integrate various roles in order to reach the ego-synthesis of fidelity (de Jager, 2015; Santrock, 2009; Louw & Louw, 2007; Erikson, 1994).

Marcia (1966) expands more on Erikson's idea of identity development and introduced four statuses of identity development which are identity diffusion, identity moratorium, identity foreclosure and identity achievement (Crocetti et al., 2012). Identity diffusion is characterized by a lack of exploration and a lack of commitment towards an identity. Furthermore, identity moratorium is characterized by exploration with different types of identity without any formal

commitments. Additionally, identity foreclosure is characterized by a formal commitment towards an identity without sufficient exploration. Lastly, the final stage which is identity achievement is characterized by exploration that is followed by a formal commitment. In other words, the adolescent has explored and then made a commitment (Meeus et al., 2012).

The driving force behind adolescents' engagement in health risk behaviors is understood better when focusing on the idea of identity development as described by Erikson (1968) and Marcia (1966). Identity exploration is often associated with an increase in experimentation and engagement in health risk behavior. Adolescents develop a sense of identity through experimentation. In addition, if adolescents were able to develop their sense of identity about their careers, values, and sexual identities successfully, they are more likely to avoid major risky behaviors. Individuals who do not have a fully developed state of identity (diffused state of identity / role confusion) may be more susceptible to association and participation in drug use and other health risk behavior such as alcohol consumption, smoking of cigarette etc (de Jager, 2015; Willoughby, Good, Adachi, Hamza, & Tavernier, 2013).

3.3.3 SOCIAL DEVELOPMENT

In relation to physical, cognitive and personality/identity development, social development is another domain of adolescents' that must be considered. Social development is significant since all other developmental processes occur within individuals while the individuals are participating in social development (de Jager, 2015). Peer groups, parents and neighborhood play a most important role in adolescent development (Geldard, Geldard, & Foo, 2015; Deveaux, Li, Marshall, Chen & Stanton, 2014; Santrock, 2009).

Dispute between adolescents and parents increase as individuals reach a stage of puberty (Shaffer & Kipp, 2013). Dispute between adolescents and parents is considered a normal developmental outcome of a combination of physical changes (hormonal influences), cognitive changes, social changes, and change of family dynamics (Geldard et al., 2015). Adolescents' dispute with parents can be considered constructive, as the negotiation and difference of opinion enable adolescents to move away from being dependent on their parents, towards becoming independent adults (Shaffer & Kipp, 2013). However, it should be noted that the adolescents tend to experience challenges to obtain more independence because their parents exert more control, which may lead to more insubordinate behavior during adolescence (Santrock, 2009).

Relationships with friends or peer groups also influence adolescents' development (Wang et al., 2014; Shaffer & Kipp, 2013; Santrock, 2009). During adolescence, individuals have an intense need for belonging to a peer group (Yap & Baharudin, 2016). In a study by Sullivan (1953), friendship is regarded as significant factors during adolescence. He further asserts in his study that adolescents move towards their friends and place more importance on them, and also claims that adolescents have basic social needs, such as social acceptance, the need for care, a close personal relationship, and sexual relationships. The fulfillment of all these needs has an influence on adolescents' health and well-being (Sullivan, 2013).

Friendships during adolescents become more intimate and directed towards shared psychological attributes such as shared interests, values, and beliefs (Yap & Baharudin, 2016). Adolescents' friendships contribute to their development by protecting them against stressors they experience.

Friendships ensure that adolescents do not experience isolation, increase self-awareness, and promote empathy (de Jager, 2015).

Dating and development of romantic relationship is another significant social development task during adolescence (Collins & Van Dulmen, 2015; Kerpelman, Pittman, Cadely, Tuggle, Harrell-Levy & Adler-Baeder, 2012). Adolescents spend much time with their opposite friends. This strengthens adolescents' sense of independence and increases communication and social skills (Santrock, 2009).

The need for acceptance and belonging can be a trigger for risk-taking behavior during adolescence (Yap & Baharudin, 2016). Adolescents have a strong crave for association and acceptance in a group, which makes them susceptible to peers influence. The rising dispute between parents and adolescents as adolescents strive for independence is another factor that contributes to health risk behavior (Willoughby et al., 2013). The more adolescents and parents disagree, the more adolescents find acceptance with peers. Likewise, the more adolescents associate with deviant peers, the higher the chances of them engaging in health risk behaviors.

The school environment is another factor that influences adolescent's development. The school environment contributes to the adolescent's social development, as this includes their association with friends and their teachers. In addition, within the school environment, the adolescent's perceptions about education are shaped and reformed (Damian, Stoeber, Negru, & Buaban, 2014; Negru & Bkaban, 2009). Schools are very important for academic purposes, as they stimulate adolescent's cognitive and intellectual development. In the school environment, students can also

develop social, psychological, and physical well-being (Govender, Naicker, Meyer-Weitz, Fanner, Naidoo & Penfold, 2013). Positive perceptions about the school environment have been linked with lesser participation of adolescent's in health risk behavior (Klein, Cornell, & Konold, 2012). In a quantitative study by Ashley, Ennis and Owusu-Ansah (2012) it was established that adolescents who experience a sense of connectedness to adults at schools are less likely to use substances, suffer from emotional pain, attempt suicide, and become involved in socially unacceptable and risk behavior.

Furthermore, the community and neighborhood in which adolescents belongs is an important social context that also affects adolescence functioning and development (de Jager, 2015; Yaw Amoateng & Kalule-Sabiti, 2013). In a quantitative study conducted by de Jager (2015) on the influence of community on the development of self, it was revealed that community shaped adolescent's development through shared and common values. In addition, communities also influenced adolescence development by providing a larger social context in which families and family responsibility were rooted (de Jager, 2015; Liechty, 2008). The term "disadvantaged communities" is used for neighborhoods with a high level of social misconduct, poverty, unemployment, and crime (Swahn, Palmier, & Kasirye, 2013). The more resources a community have (for example, leisure activities for children, and good role models), the lower the participation of adolescent's in health risk behaviors in that community (de Jager & Naudé, 2018).

3.4 DEFINING HEALTH RISK BEHAVIOR

Health risk behavior can be defined as any activity engaged in by people with intensity and frequency that increases risk of disease or injury and includes activities undertaken by individuals who are essentially healthy that have an influence upon their health condition (Eaton et al., 2010). Health risk behaviors contribute to the foremost causes of disability and death among adolescents and youths in the world, as well as contributing to social and educational problems (Schwartz et al., 2010; Centers for Disease Control and Prevention, 2009). In addition, health risk behavior can have undesirable consequences for the overall development and well-being of an individual or might hinder individuals from attaining successes and optimal development (de Jager & Naude, 2018). Likewise, health risk behavior includes behavior that will cause instant physical injury (e.g. fighting) and behavior with long-term or indirect adverse effects (e.g., substance use, alcohol drinking, and smoking) (De Guzman & Pohlmeier, 2014).

On the other hand, Malesza and Ostaszewski (2016) define adolescent health risk behavior as behavior that has potentially adverse effect on health but that is performed because of perceived rewards. When the positive outcomes are more than the possible negative outcomes, the behavior is not considered risky. However, if the possible negative results are far more than the positive results, the behavior can be considered dangerous or risky (Reniers, Murphy, Lin, Bartolomé, & Wood, 2016; Gullone, Moore, Moss, & Boyd, 2000).

3.5 ADOLESCENT HEALTH RISK BEHAVIORS IN NIGERIA

Health risk behavior is common and widespread during adolescence. According to Gardner and Steinberg (2012), adolescence is a stage in life that is characterized by adolescents' participation

in reckless, sensation seeking, and health risk behavior. In addition, adolescent's engagement in health risk behavior can disrupt their normal development or prevent them from participation in usual activities for their age group. For example, pregnancy during early adolescence stage can prevent adolescents from experiencing usual adolescent events, such as gaining admission into the college or developing a close relationship with peers (De Guzman & Pohlmeier, 2014).

The Centers for Disease Control and Prevention (CDC) address some pressing issues about health risk behaviors among adolescents and youths. Research conducted by the (Brener, Kann, Shanklin, Eaton, Hawkins & Flint 2013) shows significant additions to the leading causes of disability and death among adolescents, youth and adults. These behaviors usually start during childhood and are more avoidable (Brener et al., 2013). Furthermore, several types of health risk behaviors have been of particular interest to occupational therapist and researchers and have been studied extensively due to their high prevalence during adolescence and negative effect on society (De Guzman & Pohlmeier, 2014).

There are no universally accepted categories for health risk behavior although various researchers have attempted to structure or categorize the various types of health risk behavior. Lavery, Siegel, Cousins and Rubovits (1993) group 23 types of health risk behaviors into five categories, namely criminal (e.g., theft, driving after drinking, vandalism), vehicle (e.g., driving with strangers, driving or riding without seatbelt, riding with a drunk driver), health (e.g., having unprotected sex, bingeing/purging, crash dieting), status (e.g., fights with peers, running away from home, cutting school, cheating during text or exam), and drug use (e.g., drinking alcohol, smoking marijuana. Taking cocaine/crack, getting drunk, cigarettes smoking) (de Jager, 2015).

In the Youth Risk Behavior Survey, six categories of risk-taking behavior are considered: (1) behavior that contributes to unintentional injuries and violence, (2) tobacco use, (3) alcohol and other drug use, (4) sexual behavior that contributes to unintended pregnancy and sexually transmitted diseases, (5) unhealthy dietary behavior, (6) physical inactivity, including obesity and asthma (Centers for Disease Control and Prevention, 2014; Coleman, Wileyto, Lenhart, & Patterson, 2014).

Health risk behaviors in Nigeria are increasingly recognized as a serious, national public health concern (Isaiah & Ola, 2016). However, there is very little up to date pragmatic information available on adolescent and youth health risk behaviors in Nigeria. There are sparse records on health risk behaviors among adolescents in Africa, the existing records report a generally higher prevalence and various patterns of adolescent health risk-behaviors in sub-Sahara Africa (Nigeria inclusive) and a higher prevalence in urban than rural areas (WHO, 2014; Idache, 2008; Ezedum, 2004).

A Youth Risk Behavior Surveillance conducted in the United States by the Center for Disease and Prevention, (2015) among students in grade 9 to 12 revealed a negative association between health risk behaviors and academic performance among high schools students after controlling for race/ethnicity, sex, and grade level. It was also reported by the CDC that in the Philippines, four out of ten importance causes of death among adolescents from age 10 to 24 years and youth were attributed to health risk behaviors (Peltzer & Pengpid, 2015). In addition, some investigation has been done in Africa including Nigeria indicating that adult behavioral patterns such as smoking, drinking, and premarital sexual activities started at high school level, and

constituted major health risk behavior problems for high school students (Isaiah & Ola, 2016). Furthermore, Ezeokoli and Ofole, (2015) reported that knowledge, attitude, refusal skills, assertive skills, anxiousness reduction, self-dominance, cigarette use intention, and normative beliefs form the patterns of introduction into cigarette smoking in high schools in Nigeria.

3.6 TYPES OF HEALTH RISK BEHAVIOR

3.6.1 BEHAVIOR RELATED TO UNINTENTIONAL OR INTENTIONAL INJURIES

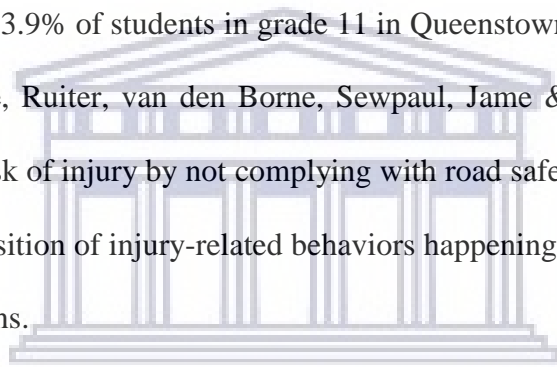
Unintentional or accidental and intentional injuries have been experienced by adolescents around the globe as a result of various factors or elements that place them at risk. Some of the risk behaviors include suicide, physical fight or violence, bullying, and traffic-related activities. Conventionally schools have been considered as secure environment or safe place that are able to provide education, learning, socializing and engaging environments that are capable of producing obedient, well-mannered and disciplined future inhabitants of a country (Dewey, 2013). On the other hand, in the past years, there are has been an increase in health risk behavior participation on school premises or on the way from or to school (Sunitha & Gururaj, 2014). Additionally, bullying has also been identified as the most frequent form of violent behavior that takes place among students in school (Kodžopeljić, Smederevac, Mitrović, Dinić, & Čolović, 2014).

Bullying can be defined as a demonstration of strength relations, in which the more powerful individual shows aggressive behavior towards the less powerful. Salgado, Senra and Lourenço, (2014, p.190) described bullying as “a form of interpersonal power affirmation by means of aggression.” Nevertheless, in Turkey, the proportion of bullies was far less than that of victims.

In a quantitative study that was conducted in Istanbul, Turkey on bullying behavior among 3519 students, it was revealed that 22% of the students were victims, whereas 9.2% were bullied (Özyil, 2016). Bullying or harassment is a behavior that may be indicative or symptomatic of poor interpersonal relationship abilities and skills. Furthermore, bullying has also been associated with other forms of health risk behaviors among adolescents'. In another quantitative study by Butchart and Mikton, (2014) on adolescents violence prevention, it was highlighted that substance use, sexual activity, physical fighting and not adhering to road safety directives were more predominant among bullies.

Another injury associated health risk behavior that was studied was adolescent engagement in a physical fight. In a quantitative research study conducted in Namibia on the prevalence of physical fighting and associated factors among 6,283 students, it was revealed that 50.6% of the students had been involved in physical fights, and substance abuse was positively associated with students engagement in fighting (Rudatsikira, Siziya, Kazembe, & Muula, 2007). Additionally, Namibia had the highest incidence rate in physical fighting and the co-occurrence of physical fighting and substance abuse was also found among United States high school learners. In a quantitative study conducted in the United States among 1,556 high school students on adolescents substance use and fighting, it was reported that 34% of the students had get involved in physical fighting on school premises and also revealed that 25% had engaged in the drinking of alcohol, 39% had used marijuana in their lifetime, 13% had participated in damaging school properties intentionally and also 13% had weapons during fight on school premises (Noffsinger, Clement-Nolle, Bacon, Lee, Albers & Yang, 2012, p.109).

In a survey among students from six sites in South Africa which are Cape Town, Durban, Port Elizabeth, Mankweng, Queenstown and Umtata, it was reported that students in Cape Town engaged in road-related health risk behaviors more than students from other locations. It was further revealed that 52.8% of 1,449 grade 11 students in Cape Town have travelled without using a seat belt, students who have travelled with a driver under the influence of alcohol was 27%, and 18.9% had ridden without wearing a motorbike helmet. Furthermore, it was also established in the study that 33.0% of grade 8 students in Mankweng had bullied other students, and 18.6% of grade 9 students in Port Elizabeth has attempted suicide. In addition, with regard to violence-related behavior, 13.9% of students in grade 11 in Queenstown had carried a knife to be used as weapon (Shilubane, Ruiters, van den Borne, Sewpaul, Jame & Reddy, 2013). Students expose themselves to the risk of injury by not complying with road safety measures. Shilubane et al., (2013) noted a predisposition of injury-related behaviors happening in the urban metropolises more than in the rural regions.



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In a study in Hong Kong which examined the prevalence and psychosocial correlates of adolescent deliberate self-harm (DSH) and suicidal behavior among 3,328 high school students, 13.7% of the students had suicide thoughts, 4.9% had devised specific suicide plans while 4.7% had actually attempted suicide (Shek & Yu, 2012). Furthermore, in Guangzhou, a city in China, in a study of 5,988 high school students, it was reported that the suicide attempt incidence rate among these students was 3.3% (Wang, Deng, Wang, Wang, & Xu, 2009). It could be inferred that the prevalence of attempts of suicide and sad feelings among Chinese high students was low. Similar research was derived from a study conducted in the United States, where it was reported also that 6.8% of the high school students had made an effort to commit suicide (Centers for

Disease Control and Prevention, 2010). Additionally, South Africa had the highest incidence of attempted suicide (17.3%) among high school students (Shilubane et al., 2013). The community and public mental health workers in Nigeria had expressed a great worry about the apparent upsurge in the rate at which high school students are attempting suicide. This was despite the few data to authenticate or discredit this rise in the rate of suicide attempt by the students. The closeness of Nigeria to South Africa could see adolescents and youths from the two countries engaging in identical or related health risk behaviors, therefore allowing the sharing of knowledge and ideas on school-based intervention programs. On the other hand, without data on these health risk behaviors from Nigeria, partnership is less likely. Consequently, this present study aims to provide baseline information on the incidence or occurrence of adolescences health risk behaviors.

3.6.2 VIOLENCE-RELATED BEHAVIOR

Definitions of violence found in several kinds of literature varied. Frequently, the terms violence and aggression are used interchangeably. Aggression is a comprehensive term that includes firm, hostile, invasive, or confronting behavior and violence are regarded as a subgroup of aggression (Mathews & Benvenuti, 2014). Violence can be defined as “the intentional or deliberate use of physical power or force, threatened, against oneself, another person, a group, or community that either result in or has a high possibility of resulting in injury, death, psychological harm, disability or deprivation” (de Jager, 2015, p.18). Violence includes a wide range of behavior which includes child abuse, gang-related fights, criminal behavior, spouse battering, sexual assault, suicide, and terrorism (Fraser, 1996).

Violence has been considered second to vehicle accidents as the primary cause of disability and death among people between the ages of 15 to 34 years (De Guzman & Pohlmeier, 2014). In a research conducted in the United States by the Centers for Disease Control and Prevention (CDC) (2013) revealed that 8.1% of high school students have been involved in physical fights in a twelve-month period, with fighting showing a higher incidence among males than among females. Furthermore, 10.3% of the students have been hit and injured with an object or weapons on purpose by someone they were courting.

Various factors can lead to violent-related behavior during adolescence. Individual factors that have been found to correlate with violence are poor academic performance, impulsivity, and hyperactivity (Kim, Gilman, Hill, & Hawkins, 2016; Massetti, Vivolo, Brookmeyer, DeGue, Holland, Holt & Matjasko, 2011). In addition, the early onset of violence and aggression during childhood is often a predictor of violence-related behavior during adolescence. Adolescents with little guilt or remorse, a history of substance use, and attitudes supporting drug abuse and violence are more likely than the general population to become violent (Van der Merwe, Dawes, & Ward, 2012). According to Massetti et al., (2011), adolescents who affiliate with deviant peers and gang members are more likely to engage in violent-related behavior themselves.

Furthermore, the family that the adolescents belong to also plays a role in their violent-related behavior. Family conflict, violent and aggressive parents, and harsh or inconsistent parenting (including severe punishment) can be predictors of violent-related behavior during adolescence (Van der Merwe et al., 2012; Massetti et al., 2011). Previous victimization by adults, emotional abuse, poor limit condition, and parental monitoring has also been identified in the etiology of

violence (Masseti et al., 2011). On a community level, risk factors for violent behavior during adolescence include community violence, poverty, and availability of drugs, alcohol and firearms, as well as high crime rates in the community (de Jager, 2015; Van der Merwe et al., 2012).

According to McAra and McVie (2010), there is a gender difference in engagement in violent-related behaviors. Males and females engage in violence-related behaviors for several reasons. In a study conducted by McAra and McVie (2010) in Edinburgh, United Kingdom showed that females who were sexually active at a very tender age were more likely to be violent. Additionally, family turbulence and deprivation at the familial level significantly contributed to violent-related behavior by females. In males, violence was connected to aspects of risk such as impulsivity, association with violent peers, poor parental monitoring, and previous victimization by adults (de Jager, 2015; McAra & McVie, 2010).

Violent-related behavior among adolescents can also be explained by examining the theory of learned behavior, which provides another explanation for the causes of violent-related behavior. Behavior can be learned through direct experience, imitation, observation, or practice. Adolescents who see their friends, parents or other individuals in their environment engaging in violence-related behaviors are more likely to emulate their behavior or use violence as a coping mechanism (de Jager, 2015; Herrenkohl et al., 2000).

3.6.3 SUBSTANCE-RELATED BEHAVIOR

Substance-related behavior (including cigarettes smoking, alcohol consumption, and other drugs) is defined as the consumption of psychoactive substances. The use of substances in restrained quantities that does not extensively impede with social, educational, or occupational functioning could be regarded as normal and is usually not regarded as health risk behavior (Sadock & Sadock, 2011). Examples of normal substance use include taking a cup of coffee in the morning before work, smoking a cigarette, and enjoying a drink with a friend. Substance use also includes the irregular and restrained intake of illegal drugs like cocaine/crack, codeine, amphetamines, or barbiturates (Barlow & Durand, 2009).

Participation in behaviors related to unintentional or intentional injury has been established to co-occur with other health risk behaviors such as drinking of alcohol, substance use and having unprotected sexual intercourse (de Jager & Naudé, 2018, Ramafikeng, 2010). In a study in Hong Kong, China, the prevalence of alcohol consumption among high school students is 58.1% as compared to high school students who had sniffed glue (Lau & Kan, 2010, p.354). The trend in the United States was similar, with 75% of high school students having consumed alcohol before and 4.4% having used leisure drugs and marijuana (Centers for Disease Control and Prevention, 2013). Additionally, South Africa was also not left out with alcohol consumption among high school students leading the substance use data. The first Youth Health Risk Behaviors Survey (YHRB) in South Africa in 2002 reported that 49% of high school students had consumed alcohol in their lifetime compared to heroin which was (12%) and use of inhalants was 11% (Reddy, Panday, Swart, Jinabhai, Amosun & Jame, 2003). It was noted that drinking of alcohol among high school students seemed to be a major challenge in South Africa, and this was also

the situation in Nigeria despite the presence of few studies on substance-related behaviors among adolescents.

According to the Youth Risk Behavior Survey (Centers for Disease Control and Prevention, 2013), 41.1% of students in the US have tried cigarette smoking. Among the students who smoke cigarettes, 8.6% smoke more than ten cigarettes per day, with smoking among males being more prevalent than among females (Centers for Disease Control and Prevention, 2013). In the US, 66.2% of students have had at least one drink of alcohol during their life, and 18.6% of these learners had drunk alcohol for the first time before the age of 13 years. A significant amount of 6.1% of students also drank more than ten drinks in a couple of hours in a 30-day period, with the prevalence higher among males than among females. Use of marijuana is also common, as 24.4% of students reported the use of marijuana during a 30-day period (Centers for Disease Control and Prevention, 2013). Various international statistics indicate that males reported higher levels of substance use than females did (Johnston, O'Malley, Bachman, & Schulenberg, 2010; National Institute on Drug Abuse, 2010).

Smoking of cigarettes and marijuana use was reported by high school students who participated in the Youth Health Risk Behavior Survey conducted in South Africa (Reddy et al., 2010). From the South Africa Youth Health Risk Behavior Survey, it was reported that 13% of the high school students had used marijuana and 31% of the students had smoked cigarettes (Reddy et al., 2010). It was also reported that 56% of the students are exposed to second-hand smoke and the highest rate of the exposure was from legal guardians or parents. Furthermore, second-hand smoking can expose non-smokers to risks associated with inhalation from the first smokers and

can probably increase the probability of the non-smoker sooner or later either become smoker or take up smoking. Additionally, in a research conducted by Moraope (2014) in South Africa, it was reported that the prevalence of drinking of alcohol among female high school students was (24%) and (15%) had smoked cigarettes. This report shows that adolescent and youth are susceptible to or prone to health risk behaviors irrespective of their gender.

In a quantitative study by Famuyiwa, Aina and Bankole-Oki, (2011, p. 351-359) on the epidemiology of psychoactive drug use amongst adolescents in Lagos State, Nigeria, it was reported that there is a high rate of use of psychoactive substances amongst high school students. For all the psychoactive substance studied, the lifetime incidence of use of any of these psychoactive substances of 61.8% and the use in the past year of 32.1% were high among these students and should stimulate purposive actions of public and community health workers committed to adolescence and youth welfare in Nigeria. In addition, a high lifetime rate of use was also found for common stimulates such as coffee, kola nut (a fruit from a kola tree), and prescription drugs (barbiturate and minor tranquilizers). The rate of use of banned addictive substances such as cannabis, cocaine, and heroin ranged between 4.0% and 4.8%. This in addition supports the view and opinion of co-occurrence of health risk behaviors; hence the call for adolescent health risk behavior surveys that take into account the likelihood of co-existence of health risk behaviors.

There are some factors which make adolescents more vulnerable to substance use, this include stressful life event, genetic predispositions, socio-economic status, and peers (National Institute on Drug Abuse, 2014; Van Ryzin, Fosco, & Dishion, 2012; Nash, McQueen, & Bray, 2005;

Shane, Diamond, Lynn Mensinger, Shera, & Wintersteen, 2006). Adolescents with a history of physical assaults or sexual abuse are more prone to substance use disorders (Shane et al., 2006). In addition, prenatal experience with alcohol consumption, smoking and other drugs, absence of parental supervision or monitoring and relationship with friends using substance can contribute to adolescents engagement in substance use (Lipari, Palen, Ashley, Penne, Kan & Pemberton, 2017); de Jager, 2015; Van Ryzin, Fosco & Dishion, 2012). Likewise, peer acceptance also contributes to substance use. Adolescents may be more prone to substance use if they perceive from their peers or parents that it is normal and acceptable to use substances (U.S. Department of Health and Human Services, 2013). Other reasons why adolescents engage in substance use are to cope with their emotional pain, to feel better, and as part of normal experimentation (National Institute on Drug Abuse, 2014).

Social media is another factor that encourages adolescents' participation in substance use, as the media often portrays substance use as a normal activity and thus promotes it in adolescents (de Jager, 2015). Other contributing factors include personal beliefs about substances, lower social economic status, lack of parental support, accessibility and availability of substances, low self-esteem, and low levels of academic performance (de Jager, 2015; U.S. Department of Health and Human Services, 2013).

3.6.4 SEXUAL BEHAVIOR

Risky sexual behavior is described as the participation in sexual intercourse at a very tender age, inconsistent use of contraceptives, or engaging in sexual intercourse with multiple partners with no adequate self-protection (using a condom) (de Jager, 2015). These types of sexual behavior

can be regarded as risky behavior as they pose various health and mental threats to the individual engaging in such behaviors. Some of these health threats include unwanted pregnancy, financial strains due to having a baby at a very tender age, contacting a sexually transmitted disease, and developing socio-emotional problems (de Jager & Naude, 2018).

In a quantitative study in Eastern Cape Province of South Africa by Tugli and Morwe (2013) on sexual risk behaviors among rural high school students, it was reported that 70% of the high school students were sexually active within 3 months prior to the survey and 41% of the students have had sex in their lifetime. In another research study among female adolescents in Swaziland on sexual communication and sexual risk behavior among female high school students, it was reported that 27% of 801 girls are current sexually active (Shongwe, 2013).

Furthermore, in a quantitative study conducted by Omotowo et al., (2017) among high school students in Enugu, South-East of Nigeria, it was revealed from the study that 16.4% of the high school students have had sex in the past. This result was slightly lower than the findings in research conducted also in Nigeria (Ugoji, 2014) and in Ethiopia (Tekletsadik, Shaweno, & Daka, 2014) where it was also reported that the prevalence are 22.9% and 18.3% respectively. In addition to the study, the prevalence of high school students who had sexual intercourse using condom is 31.6% which is lower as compared to the study conducted in Ethiopia (51.4%). It was noted also that the difference in the sexual behaviors among these countries could be due to the fact that the study was conducted among female high school students unlike the study in Nigeria that involved both the male and female high school students.

Factors that contribute to risky sexual behavior are substance use, history of sexual/or physical abuse, poor parental control, lower education, and poverty. Substance use is a strong predictor of engagement in unsafe sexual behavior. Adolescents who abuse drugs are more likely to find themselves in situations where they may engage in unsafe or risky sexual behavior and become victims of sexual crimes (Hall, Holmqvist, & Sherry, 2013). Witnessing domestic violence or being raised in a home where adolescents continuously experience violence increases their risk to engage in sexual risk behavior about threefold (Cole, 2012).

According to Rutter, Weatherill, Krill, Orazem and Taft (2013) a history of sexual abuse or assault is another risk factor for engagement of adolescents in sexual risk behavior and substance use. Furthermore, peer pressure and the way in which the media portrays sex increase adolescents' vulnerability towards unsafe sexual behavior (de Jager & Naude, 2018).

From a developmental perspective, adolescents' rapid physical development, including the development of sex characteristics and secretion of sex hormones, together with increased interest in the opposite sex, leads to the exploration of identities and relationships (de Jager, 2015). Downing and Bellis (2009) indicate that early physical maturation is associated frequently with early sexual activity and unplanned pregnancies among adolescents.

3.6.5 OTHER HEALTH RISK BEHAVIOR

The other categories of health risk behavior include behavior that contributes to unhealthy behavior and physical inactivity (Centers for Disease Control and Prevention, 2013). Unhealthy dietary behavior refers to behavior related to an unhealthy diet or food consumption (de Jager &

Naude, 2018). A healthy diet provides sufficient levels of all the six classes of food which includes vitamins, minerals, proteins, carbohydrates, and healthy fats (Renee, 2014). Physical inactivity refers to not participating in regular exercise. Regular physical activity in an early stage of development (childhood) and adolescence improves strength and stamina, aids in forming healthy bones and muscle fibers. Physical activity also helps reduce anxiety and stress, control weight, increases self-confidence and may improve blood pressure and cholesterol levels (Reddy et al., 2010).

The Centers for Disease Control and Prevention, (2010) report that, in the 2010 Youth Risk Behavior Survey in the United States, 13.7% of students do not eat breakfast regularly, 6.6% of students do not eat vegetables regularly, and 5% of students do not eat fruit regularly (De Guzman & Pohlmeier, 2014). Furthermore, in the 2013 Youth Risk Behavior Survey of the United States, it was found that only 27.1% of high school learners engaged in 60 minutes of exercise daily and that 15.2% of students do not participate in any physical activity (Centers for Disease Control and Prevention, 2013). A recommendation is that adolescents should take part in at least 60 minutes of physical exercise or activity daily.

Some factors are considered risk factors for the above-mentioned risk-taking behaviors. The family environment and parents' attitudes towards safety and health are important contributors to adolescent dietary behavior and use of safety precautions. Peer influence can be considered important determinants in adolescents selecting and eating acceptable food (Salvy & Bowker, 2014)). In addition, the media also influence eating habits, as they often portray a thin image as the norm, leading to body dissatisfaction and eating disorders in women. Concern about body

image and the sociocultural and economic context will also affect dietary behavior and exercise (Mallick, Ray, & Mukhopadhyay, 2014).

3.6.6 SOCIAL FACTORS INFLUENCING ADOLESCENTS ENGAGEMENT IN HEALTH RISK BEHAVIOR

Environmental/social theories emphasize the influence of environment, parents, teachers, peers, culture, and community on health risk behaviors during adolescence, which is hypothesized as a period of growing independence and emergent of individuation from the family (Michael & Ben-Zur, 2007). During the adolescence period, adolescents experience and go through changes in status and roles that redefine their place in the community, and may lead to disputes, disagreement, and confrontations with parents and teachers (Michael & Ben-Zur, 2007). However, good parenting and monitoring which includes regular involvement in their daily activities, frequent communication, monitoring related skills, and imparting appropriate coping skills may assist adolescents in avoiding engagement in health risk behaviors such as drinking, sexual behavior, and smoking (Michael & Ben-Zur, 2007). These will enable them to deal with anger, frustration, and applying other self-management strategies. Additionally, the perceived significance of the parents is related to lower levels of vulnerability to antisocial peer pressure, and thus to lessen adolescents' participation in health risk behaviors (Michael & Ben-Zur, 2007).

Furthermore, the relationship with peer groups in parallel to the relationship with parents' functions both as a source of inducement, endangerment, and social support. Peer pressure by the social group tends to foster or encourage adolescent engagement in dangerous acts, with socialization in the peer group leading to engagement in health risk behaviors such as violent-

related behavior, marijuana smoking, taking illicit drugs (Jessor, Donovan & Costa, 2017; Michael & Ben-Zur, 2007). The adolescent becomes engaging in health risk behaviors because such an individual seeks to get involved in experiences that appear relevant to the group identity and to attain accomplishments that established a self-identity within the social group (Lightfoot, 2013; Michael & Ben-Zur, 2007). Certainly, perceived susceptibility to peer pressure, along with having friends who drinks alcoholic beverages, have been found to be the most two consistent predictors of substance use among adolescents (Jacob, Goodson, Barry, McLeroy, McKyer & Valente, 2017; Michael & Ben-Zur, 2007).

3.7 LEISURE

One of the fundamental beliefs of occupational therapy is that it is healthy to strike a balance between work, leisure and self-care activities in daily life. This poses the question of what exactly is a healthy balance, and how does this vary from individual to individual? In order to answer these questions, occupational therapists and other health professionals need to think through not only what people do, but why people engage in activities, the nature of this activities participation, and how occupational behavior occurs (Wegner, 2011). Most of the research being conducted in the occupational therapy profession is now looking at issues such as these.

The study of leisure is validated through the perception that individual participation in leisure occupations or activities promote greater healthy life, well-being and life satisfaction. Leisure is understood and interpreted primarily as a positive influence that improves the lives of individuals and the public as a whole (Medruct, 2015). Well-being and life satisfaction are generally conceptualized and assessed in terms of satisfaction, morale, happiness, self-esteem, mental and

physical health, and quality of life. Although there seems to be no consensual definition of leisure in the research literature, one of the following elements are commonly included in the definition of leisure; leisure as time, leisure as an activity, leisure as a quality of action or experience and leisure as a state of mind (Wegner, 2011). Thus leisure is operationalized objectively as an external behavior that can be defined and measured according to the individual's internal psychological state.

A general methodology in early research was to regard leisure as the discretionary or unobligated time which remained after subsistence, maintenance, rest and other fundamentals of life were subtracted (McLean & Hurd, 2011). However, there are difficulties with defining leisure as “time left over”, including the de-standardization of work hours, the blurring of boundaries between work and leisure, distinguishing between maintenance and leisure, the large quantities of unobligated time experienced by the unemployed individuals (Stebbins, 2017).

3.8 DEFINING LEISURE

Leisure is a multifaceted construct, which is influenced by factors such as society, culture, gender and the environment. Therefore, in order to understand leisure, one should examine the construct from different perspectives. In the section below, leisure will be define in relation with; (1) time, (2) activity, and (3) subjective meaning (experience or state of mind).

3.8.1 LEISURE AS TIME

Adesoye and Ajibua (2015) in their explorative study describe leisure as the period of time often referred to as the “free time” before or after individual compulsory activities such as house

chores, school activities, everyday stress, running a business, remunerated work or chore are undertaken. In the same vein, Stebbins (2017) defined leisure as a block of free time; a time when an individual is free from the necessities and obligation of life. Adesoye and Ajibua (2015) in their literature upheld that leisure means individual's choice to spend his or her discretionary time carrying out a certain interest or needs or performing satisfying activities and experiences for the sake of wellbeing and personal development.

It is essential to differentiate between leisure and free time, as often, these concepts are used interchangeably. The concepts are related, yet are quite different from one another. Free time occupies a wider domain than leisure, and it is described as the time that is free of mandatory activities or occupations (Adesoye & Ajibua, 2015). Free time is that time when the individual e.g. the adolescent is not engaged in a home chore, schoolwork, remunerated activities of occupations. Leisure is been nested with the domain of free time. Therefore, leisure activities usually take place within the domain of free time. Therefore leisure can be described as the intentional and purposeful use of free time to participate or engage in enjoyable, meaningful activities.

Adesoye and Ajibua (2015) in their explorative study on the concept of leisure and its impact on the quality of life divide time into three segments which are referred to as the three parts of life;

- Existence: the activities an individual must engage biologically to stay alive;
- Subsistence: the activities an individual must engage in to make a livelihood (through work) or to prepare to make a living (through school); and
- Discretionary time: the time that may be used according to individuals' own judgment.

Relative to most working adolescents, youths and adults generally have more free time available for leisure, although this varies depending on the socio-cultural context. According to a study in the United State, approximately 50% of adolescents' waking hours are available for discretionary free time pursuits, with European adolescents having similar or slightly less free time; compare with East Asian adolescents who devote most of their free time to schoolwork or assignment leaving approximately 25% of their waking hours for free time (Zuzanek, 2016).

The environment and social control mechanism influence the utilization of free time and leisure participation. Boys often have more free time than girls, as girls spend most of their free time in mandatory activities such as cleaning the house, cooking and caring for their younger siblings (Wegner & Flisher, 2009), spending more time at school and doing homework (Caldwell & Faulk, 2013; Shaw, Caldwell, & Kleiber, 1996), and performing unpaid work (Kaufman, Clark, Manzini, & May, 2002). This implies that female adolescents have less free time available for leisure activities than male adolescents and fewer opportunities to hang out with their colleagues.

Furthermore, a study on adolescent risk behavior and leisure boredom by Wegner and Flisher (2009) reports that many South African schools particularly those situated in economically deprived communities do not offer structured after-school programs and extra-curricular activities. This implies that many adolescents have large amounts of unstructured free time with very little to do during the afternoons and over weekends. This further explains how many young people became involved in gangs as a means of creating excitement for themselves due to the lack if worthwhile and entertaining things to do in the community.

3.8.2 LEISURE AS ACTIVITY

Adesoye and Ajibua (2015) cited that individual utilizes their time to engages in some activities or perform various types of activities. The author revealed the four different types of activities that people can engage in, this includes;

- Family Obligation;
- Remuneration obligation;
- Activities that are oriented toward individual self-expression and self-fulfillment; and
- Social-spiritual obligation.

The third category which is the activity that is oriented toward individual self-expression and self-fulfillment is referred to as leisure. Leisure is any activity that is chosen at will and pursued for its own interest and purpose, that is, the intrinsic motivation dimension (Adesoye & Ajibua, 2015). Leisure is an activity aside from the duty of the family, work and society to which the individual turns at will for relaxation, refreshment, diversion or to broadening his or her knowledge, the free use for his or her creative capability and spontaneous social participation. Research in the developed countries found that favorite adolescent leisure activities included watching television, sports, socializing with friends, and physical activities, hobbies, and cultural activities (Freire, 2013). South African youths enjoy social interaction and conversation, watching television, listening to the radio and to music, and sporting activities (Wegner, Flisher, Caldwell, Vergnani, & Smith, 2007; Reddy et al., 2010).

3.8.3 LEISURE AS SUBJECTIVE MEANING “EXPERIENCE OR STATE OF MIND”

In complementary to the perception of leisure as activity, Adesoye and Ajibua (2015) further make clear that leisure is not always viewed as time and activity, but also as a state of mind that

is achieved through individual outward expression. In addition, leisure is an attitude of the mind and the condition of the soul (Torkildsen, 2012). Furthermore, common characteristics that define leisure in terms of the meaning of the experience are that leisure activities are subjectively experienced by the individual as being freely chosen for relaxation, enjoyment, and pleasure, and are free from external constraints, have low work-relation, and are intrinsically motivating (Wegner & Flisher, 2009). Likewise, leisure as subjective meaning is an approach of keeping the mind busy, and consequently, distracting individual or diverting the mind from distressing thoughts that may be triggered by stressful life conditions.

3.9 LEISURE AS A CONTEXT FOR ADOLESCENT DEVELOPMENT

Leisure is a powerful context wherein adolescent development may occur because of its unique elements as compared to other contexts in an adolescent's life e.g., school or school (Caldwell & Faulk, 2013). Larson and Verma (1999) observed that:

“Each activity context is associated with a unique matrix of socialization experiences, positive and negative, and the amount of time a population of children spends in that activity provides uneven index of the amount of exposure to, involvement with, and absorption of those experiences” (p. 702).

As a context of relative freedom, reduction in direct parental control, and increase in the importance of and access to peers, leisure also affords opportunities to participate in health risk behaviors such as alcohol drinking, smoking of cigarette, sexual behaviors, violence-related behaviors and substance use (Caldwell & Faulk, 2013).

Viewing leisure from an adolescent developmental perspective, positive leisure is likely to immensely contribute to adolescent identity and independence development, academic achievement, and development of competence and initiative (Forgeard & Benson, 2019; Arnold, 2017; Barber, Abbott, Neira, & Eccles, 2014). In addition, leisure is also a context to promote adolescents' physical, cognitive, emotional, social, quality of life, spiritual health and well-being (Caldwell & Faulk, 2013).

3.10 LEISURE OUTCOME AND ADOLESCENT DEVELOPEMNT

In a number of research studies with adolescents and youth from developed countries such the United States, UK, and Canada, the adolescent's engagement in extracurricular activities has been associated to positive developmental outcomes such as self-esteem, school participation, good academic performance, school retention, global measures of positive adjustment, and better mental health during young adulthood (Martinez, Coker, McMahon, Cohen, & Thapa, 2016; Mahoney, 2014; Camacho & Fuligni, 2015; Caldwell & Faulk, 2013). Furthermore, consistent adolescent engagement in leisure may also have a protective effect for outcomes such as school dropout, unlawful or delinquent activity, or depressed mood (Mahoney, 2014; Wood, Kiperman, Esch, Leroux, & Truscott, 2017). In contrast to this, adolescent engagement in some types of leisure activities has also been related to a higher rate of alcohol consumption, smoking and other forms of antisocial activity (Walters, 2018; Martinez et al., 2016).

Development in the direction of more fully understanding leisure contexts begins with primary descriptive investigations of time use (Roth & Brooks-Gunn, 2016). Most broadly, this method has examined what adolescents do in their optional or open time and whether different kinds of

activities have a differential influence on development. In a research conducted by Martinez et al., (2016) on adolescents involvement in extracurricular activities, it was established that some developmental outcomes differed depending on whether the adolescents' engaged in pro-social activities, academic clubs, sports activities, school participatory activities or performing art. However, adolescents who get involved in any activity showed better than expected educational outcomes, only participation in pro-social activities was related to lowered rates of alcohol consumption, cigarette smoking, and substance use.

3.11 BOREDOM

Boredom has been hypothesized as a state of lack of momentum, motivation, arousal or lack of psychological engagement associated with dissatisfaction in the task situation (Akgul, 2015). Iso-Ahola and Weissinger (1990) described leisure boredom as “a state of mind or negative mood that reflects an incongruity between optimal experiences that are perceptually available to an individual” (p.4). The feelings of leisure boredom can be created by multiple constraints and meaningless leisure. In other word, lack of recreational skills combined with restricted leisure opportunities is likely to cause feeling of boredom in leisure (Wegner, 2011). Furthermore, boredom is defined as a form of anxiety about the absence of meaning or loss of purpose in a circumstances or activity, accompanied by feelings of restlessness, dissatisfaction, displeasure, irritability, and stress about the absence of interest, and a sense of setup (Wegner, 2011). Views of leisure as boredom are related to negative or undesirable effects, and can be manifested as belief that the available leisure or recreational experiences are not adequately frequent, thrilling, involving, varied or novel (Iso-Ahola & Wessinger, 1990). Furthermore, lack of leisure skills combined with restricted leisure opportunities were likely to cause feelings of boredom in leisure

that may result in delinquency and drug use in free time (Weybright, Caldwell, Ram, Smith, & Wegner, 2015). A study conducted by Caldwell and Faulk (2013) in the United States on adolescent leisure from a developmental perspective confirmed that leisure boredom frequently occurs among youth. The authors further reported that those adolescents who experienced more positive experiences in structured activities, such as sports and hobbies, were less bored than when watching television or engaging in other unstructured activities.

3.12 CAUSES OF BOREDOM

Because of the adverse effect of boredom on learning, researchers tuned their attention to factors that contribute to the experience of boredom. Pekrun and Linnenbrink-Garcia, (2014) divide potential antecedents of boredom into three broad categories: the person (e.g., low control/value, boredom proneness, etc.), the environment (e.g., isolation, monotony, repetition etc.) and the environment/person fit (e.g., too high/too low difficulty, etc.). We stand to Pekrun, Hall, Goetz, and Perry (2014) control value theory of emotion that suggests that boredom occurs when adolescents or older adults experience a lack of control that is either far beyond or below their abilities and they do not perceive value in their academic tasks (Mega, Ronconi, & De Beni, 2014; Pekrun et al., 2014). Thus charting onto the categories identified by Goetz and Bieg, (2016), these control and value considerations are based on adolescents' assessments of the environment and their personality factors. For an illustration, when paired with low value of the content, high school students who perceive paying attention to educational lectures as very low control will likely experience boredom in that class. This would be even more likely for the adolescents high on boredom proneness, a personality factor that inclines an individual to

consider a situation as boring (Fahlman, Mercer-Lynn, Flora, & Eastwood, 2013; Mann & Robinson, 2009).

Ragheb and Merydith (2001) developed the Precursors to Boredom Scales (PBS) in order to determine a couple of causes of boredom in school environment. Building and leveraging on different research addressing potential past records to boredom, (Ragheb & Merydith, 2001) mentioned from different studies eight discrete factors that make contributions to boredom: being bored by an unchanging routine, being under challenged, being over challenged, not finding meaning in learning, disliking the teacher, feeling uninvolved, having better thing to participate in than to be in class and being bored in general. The first seven reasons relate to environmental factors that can be evaluated as either supporting or hindering control or value while the final cause, general boredom tendency, was included to refer to dispositional causes of boredom (LePera, 2011; Vodanovich, Kass, Andrasik, Gerber, Niederberger & Breaux, 2011). Boredom is described in social control theories as resistance to external control; adolescents use boredom as a routine expression of their resistance to adult control (Mora, 2011). As adolescents strive for independence, they may react to any form of social control, such as parental monitoring, through resistance that is experienced as boredom. Furthermore, linked to social control is the forced-effort theory of boredom (Mora, 2011), which explains boredom as a result of being forced to spend energy and effort on tasks perceived as homogeneous. For instance, adolescents who engage in obligatory, routine practice activities may experience boredom, as their involvement may be extrinsically motivated through parents, teachers or other social pressures. Kara, Gürbüz and Öncü, (2014, p. 28) establish support for both psychological and social control reasons of

boredom, operationalized in their study as reasons for participating in an activity being “I had to”, “I wanted to”, or “I had nothing else to do”.

Martin, (2009) described previous circumstances of boredom at home and at work that included level of challenge, tiredness, regularly being alone, loss of purpose, loss of motivation, depression and alienation. Boredom has also been described as a sense of disconnection, with high school students becoming bored and disengaging from situations due to repetition, having nothing to relate to, lack of action, too much or too little familiarity with the task, or simply a bad fit between the individual and the situation (Mora, 2011).

3.13 LEISURE AND HEALTH RISK BEHAVIOR

Adolescents’ engagement in leisure activities offers them amazing opportunities for a healthy quality of life, and healthy development. It has been established in research by Caldwell and Faulk (2013) that engagement in school-based extracurricular activities was found to be a protective factor in that adolescents reported with lower levels of marijuana/drugs use and other substance, more positive academic attitudes and higher academic results and aspirations. Similarly, leisure affords the adolescents a context – or the time, space, place, to participate in unhealthy or negative leisure activities (Wegner & Flisher, 2009).

Substance use and alcohol consumption by high school students were regarded as casual leisure activities engagement because they were self-indulgent, pleasure-seeking, and these high school students derived pleasure and fun, especially in the presence of friends (Wenger & Flisher, 2009; Shiner & Parry, 2005). From a quantitative study conducted by Aldridge, Measham, &

Williams (2013), it was found that drinking of alcohol and substance use was an established part of young people's leisure time. Most young individuals participate in drinking of alcohols because it was pleasurable and formed part of socializing with friends and celebrating with family members. The authors further attributed the increase in leisure or party drugs such as ecstasy and amphetamines to the emergence of the 'rave' dance music scene during the 1990s (Aldridge et al., 2013). Drinking of alcohols and party drugs such as ecstasy, amphetamines have become central components in youth and older adult party culture in both Europe and America continent (Sanchez et al., 2011). Additionally, Caldwell and Faulk (2013) revealed that the risk of substance use increased among adolescents in a situation such as social gathering or parties where adolescents perceived parental monitoring to be low or where adolescents spent more time with friends who used substances. In a systematic literature review done by Wegner and Flisher (2009) on leisure boredom and adolescent risk behavior, it was revealed that children in their pre- and early-adolescent years use illegal drugs such as marijuana or cannabis in response to boredom. These studies support the idea that young individual drink and use drugs for pleasure and fun because they are bored and have nothing to do or engage in, and to be relax and sociable. Criminal behaviors, social misconduct and other misbehaviors among adolescents has been found to be positively related to time spent in unsupervised social activities and leisure activities with friends, and negatively related to time spent in organized leisure activities, passive entertainment and non-competitive sports (Wegner & Flisher, 2009).

3.14 BOREDOM AND HEALTH RISK BEHAVIOR

Exploration into boredom and the association with health risk behavior appeared to begin with Zuckerman's (1971, 1979)work on the components and correlates of sensation-seeking and the

balance between risk and reward among high school students; boredom proneness emerged as one of four dimensions of sensation seeking, and was found to positively correlate with drinking behavior. On the same note, this line of research was continued by several researchers by examining how existential boredom (frequency of boredom and lack of meaning in life) and interpersonal boredom (boredom with small talk and boredom with other people) correlated with drinking behavior (Wegner & Flisher, 2009).

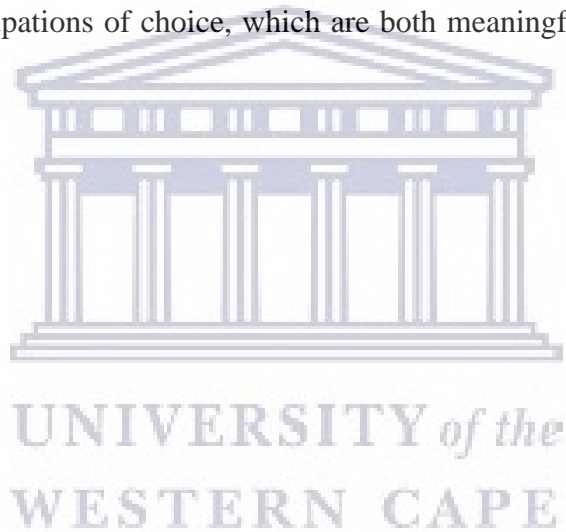
Furthermore, in a qualitative study conducted by Wegner (2011) on the understanding of leisure boredom and health risk behavior among adolescents in South Africa, it was revealed from the study that individuals who perceived their daily lives to be boring sought the stimulation afforded by drinking of alcohol.

Additionally, adolescent and youth who felt bored and used leisure as a means of rejecting adult structure were more likely to engage in undesirable health risk behaviors such as smoking cigarettes and consumption of alcohol (Caldwell & Faulk, 2013). Weybright et al., (2015) utilized qualitative approaches to identify and gain understanding into the social context of alcohol misuse in South African adolescent male binge drinkers. One of the most significant reasons for the boys' use of alcohol was that it eased boredom.

3.15 CONCLUSION

To conclude, Participation in health risk behaviors point toward adolescents' engagement in occupations which can have an adverse effect on their health and quality of life. This presents a challenge to Occupational Therapist as it is widely accepted in the profession that meaningful

and purposeful occupation promote health and well-being. Youths and adolescents who participate in health risk behaviors could draw meaning from activities such as cigarette smoking with friends and the purpose could be entertaining or seen as been participating in leisure activities. This context affects health risk behaviors during adolescence. In this situation, this activity does not promote healthy life and wellbeing of the youths and adolescents in question. Thus, it is evident that, to understand health risk behaviors during adolescence, the social context (including an individual's environment, school, peers, parents and community should be considered. This current study could provide support and add to this body of knowledge that is aimed at showing that occupations of choice, which are both meaningful and purposeful can be detrimental to health.



CHAPTER FOUR

RESEARCH METHODOLOGY

4 INTRODUCTION

This chapter gives a detailed description of the methodology employed in conducting this study and provides all methodological steps taken towards achieving the objectives of this study. A broad description of the research setting, population, study design, data collection procedures as well as data analysis are all explained. Ethical considerations pertaining to the study are also outlined.

4.1 RESEARCH PARADIGM

Positivism is the research paradigm that was used in the present study. Positivism is a philosophy based on the view that “factual” knowledge is obtained through examination or observation (the senses) including measurement, and can be described from an objective point of view, independent from the phenomena under study (Bernard, 2017). It has been highlighted that positivism depends on quantifiable or measurable observations that guide the researcher towards statistical analysis (Bernard, 2017). The position of the positivist researcher is restricted to data collection and the objective interpretation of the data only. The phenomena should therefore be isolated especially where observations are repeatable and the research findings are observable and quantifiable (Fine, 2010). Additionally, it has been well-known that positivism has observable elements, discrete and events that interact in an observable, determined and regular manner (Bernard, 2017). Moreover, the positivist approach does leave room for human interest and usually uses a deductive approach in a quantitative manner (Fine, 2010).

4.2 QUANTITATIVE APPROACH

A quantitative research approach involves the systematic investigation of observable phenomena in order to explain and predict behaviors, often with the goal to identify patterns of behavior (Martin & Bridgmon, 2012). This quantitative approach assumes the existence of one single reality and that researchers can conduct objective, value-neutral research within this worldview (Robson & McCartan, 2016). In this quantitative approach, precise measurement is very essential because the paradigm connects scientific observations to the explanation and clarification of differences between or relationships among variables (Martin & Bridgmon, 2012). The data that comes from quantitative research are numerical in form and often take the form of explaining the frequency, degree, value, and/or intensity of a variable (Fine, 2010). Thus, a descriptive quantitative approach was thought necessary for gaining insight to determine the health risk behaviors and the association with leisure boredom among high school students in Lagos State, Nigeria.

4.3 RESEARCH DESIGN

A descriptive method design was utilized in order to address the research question for this study. Thomas, Silverman and Nelson (2015) described cross-sectional survey research design as being useful for studying a variety of problems involving data collection for either testing hypotheses or answering pertinent research questions concerning the present status of subjects under study. It was further asserted that this design permits the description of conditions as they exist in their natural settings (Thomas et al., 2015). Coolican (2017) further corroborated this assertion that a descriptive design covers the physical characteristics of people, behavior as well as their knowledge, attitudes, beliefs and opinions that enhance explanation of behavior, phenomena and

practices that occurred or are occurring in the population. The descriptive research design, therefore, was considered most appropriate for the present study as it has effectively been utilized in similar studies (Idache, 2008; Matumo, Maina, & Njoroge, 2012; Omotowo et al., 2017). The successful utilization of this design by the aforementioned investigators in their respective studies suggested a possible success in its use for the current study.

4.4 DESCRIPTION OF STUDY SETTING

This study was conducted in Shomolu Local Government area of Lagos state, Nigeria (see Map in Figure 4.1). Although being the smallest state in Nigeria in terms of land surface area, Lagos state is the second most populated state in Nigeria. Lagos is a metropolitan state with a population of 17,552,942 (Lagos Bureau of Statistics, 2016) with people occupying 3577 square kilometers of which 787 square kilometers are creeks and lagoons. Shomolu Local Government area is selected for this study because it is one of the most densely populated areas in Lagos state with a population of 1,025,123 (Lagos Bureaus of Statistics, 2016).

Shomolu Local Government Area is located in the mainland and eastern part of Lagos State (see Map 1 for the location of Shomolu in relation to other districts of Lagos). It is a residential suburb of Lagos State plagued by problems of overcrowding, poor housing, and inadequate sanitation. In addition, the cultures of gang activity and violence among youths have become distinctive features in descriptions of Shomolu and the broader Lagos societies. Gang activity in Shomolu Local Government Area, like in other areas in Lagos, is mainly a male dominated activity (Heap, 2010, p.63). The activities of gangsterism in Lagos State in general and Shomolu LGA in particular are wide ranging and include: stealing, pick-pocketing, drug abuse, gambling,

armed robbery, street fighting, urban violence, arson, illegal extortion of money from people, prostitution, rape, murder and other forms of social insecurity (Heap 2010; Ikuomola, 2012).

In Shomolu Local Government area, there are 39 government approved secondary schools: 20 are state owned (public schools) and 19 are privately owned (private schools). The questionnaire was administered to the students in English since English language is the means of communication in secondary schools and colleges in Nigeria. This area is deemed appropriate as the setting of this study because this area has a large youth population.

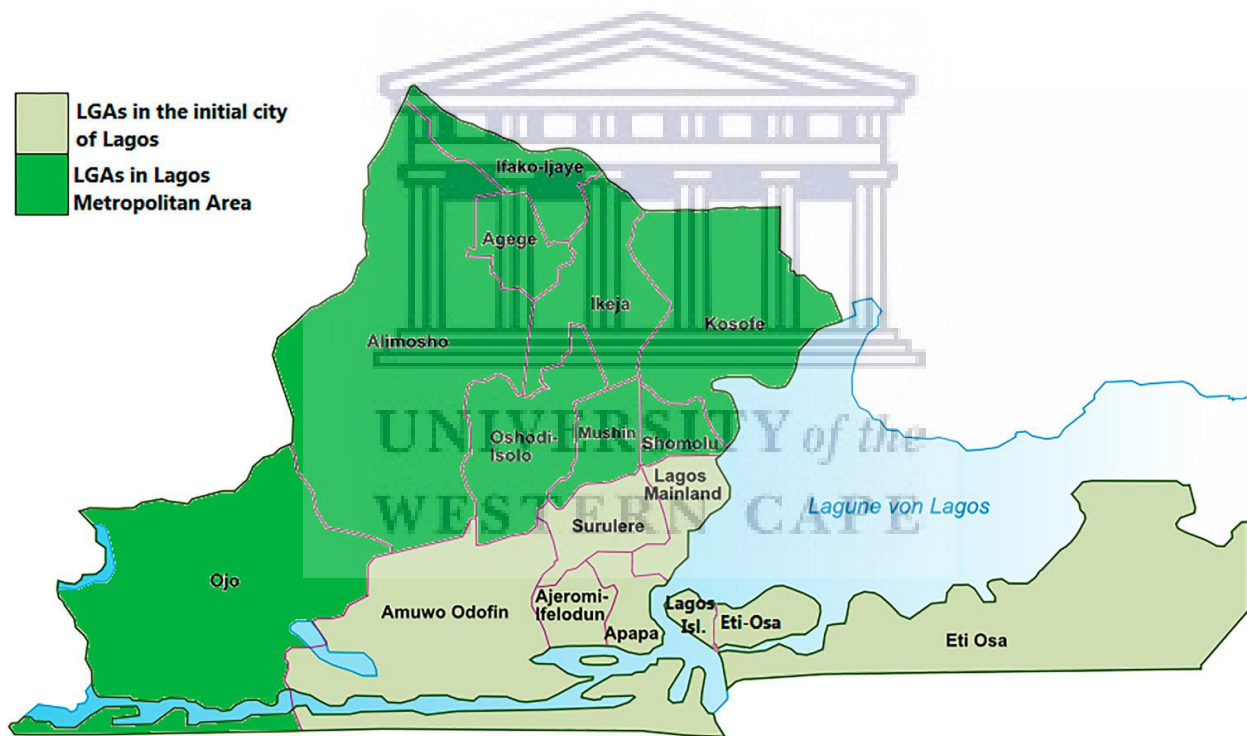


Figure 4.1: Map of Lagos State, Nigeria.

4.5 POPULATION AND SAMPLING STRATEGY

A research population refers to a well-defined group of individuals, or objects that share many common characteristics, and are the main focus of a scientific inquiry (Kothari, 2004). The target

populations for this present study were students from seven high schools in Shomolu Local Government Area of Lagos State. The study sample size was calculated using Lwanga and Lemeshow's (1991) formula considering the number of secondary school education students and the prevalence of adolescents' health risk behaviors. The sample was stratified randomly according to residence and gender and the schools were selected randomly. Seven high schools from Shomolu Local Government area were randomly selected. Students from senior class 1/Grade10 to senior class 3/Grade 12 from each school were randomly selected for this study and also classes was selected randomly for each grade as in some cases there were more than eight classes for each grade level. Data was not collected from students who were absent on the day of data collection. A total of 691 students were included for this study. Below is the calculation of the sample size and criteria for participants.

4.5.1 CALCULATION OF SAMPLE SIZE

Mathematically,

$$N = \frac{Z^2 (1-\alpha)^2 p(1-p)}{d^2} \quad (\text{Lwanga and Lemeshow, 1991})$$

Where;

N= the minimum sample size,

Z_{α} = standard normal deviate of α at 99% confidence level (i.e. probability of making a type 1 error) = 2.575, $100(1-\alpha)^2\%$ = Confidence level,

P = Anticipated population proportion,

d = Absolute precision required on either side of the proportion (in percentage points), Using this proportion;

- | | |
|---------------------------------------|---------------------|
| (a) Anticipated population proportion | 50% |
| (b) Confidence level | 99% |
| (c) Absolute precision (15%-25%) | 5 percentage points |

$$P = 0.50,$$

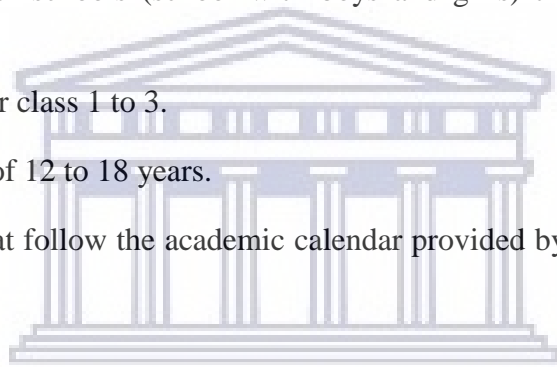
$$d = 0.05$$

$$N = \frac{(2.575)^2 \times 0.5(1-0.5)}{0.05^2} = \mathbf{691}.$$

4.5.2 CRITERIA FOR PARTICIPANTS

Inclusion criteria for health risk behaviours:

- Students in mixed gender schools (school with boys and girls) that are in Shomolu Local Government area.
- Students who are in senior class 1 to 3.
- Student between the age of 12 to 18 years.
- Students from schools that follow the academic calendar provided by the Lagos state Ministry of Education.



Exclusion criteria for health risk behaviours:

- Students who expressed difficulty in completing the questionnaire independently as a result of difficulty comprehending the English language or who were unable to write.
- Students whose parents have not given consent.
- Students who are above age 19 years.
- Students who are absent from school on the day of data collection.
- Students whom, despite their parents having given consent refuse to give assent.
- Students whom for one reason or the other were not in the designated venue at the period given during questionnaire administration.

4.6 DATA COLLECTION INSTRUMENT

The study instrument used for this present study was an hour long paper-based, self-administered standardized questionnaire. These included the US Adolescents Health Risk Behaviors Survey (CDC, 2008), and the Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990). The US Adolescents Health Risk Behavior Survey (US AHRBS) (CDC, 2008) was used as the basis from which the Nigeria Adolescents Health Risk Behavior Survey (AHRBS) was developed. Consequently, the Adolescents Health Risk Behavior Survey (AHRBS) and Leisure Boredom Scale (LBS) were not tested for reliability and validity for this present study because a standardized questionnaire was adopted for the study. The AHRBS was tested in the pilot study to test the understanding of students regarding the questions and to ascertain whether the answers of students depicted the questions asked. Some terms were modified to suit the Nigeria context. The questionnaire included demographic characteristics of name of school, age, sex, grade level, religion and nationality. (See Appendix 2 for the questionnaires).

4.6.1 DEMOGRAPHIC CHARACTERISTICS

The demographic information regarding age, sex, grade level, religion, name of school and nationality was obtained in this study. Sex was divided into male or female. Grade level was categorized into Senior Secondary Class one (SS 1), Senior Secondary Class two (SS 2) and Senior Secondary Class three (SS 3). Religion was divided into Christianity, Islam and Traditional.

4.6.2 ADOLESCENTS HEALTH RISK BEHAVIOR SURVEY (AHRBS)

The Adolescent Health Risk Behavior Survey (CDC, 2008) contains 82 questions which cover demographic details and health risk behavior. The area pertaining to the health risk behaviors in the Adolescent Health Risk Behavior Survey (CDC, 2008) was divided under headings in the questionnaires with the total in brackets indicating the amount of questions covered under the respective heading. The headings were safety (4), violence-related behaviors (12), bullying (2), sad feeling and attempted suicide (6), tobacco use (11), drinking alcohol (6), marijuana use (4), other drugs (6), sexual behavior (7), body weight (5), physical activity (5), nutrition/dietary behavior (6) and health related (3). The responses to items are based on the Likert-type scale from which participants had to choose the response that best represented them. For every health risk behavior, scores are produced that will indicate first time use, life time use, and/or use during the last 30 days, as well as engagement in health risk behavior. This instrument reported acceptable reliability with internal consistency ranging from 0.61 to 1 (Brenner et al., 2002) indicating that the measures are reliable and appropriate for use in research (Foxcroft & Roodt, 2013).

4.6.3 LEISURE BOREDOM SCALE (LBS)

The Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990) is a self-administered standardized questionnaire, consisting of 16 items to which subject respond on a 1-5 Likert-scale with higher number equaling greater boredom. Total scores could range from 16 (lowest boredom) to 80 (highest boredom). Reverse coding applied to items 2, 4, 7, 8, 9, 12, 13, and 16. Results from previous study showed that LBS had both reliability and construct validity (Iso-Ahola & Weissinger, 1990). The internal consistency of LBS using Cronbach's alpha was 0.76, 0.87 and

0.76 respectively (Wegner & Flisher, 2009). The concordance correlation on the LBS was 0.73 with 95% confidence interval (0.64 to 0.82) (Wegner & Flisher, 2009).

4.7 PILOT STUDY

Pilot studies provides a prospective researcher with the opportunity of familiarizing oneself with the procedure of a research study (Van Teijlingen & Huntley, 2001). It also serves as a means of appraising the effectiveness of the procedure to be used in a study. A pilot study was conducted as it was essential to establish whether the modifications made on the instrument used was appropriate and understandable. The sample size for this pilot study was 70 students which denote ten percent of the total number of the actual sample size population. Participants of the pilot study were not part of the sample, and comprised students from one high school that is not in the actual study. Arrangements were made with the school principal and some teachers. Ethical consideration was also applied for the pilot study. The pilot study was conducted in a classroom and the required time to complete the questions was also noted as it was used to determine the time required to administer the questionnaire during data collection. The reliability of the questionnaire was tested by test and retest method before the questionnaires were administered.

4.8 QUANTITATIVE DATA ANALYSIS

The statistical software package SPSS (version 25) was used to enter, clean and analyze the data (SPSS Incorporated, SPSS). Exploration and analysis of the data was carried out in two stages: (1) univariate descriptive analysis; (2) bivariate analysis to test which socio-demographic, and

leisure boredom variables were associated with health risk behaviors (key dependent variables) of the participants.

4.8.1 UNIVARIATE/DESCRIPTIVE STATISTICS

Descriptive statistics of measure of central tendency, frequency and percentage (Crewson, 2006) were used to summarize participants' demographic, health risk behavior characteristics as well as the leisure boredom level of participants. A demographic breakdown of the sample was provided according to gender, class/grade, religions, and nationality. Risk behaviors were defined as the participants' engagement in health risk behavior in the "past Month", i.e. the month preceding the administration of the questionnaire. The frequency distribution of leisure boredom was obtained. As the analysis of the data showed the distribution to be asymmetrical; the median and the interquartile range was used as the measures of central tendency and variation respectively.

4.8.2 BIVARIATE ANALYSIS

4.8.2.1 MANN-WHITNEY U-TEST

The Mann-Whitney U-test is a non-parametric test that is used to compare two conditions with different participants being used in each condition and the resulting data being ranked (Pallant, 2013). In this study, it is used to compare whether any difference exist between health risk behavior variables with regard to gender. The Mann-Whitney U-test was the appropriate test because two samples are independently derived, with the grouping variable (gender) being nominal and the test variable (health risk behavior) being ordinal or ranked. A significance level of 0.05 (5%) is used for the test. As a rule, the null hypothesis is accepted if the significance value is higher than the given level of significance (Pallant, 2013). Otherwise, it is rejected in

favor of the alternative hypothesis if the significance value is less than or equal to the given level of significance. Generally, the Mann-Whitney U-test for large samples is given by the following formula:

$$U_1 = R_1 - n_1 \left(\frac{n_1 + 1}{2} \right) \quad \text{Equation 4.1}$$

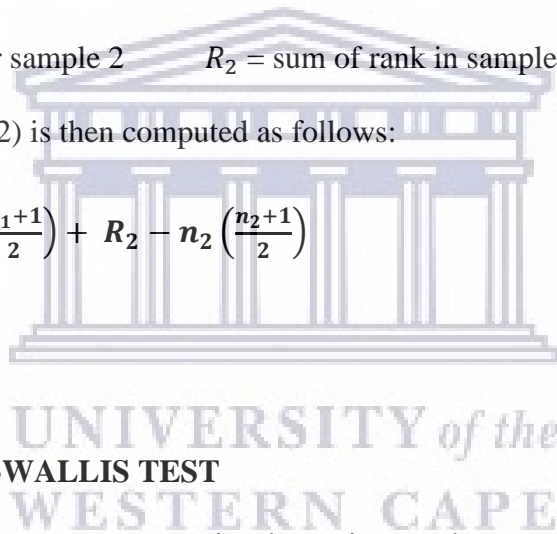
Where n_1 = sample size for sample 1, R_1 = sum of rank in sample 1

$$U_2 = R_2 - n_2 \left(\frac{n_2 + 1}{2} \right) \quad \text{Equation 4.2}$$

Where n_2 = sample size for sample 2 R_2 = sum of rank in sample 2

The sum of equation (1) + (2) is then computed as follows:

$$U_1 + U_2 = R_1 - n_1 \left(\frac{n_1 + 1}{2} \right) + R_2 - n_2 \left(\frac{n_2 + 1}{2} \right) \quad \text{Equation 4.3}$$



4.8.2.2 THE KRUSKAL-WALLIS TEST

The Kruskal-Wallis test is a non-parametric alternative to the one-way analysis of variance (ANOVA) and used for comparing more than two samples that are not related, or independent (Aczel & Sounderpandian, 2009). The test is used when there is one independent variable with two or more levels and an ordinal dependent variable. In this study, it was used to compare whether any difference exist between health risk behavior variables with regard to participants' class/grade and age categories. The appropriateness of the Kruskal-Wallis test to examine the difference in health risk behaviors among participants' class/grade and age categories is justified

as the values in each of the category were at least three and the dependent variables were ordinally scaled.

For the computation of the Kruskal-Wallis test, all data points in the entire set are ranked from smallest to largest, without regard to which sample they come from. Then all the ranks are summed from each separate sample. As such, let n_1 be the sample size from population 1, n_2 the sample size from population 2, and so on up to n_k , which is the sample size from population k . Also, define n as the total sample size: $n = n_1 + n_2 + \dots + n_k$. Furthermore, R_1 is defined as the sum of the ranks from sample 1, R_2 as the sum of the ranks from sample 2, and so on to R_k , the sum of the ranks from sample k (Pallant, 2013).

The Kruskal-Wallis test statistic H is defined thus:

$$H = \frac{12}{n(n+1)} \left(\sum_{j=1}^k \frac{R_j^2}{n_j} \right) - 3(n-1) \quad \text{Equation 4.4}$$

A significance level of 0.05 (5%) is used for the test. As a rule, the acceptance of the null hypothesis is premised on the significance value being greater than the given level of significance. Otherwise, the null hypothesis is rejected in favor of the alternative hypothesis if the significance value is less than or equal to the given level of significance.

4.8.2.3 THE SPEARMAN CORRELATION

The Spearman's Rank Order Correlation coefficient (Spearman's correlation, for short) is a non-parametric test used to examine the strength and direction of the linear relationship that exists

between two variables measured on at least an ordinal scale (Pallant, 2013). In this study, it was used to compare whether any relationship or association exist between health risk behavior variables with regard to participants' leisure boredom. The correlation coefficient takes on values ranging between +1 and -1. The sign out front indicates whether there is a positive correlation (as one variable increase, so too does the other) or negative correlation (as one variable increase, the other decreases) (Pallant, 2013). The size of the absolute value (ignoring the sign) provides an indication of the strength of the relationship. A negative correlation coefficient indicates a negative relationship between the two variables. On the other hand, a positive correlation coefficient indicates a positive relationship between two variables. In terms of strength of the relationship, the following guidelines are adopted.

1. Values between 0 and 0.29 indicate a weak relationship.
2. Values between 0.3 and 0.69 indicate a moderate relationship.
3. Values between 0.7 and 1.0 indicate a strong relationship.

A significance level of 0.05 (5%) is used for the test. As a rule, the acceptance of the null hypothesis is premised on the significance value being greater than the given level of significance. Otherwise, the null hypothesis is rejected in favor of the alternative hypothesis if the significance value is less than or equal to the given level of significance.

Generally, the Spearman's correlation test for large samples is given by the following formula:

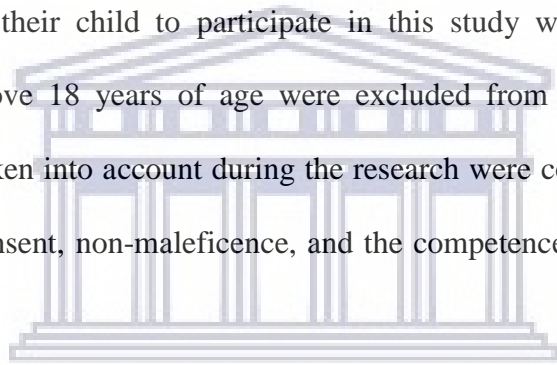
$$\rho = 1 - \frac{6 \sum d_i^2}{n(n^2-1)} \quad \text{Equation 4.5}$$

Where d_i = difference in paired ranks

n = number of cases

4.9 ETHICAL STATEMENT

Ethical approval was sought from the Higher Degrees committee of the University of the Western Cape and the Biomedical Research Ethics Committees (Ethics Reference Number: BM18/8/2). Permission to conduct this study was also obtained from the Lagos State Ministry of Education, the principals and teachers of the selected schools, and the Shomolu Local Government Educational Board. Informed written consent was obtained from parents of participants under the age of 18 years and these participants under 18 years provide informed assent. Students who had either not returned the parental consent form or whose parent(s) had declined the invitation of their child to participate in this study were not included in data collection. Participants above 18 years of age were excluded from this study. Other ethical considerations that were taken into account during the research were confidentiality, anonymity, voluntary and informed consent, non-maleficence, and the competence of the researcher. These are discussed below.



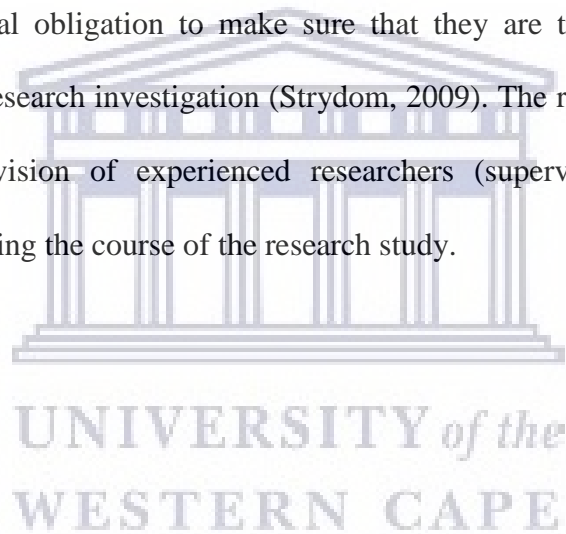
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Confidentiality can be defined as the treatment of information in a confidential manner, and anonymity can be explained as a state of being unknown (Wassenaar, 2006). In other words, anonymity refers to a situation in which a person's name or any other identifying particulars are kept secret (Strydom, 2009). Owing to the sensitive nature of items in the questionnaires, all participants were assured of anonymity. The participants were not requested to give any identifying information on any of the questionnaires. Furthermore, to ensure the participants' confidentiality, the researcher stored the completed questionnaires safely in a locked cabinet with only the researcher and the supervisor having access to them, and on a password-protected file

on the researcher's computer. Data will be stored for a period of five years following completion of the study, after which it will be destroyed.

Non-maleficence refers to the responsibility of the researcher to ensure that no harm comes to participants as a direct or indirect consequence of the research study (Wassenaar, 2006). The researcher adhered to the principle by explaining to participants that the study was voluntary and that participants had the right to withdraw from the study at any point in time.

Researchers have an ethical obligation to make sure that they are trained appropriately and competent to undertake a research investigation (Strydom, 2009). The researcher ensured this by working under the supervision of experienced researchers (supervisor), and by attending workshops and training during the course of the research study.



CHAPTER FIVE

RESULTS

5 INTRODUCTION

This chapter presents the results from the quantitative data analysis in an attempt to answer the specific aim and objectives of this study i.e. to gather information regarding health risk behaviors and degree of leisure boredom among high school students in Shomolu Local Government Area, Lagos, Nigeria. This chapter provides descriptive statistics used in presenting an overview of the social demographic profile and then presents the prevalence of health risk behaviors of the study sample. Secondly, the prevalence of health risk behaviors and its association with demographic variables i.e. gender, class and age will be described. Lastly, this chapter presents the degree of leisure boredom and its association with health risk behaviors.

5.1 SAMPLE RESPONSE RATE

A total of 691 questionnaires were distributed to participants in the various classes. Six hundred and seventy-three (673) questionnaires were completed and returned to the researcher, yielding a response rate of 97.3%. In this study, the response rate was high because the researcher was able to make a follow-up during the distribution of the questionnaires by making sure participants completed the questionnaires in the presence of the researcher and with the assistance of each class teacher who was able to assist the researcher when the questionnaires were being distributed. The data collection was a paper-based approach where the participants were asked to fill the questionnaires with the assistance of the class teacher and the researcher was able to

collect the data back from the participants on the same day. There was also a research assistant who assisted the researcher in facilitating the process of data collection.

5.2 DESCRIPTION OF THE STUDY SAMPLE

The populations of this phase of the study samples were male and female high school students from seven (7) senior high schools between senior class 1 to senior class 3 in Shomolu Local Government Area of Lagos State, Nigeria within the age range of 12 years and 18 years, and a total number of 673 students

5.3 SOCIODEMOGRAPHIC CHARACTERISTICS OF THE STUDY SAMPLE

The mean age of the students was 15.01 years ($SD = \pm 1.33$). The majority of the participants (53.3%) were aged between 15 years ($n = 200, 29.7\%$) and 14 years ($n = 159, 23.6\%$) old. The gender composition of the participants i.e. the female participants was reasonably unequal with male participants ($n = 377, 56.0\%$) and female participants ($n = 296, 44.0\%$). In this study, the majority of the participants were in senior class 1 ($n = 335, 49.8\%$). Likewise the majority (97.5%, $n = 656$) of the participants were Nigerian. In relation to religion, the number of Christian participants was (97.5%, $n = 517$) outnumbering the number of Muslim participants, which was (2.5%, $n = 17$) and participants that practice traditional religion (0.6%, $n = 4$). The demographic information of the students in the study is listed below in Table 5.1

Table 5.1: Demographic Information (n=673)

Variable	Frequencies (N)	Percentage (%)
Gender		
Male	377	56.0
Female	296	44.0
Total	673	100.0
Age		
12 years	9	1.3
13 years	76	11.3
14 years	159	23.6
15 years	200	29.7
16 years	140	20.8
17 years	61	9.1
18 years	28	4.2
Total	673	100.0
Mean = <i>15.01</i> years		
Standard Deviation = ± 1.33		
Grade		
Senior class 1	335	49.8
Senior class 2	218	32.4
Senior class 3	120	17.8
Total	673	100.0
Religion		
Christianity	517	76.8
Islam	152	22.6
Traditional	4	0.6
Total	673	100.0
Nationality		
Nigerian	656	97.5
Non-Nigerian	17	2.5
Total	673	100.0

5.4 PREVALENCE OF HEALTH RISK BEHAVIORS

In this section, the participants' responses regarding the health risk behaviors are presented based on the subsection namely; personal safety, violence-related behavior, bullying, sad feeling and

attempts of suicide, smoking, drinking of alcohol, marijuana/drug use, other drug use, sexual behavior, body weight, physical activity, other health-related issues and food.

5.4.1 PERSONAL SAFETY

The personal safety category incorporates two main aspects: first, the wearing of protective clothing and second, the number of times they have been wearing protective clothing. When the participants were asked on how often did they wore helmet when they ride a bike in the past 12 months, majority of the participants (41.2%) indicated they never wore a helmet, 116 participants (17.2%) rarely wore helmet, 23 participants (3.4%) most of the time wore helmet and 40 participants (5.9%) always put on helmet. Furthermore, in response on how often do participants wear a seat belt when riding in a car driven by someone else, it was revealed that 113 participants (16.8%) never wore seat belt, 15% of the participants rarely wear a seat belt, 24% of the participants sometimes wear seatbelt and 12.9% of the participants most of the time wear seat belt. Furthermore, when ask on how many times do participants rode with a driver who had been drinking alcohol in the past 30 days, 12.6% of the participants rode 1 time, 6.7% rode 2 or 3 times, 3.7% rode 4 or 5 times and 7.1% rode 6 or more times. In addition, when asked on how many time did they drive a car when they had been drinking alcohol, 7.1% of the participant rode 1 time, 3.1% rode 2 or 3 times, 1.9% rode 4 or 5 times and 0.6% rode 6 or more times. Table 5.2 summarizes the questions relating to personal safety and the frequency of each response potion.

Table 5.2: Personal Safety (n = 673)

Risk behavior	Responses	Frequency	n (%)
When you rode a bike “okada rider” during the past 12 months, how often did you wear a helmet?	Did not ride bike	217	32.2
	Never wore helmet	277	41.2
	Rarely wore helmet	116	17.2
	Most of the time	23	3.4
	Always wore helmet	40	5.9
How often do you wear a seat belt when riding in a car driven by someone else?	never	113	16.8
	rarely	104	15.5
	sometimes	167	24.8
	most of the time	87	12.9
	always	202	30.0
During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?	0 times	470	69.8
	1 time	85	12.6
	2 or 3 times	45	6.7
	4 or 5 times	25	3.7
	6 or more times	48	7.1
During the past 12 months, how many times did you drive a car or other vehicle when you had been drinking alcohol?	0 times	585	86.9
	1 time	48	7.1
	2 or 3 times	21	3.1
	4 or 5 times	13	1.9
	6 or more times	6	0.9

5.4.2 VIOLENCE – RELATED BEHAVIOR

The violence category includes two main elements: first, the numbers of days learners carry weapons, and second, the engagement in physical fights. In relation to violence-related behavior and school-related behavior, it has been found that majority of the participants (n = 541, 80.4%) did not carry a weapon such as a knife, screwdriver or broken bottle. However, in the past 30 days, it was revealed that 56 participants (8.3%) carried weapon for 1 day, 56 participants (5.8%) carried weapon for 2 or 3 days, 12 participants (1.8%) carried weapon for 4 or 5 days and 25 participants (3.7%) carried weapon for 6 or more days.

When participants were asked on how many days in the past 30 days they carried a gun, 29 participants (4.3%) mentioned 1 day, 16 participants (2.4%) mentioned 2 or 3 days and 6 participants (0.8%) mentioned 4 or more days. Furthermore, when asked on how many times did the participants carried a weapon while at school in the past 30 days, 25 participants (3.7%) mentioned 1 day, 19 participants (2.8%) mentioned 2 or 3 days and 17 participants (2.5%) mentioned 4 or more days. Additionally, it was also found that 58 participants (8.6%) for 1 day have used mathematical compass or divider as a weapon at school premises in the past 30 days. Also, 22 participants (3.3%) have used it for 2 or 3 days, 16 participants (2.4%) have used it for 4 or 5 days and 26 participants (3.9%) have used a compass as a weapon for 6 or more days. Likewise, when asked about how many days did participants miss school because they felt unsafe at school in the past 30 days? 67 participants (10.0%) mentioned 1 day, 22 participants (3.3%) mentioned 2 or 3 days, 12 participants (1.8%) mentioned 4 or 5 days and 26 participants (3.9%) mentioned 6 or more days. More also, when participants were asked on how many times were they in a physical fight in the past 12 months while in school, 108 participants (16.0%) mentioned 1 day, 35 participants (5.3%) mentioned 2 or 3 days, 20 participants (2.9%) mentioned 4 or more days.

When the participants were asked whether during the past 12 months their girlfriend or boyfriend ever hit, slapped or physically hurt them on purpose as well as whether they have ever been force to have sexual intercourse when they did not want to, 117 participants (17.4%) indicated that they have been hit, slapped or hurt physically on purpose whilst 69 (10.3%) participants have been physically forced to have sexual intercourse when they did not want to. Table 5.3 presents the findings related to the participants' self-reported behavior in this section.

Table 5.3: Violence-related behavior (n=673)

Risk behavior	Responses	Frequency n (%)	
How many days within the past month (30 days) did you carry a weapon such as a knife “lebe”, screwdriver or broken bottle?	0 days	541	80.4
	1 day	56	8.3
	2 or 3 days	39	5.8
	4 or 5 days	12	1.8
	6 or more days	25	3.7
	How many days within the past month (30 days), did you carry a gun?	0 days	622
1 day		29	4.3
2 or 3 days		16	2.4
4 or 5 days		3	0.4
6 or more days		3	0.4
How many days within the past month (30 days) did you carry a weapon such as a gun, knife “lebe”, screwdriver or broken bottle while at school?		0 days	612
	1 day	25	3.7
	2 or 3 days	19	2.8
	4 or 5 days	12	1.8
	6 or more days	5	0.7
	How many times within the past month (30 days) have you used a mathematical compass or divider as a weapon at school?	0 days	551
1 day		58	8.6
2 or 3 days		22	3.3
4 or 5 days		16	2.4
6 or more days		26	3.9
How many days within the past month (30 days) did you not go to school (miss school) because you felt you would be unsafe at school?		0 days	546
	1 day	67	10.0
	2 or 3 days	22	3.3
	4 or 5 days	12	1.8
	6 or more days	26	3.9
	How many days within the past month (30 days) did you not go to (miss) school because you felt you would be unsafe on your way to or from school?	0 days	565
1 day		65	9.7
2 or 3 days		31	4.6
4 or 5 days		5	0.7
6 or more days		7	1.0
How many times within the past 6 months has someone threatened or injured you with a weapon such as a gun, knife, screwdriver, mathematical compass, divider or broken bottle at school?		0 days	529
	1 day	94	14.0
	2 or 3 days	35	5.2
	4 or 5 days	4	0.6
	6 or more days	11	1.6
	How many times within the past 12 months were you in a physical fight?	0 days	445
1 day		124	18.4
2 or 3 days		79	11.7
4 or 5 days		18	2.7
6 or more days		7	1.0
How many times within the past 12 months were you in a physical		0 days	579
	1 day	47	7.0

fight in which you were injured and had to be treated by a doctor or a nurse?	2 or 3 days	35	5.2
	4 or 5 days	8	1.2
	6 or more days	4	0.6
How many times within the past 12 months were you in a physical fight while in school?	0 days	509	75.6
	1 day	108	16.0
	2 or 3 days	36	5.3
	4 or 5 days	7	1.0
	6 or more days	13	1.9
Did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose within the past 12 months?	Yes	117	17.4
	No	556	82.6
Have you ever been forced physically to have sexual intercourse when you did not want to?	Yes	69	10.3
	No	604	89.7

5.4.3 BULLYING

This section presents items regarding bullying, two hundred and one participants (29.9%) indicated that they were been bullied at school. When asked about electronic bullying, only 107 of the participants (15.9%) indicated that they were bullied via What Sapp, BBM, texting and other social media. Table 5.4 summarized the findings for bullying.

Table 5.4: Bullying (n=673)

Risk behavior	Responses	Frequency n	(%)
Have you been bullied with the school premises within the past 12 months?	Yes	201	29.9
	No	472	70.1
Have you ever been electronically bullied within the past 12 months? (Including being bullied through What Sapp, twitter, text message and other social media)	Yes	107	15.9
	No	566	84.1

5.4.4 SAD FEELING AND ATTEMPTS OF SUICIDE

This section considers the participants' responses when were asked about sad feeling and attempts of suicide. Less than half of the participants (n = 217, 32.2%) mentioned that they did think of committing suicide. Three hundred and ninety-eight (59.1%) of the participants expressed a feeling of sadness or being hopeless almost every day for two weeks or more in a row. Furthermore, when asked has participants ever thought of killing self in the past 12 months, 105 participants (15.6%) indicated that they had the thought of killing themselves and 66 participants (9.8%) did actually attempt suicide. In addition, when participants were asked on how many times did they actually attempted suicide in the past 12 months, 39 participants (5.8%) mentioned 1 time, 19 participants (2.8%) mentioned 2 or 3 times and 11 participants (1.7%) mentioned more than 4 times. Fifty participants (7.4%) indicated that their attempted suicide led to them being injured, poisoned or overdose resulting in needing treatment from a doctor or a nurse. Table 5.5 summarizes the results relating to this section.

Table 5.5; Sad feelings and attempts of suicide (n=673)

Risk behavior	Responses	Frequency n	(%)
Within the past 12 months have you ever thought of committing suicide?	Yes	217	32.2
	No	456	67.8
Within the past 12 months have you attempted suicide?	Yes	66	9.8
	No	607	90.2
Have you ever experienced feeling of sadness or hopelessness within the past 12 months?	Yes	398	59.1
	No	275	40.9
Have you ever nursed the thought of killing yourself in the past 12 months?	Yes	105	15.6
	No	568	84.4
Within the past 12 month how many times did you actually attempt suicide?	0 time	603	89.6
	1 time	39	5.8
	2 or 3 time	19	2.8
	4 or 5 time	5	0.7
	6 or more time	7	1.0

If you attempted suicide within the past 12 months, did any attempt result in an injury, poisoning or overdose that had to be treated by a doctor or nurse?	Yes	50	7.4
	No	623	92.6

5.4.5 SMOKING

Regarding smoking, one hundred and two participants (18.0%) had smoked either with one or two puffs. Moreover, 37 participants (5.5%) have smoked cigarettes daily, i.e. at least one cigarette every day in the past 30 days and 45 participants (6.7%) also indicated they tried to quit smoking. When asked how old the participants were when they first smoked in their life, 23 participants (3.4%) mentioned 8 years old or younger, 17 participants (2.5%) mentioned 9 or 10 years old, 21 participants (3.1%) mentioned 11 or 12 years old, 35 participants (5.2%) mentioned 13 or 14 years old, 16 participants (2.4%) mentioned 15 or 16 years old and 8 participants (8.0%) mentioned 17 years old or older. Also, when participants were asked on how many days did they smoked cigarettes in the past 30 days, 29 participants (4.3%) indicated they smoked for 1 or 2 days, 35 participants (5.2%) smoked for 3 to 5 days, 11 participants (1.6%) smoked for 6 to 9 days, 17 participants (2.5%) smoked for 10 to 19 days, 2 participants smoked for 20 to 29 days while 6 participants smoked for all the 30 days.

On the number of cigarettes participants smoked per days during the past 30 days, it was found that 27 participants (4.0%) smoked less than 1 cigarette per days. Furthermore, 42 participants (6.2%) smoked one cigarette per day, 12 participants (1.2%) smoked 2 to 5 cigarettes per day, 6 participants smoked 6 to 10 cigarettes per days, 3 participants smoked 11 to 20 cigarettes per day while 6 participants smoked more than 20 cigarettes per day. Likewise when asked on how many

days did participants smoked in school premises, it was revealed that 21 participants (3.1%) had smoked 1 or 2 days in school premises. Also 19 participants (2.8%) have smoked 3 to 5 days, 11 participants (1.6%) have smoked 6 to 9 days, 11 participants (1.6%) have smoked 10 to 19 days, 7 participants have smoked 20 to 29 days and 1 participant have smoked for all the 30 days in school premises. Table 5.6 summarized the results for smoking.

Table 5.6: Smoking (n=673)

Risk behavior	Responses	Frequency n	(%)
Have you ever in your lifetime tried cigarette smoking, even one or two puffs?	Yes	121	18.0
	No	552	82.0
How old were you when you smoked a whole cigarette for the first time?	Have never smoked a whole cigarette	553	82.2
	8 years old or younger	23	3.4
	9 or 10 years old	17	2.5
	11 or 12 years old	21	3.1
	13 or 14 years old	35	5.2
	15 or 16 years old	16	2.4
	17 years old or older	8	1.2
During the past 30 days, on how many days did you smoke cigarettes?	0 days	573	85.7
	1 or 2 days	29	4.3
	3 to 5 days	35	5.2
	6 to 9 days	11	1.6
	10 to 19 days	17	2.5
	20 to 29 days	2	0.3
	All 30 days	6	0.9
During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?	Did not smoke cigarettes during the past 30 days	577	85.7
	Less than 1 cigarette per day	27	4.0
	1 cigarette per day	42	6.2
	2 to 5 cigarettes per day	12	1.8
	6 to 10 cigarettes per day	6	0.9
	11 to 20 cigarettes per day	3	0.4
	More than 20 cigarettes per day	6	0.9
During the past 30 days, how did you usually get your own cigarettes?	Did not smoke cigarettes during the past 30 days	573	85.1
	I bought them in a store such as a convenience store, supermarket, plaza or from street vendor	26	3.9

	I asked someone who smokes	50	7.4
	I gave someone else money to buy them for me	8	1.2
	I borrowed them from someone else	14	2.1
	A person 18 years old or older gave them to me	1	0.1
	I took them from a store or family member	1	0.1
	I got them some other way		
During the past 30 days, on how many days did you smoke in school premises?	0 days	603	89.6
	1 or 2 days	21	3.1
	3 to 5 days	19	2.8
	6 to 9 days	11	1.6
	10 to 19 days	11	1.6
	20 to 29 days	7	1.0
	All 30 days	1	0.1
Have you ever smoked cigarettes daily, that is, at least one cigarette every day for 30 days?	Yes	37	5.5
	No	636	94.5
During the past 12 months, did you ever try to quit smoking cigarettes?	Yes	45	6.7
	No	245	36.4
	I did not smoke during the past 12 months	383	56.9
During the past 30 days, on how many did you use stuff "taba" or shisha?	0 days	571	84.8
	1 or 2 days	50	7.4
	3 to 5 days	21	3.1
	6 to 9 days	17	2.5
	10 to 19 days	4	0.6
	20 to 29 days	5	0.7
	All 30 days	5	0.7
During the past 30 days, on how many days did you use snuff "taba" or shisha in school premises?	0 days	602	89.5
	1 or 2 days	28	4.2
	3 to 5 days	24	3.6
	6 to 9 days	4	0.6
	10 to 19 days	7	1.0
	20 to 29 days	0	0.0
	All 30 days	8	1.2
Do your parents/ guardians engage in smoking?	Both my parents/ guardians do not smoke	480	71..3
	Both my parents/guardians smoke	48	7.1
	Only my father/male	14	2.1

	guardian smokes		
	Only my mother/female guardian smoke	9	1.3
	I don't know	122	18.1

5.4.6 DRINKING ALCOHOL

In relation to drinking of alcohol, it has been found that majority of the participants (n = 452, 67.2%) have never drank alcohol during their life time. However, during their life time, it was revealed that 144 participants (21.4%) have drank alcohol for 1 or 2 days, 27 participants (5.5%) have drank for 3 to 9 days, 25 participants (3.7%) have drank for 10 to 19 days and 15 participants (2.2%) have drank for 20 or more days. When participants were asked how old they are when they first drank alcohol, 44 participants (6.5%) were 8 years old or younger, 41 participants (6.1%) were 9 to 10 years old, 49 participants (7.3%) were 11 to 12 years old, 58 participants (8.6%) were 13 to 14 years old, 16 participants (2.4%) were 15 to 16 years old, 17 participants (2.5%) were 15 to 17 years old and 6 participants were 18 years old or older.

Likewise, when asked how often do participants have at least of drink of alcohol in the past 30 days, 74 participants (11.0%) mentioned 1 or 5 days, 32 participants (4.8%) mentioned 6 to 9 days, 7 participants (1.0%) mentioned 10 to 19 days and 18 participants (2.7%) mentioned 20 to 30 days. Furthermore, on how often do participants drank 5 or more drinks of alcohol within a couple of hours in the past 30 days, it was found that 74 participants (11.0%) drank for 1 or 5 days, 32 participants (4.8%) drank for 6 to 9 days, 7 participants drank for 10 to 19 days and 18 participants drank for 20 to 30 days.

Additionally, when participants were asked for how many days have they drank alcohol in the past 30 days during school time or premises, it was revealed that 66 participants (9.8%) have

drank for 1 or 5 days, 40 participants (5.9%) have drunk for 6 to 9 days, 12 participants have drunk for 10 to 19 days and 18 participants (2.7%) have drunk for 20 to 30 days. Table 5.7 summarized the result of alcohol drinking.

Table 5.7: Alcohol (n=673)

Risk behavior	Responses	Frequency n	(%)
During your life, how often have you had at least one drink of alcohol?	0 days	452	67.2
	1 or 2 days	144	21.4
	3 to 9 days	27	5.5
	10 to 19 days	25	3.7
	20 or more days	15	2.2
How old were you when you had your first drink of alcohol?	I have never had a drink of alcohol	442	65.7
	8yrs old/younger	44	6.5
	9 to 10 years old	41	6.1
	11 to 12 years old	49	7.3
	13 to 14 years old	58	8.6
	15 to 16 years old	16	2.4
	15 to 17 years old	17	2.5
	18 years old or older	6	0.9
How often did you have at least one drink of alcohol within the past month (30 days)?	0 days	518	77.0
	1 or 5 days	71	10.5
	6 to 9 days	56	8.3
	10 to 19 days	26	3.9
	20 to 30 days	2	0.3
How often did you have 5 or more drinks of alcohol in a row, that is, within a couple of hour during the past month (30 days)?	0 days	542	80.5
	1 or 5 days	74	11.0
	6 to 9 days	32	4.8
	10 to 19 days	7	1.0
	20 to 30 days	18	2.7
How many days did you have at least one drink of alcohol at school during school time within the past month (30 days)?	0 days	537	79.8
	1 or 5 days	66	9.8
	6 to 9 days	40	5.9
	10 to 19 days	12	1.8
	20 to 30 days	18	2.7

5.4.7 MARIJUANA/SK USE AND DRUG USE

In relation to marijuana and drug use, it has been found that majority of the participants (n = 580, 86%) has never used marijuana ever in their life. However, during their life, it was revealed that 56 participants (8.3%) have used marijuana for 1 to 2 times, 31 participants (4.6%) have used marijuana for 3 to 9 times, 6 participants have used marijuana for more than 10 times. Also, when participants were asked at what age did they use marijuana for the first time, 22 participants (3.3%) mentioned 8 years old or younger, 20 participants (3.0%) mentioned 9 or 10 years old, 8 participants (1.2%) mentioned 11 or 12 years old, 17 participants mentioned 13 or 14 years old and 6 participants mentioned 15 years old or older.

In addition, when asked how often did participants use marijuana in the past 30 days, it was found that 46 participants (6.8%) have used marijuana 1 to 5 days, 23 participants (3.4%) have used marijuana for 6 to 9 days and 12 participants have used marijuana for more than 10 days. Furthermore, when participants were asked how often have they use marijuana in the past 30 days during school time, it was revealed that 26 participants (3.9%) have used marijuana for 1 to 5 days, 11 participants (1.6%) have used marijuana 6 to 9 days, 31 participants (4.6%) have used marijuana 10 to 19 days and 12 participants (1.8%) have used marijuana 20 – 30 days. Table 5.8 reports on the exposure of participants with marijuana and drug use.

Table 5.8: Marijuana/SK use and Drug use (n =673)

Risk behavior	Responses	Frequency n	(%)
During your life, how many times have you used marijuana “Igbo/weed/ganja” or SK?	Never (0 times)	580	86.2
	Rarely (1-2 times)	56	8.3
	Sometimes (3-9 times)	31	4.6
	Often (10-19 times)	4	0.6
	Very Often(20 or more times)	2	0.3

How old were you when you tried marijuana or SK for the first time?	I have never tried marijuana	600	89.2
	8 years old or younger	22	3.3
	9 or 10 years old	20	3.0
	11 or 12 years old	8	1.2
	13 or 14 years old	17	2.5
	15 or 16 years old	1	0.1
	17 years old or older	5	0.7
During the past month (30 days), how often did you use marijuana or SK?	Never (0 days)	592	88.0
	Rarely (1-5 days)	46	6.8
	Sometimes (6-9 days)	23	3.4
	Often (10-19 days)	4	0.6
	Very Often (20-30 days)	8	1.2
How often did you use marijuana or SK at school during school time within the past month (30 days)?	Never (0 days)	593	88.1
	Rarely (1-5 days)	26	3.9
	Sometimes (6-9 days)	11	1.6
	Often (10-19 days)	31	4.6
	Very Often (20-30 days)	12	1.8

5.4.8 OTHER DRUG USE

This section has items that elicit participants' responses about other drug use. According to Table 5.9, the participants shared their engagement or exposure to a variety of drugs such as gum sniffing, petrol and paint inhaling, cocaine, powder, and crack. When participants were asked how many times have they sniffed gum or inhaled substance like petrol, paint ever in their life to get high, 50 participants (7.4%) mentioned 1 or 2 times, 20 participants (3.0%) mentioned 3 to 9 times, 15 participants (2.2%) mentioned 10 to 19 times and 1 participant mentioned 20 or more time. Furthermore, when asked how many time have they used cocaine in powder or crack form ever in their life, 47 participants (7.0%) mentioned 1 or 2 times, 14 participants (2.1%) mentioned 3 to 9 times, 10 participants (1.5%) mentioned 10 to 19 times and 9 participants mentioned 20 or more time.

Likewise, when the participants were asked during their life, how often have they used a needle to inject any illegal drug e.g. heroine into their body, nearly, 39 participants (5.8%) have used needle 1 to 2 times while 15 participants (2.2%) have used needle 3 to 9 times. On the other hand, 7 participants (1.0%) have used needle 10 to 19 times while 13 participants (1.9%) have used needle in their body 20 or more time. Additionally, when participants were asked how many times they have taken prescription drug, 24 participants (3.6%) mentioned 1 or 2 times, 41 participants (6.1%) mentioned 3 to 9 times, 27 participants (4.0%) mentioned 10 to 19 times and 12 participants mentioned 20 or more time. Lastly, sixty participants (8.9%) further indicated that they have been offered illegal drug at school premises in the past 12 months.

Table 5.9: Other Drug use (n=673)

Risk behavior	Responses	Frequency n	(%)
How often have you sniffed gum or inhaled petrol, paint or paint thinners to get high during your lifetime?	0 times	585	86.9
	1 or 2 times	50	7.4
	3 to 9 times	20	3.0
	10 to 19 times	15	2.2
	20 or more	1	0.1
	I don't know this drug	2	0.3
How often have you used cocaine "gbana" including powder, crack during your lifetime?	0 times	588	87.4
	1 or 2 times	47	7.0
	3 to 9 times	14	2.1
	10 to 19 times	10	1.5
	20 or more	9	1.3
	I don't know this drug	5	0.7
How often have you used a needle to inject any illegal drug into your body during your lifetime?	0 times	591	87.8
	1 or 2 times	39	5.8
	3 to 9 times	15	2.2
	10 to 19 times	7	1.0
	20 or more	13	1.9
	I don't know this drug	8	1.2
How many times have you taken a prescription drug during your lifetime?	0 times	556	82.6
	1 or 2 times	24	3.6
	3 to 9 times	41	6.1
	10 to 19 times	27	4.0
	20 or more	12	1.8
	I don't know this drug	13	1.9

Has anyone offered, sold, or given you an illegal drug at school premises within the past 12 months?	Yes	60	8.9
	No	613	91.1

5.4.9 SEXUAL BEHAVIOR

In relation to sexual behavior, it was found that less than half of the participants (n = 182, 27.0%) have had sexual intercourse. However, when asked old were the participants when they first had sexual intercourse, 43 participants (6.4%) said 11 years old or younger, 29 participants (4.3%) said 12 years old, 26 participants (3.9%) said 13 years old, 42 participants (6.2%) said 14 years old, 18 participants (2.7%) said 15 years old, 10 participants said 16 years old and 11 participants said 17 years old or older.

Furthermore, when participants were asked how many people in their life have they had sex with, 60 participants (8.9%) mentioned 1 person, 31 participants (4.6%) mentioned 2 people, 23 participants (3.4%) mentioned 3 people, 14 participants (2.1%) mentioned 4 people and 46 participants (6.8%) mentioned 5 or more people. Similarly, when asked how many people in the past 30 days have they had sex with, 44 participants (6.5%) said they have sexual intercourse but not in the past 3 months. However, 33 participants (4.9%) have had sex with 1 person, 23 participants (3.4%) have had sex with 2 people, 19 participants have had sex with 3 people, 29 participants (4.3%) have had sex with 4 people and 25 participants (3.7%) have had sex with 5 people or more. The last time participants had sex, 29 participants (4.3%) indicated that they drink alcohol before they had sexual intercourse with their partners. Also it was found that 259 participants (38.5%) never use condom when they had sexual intercourse with their partner.

Additionally, when participants were asked what method was used to prevent pregnancy when they had sex with their partners, 40 participants (5.9%) said no method was used. However, 17 participants (2.5%) said they used birth control pills, 103 participants (15.3) said they used condom, four participants said they use depo provera, four participants said they used withdrawal method and four participants said they used other method. Table 5.10 reports the sexual behavior of participants in this study.

Table 5.10: Sexual behavior (n=673)

Risk behavior	Responses	Frequency n	(%)
Have you ever had sexual intercourse with someone? (when the penis enters the vagina or the anus)?	Yes	182	27.0
	No	491	73.0
When you had sexual intercourse how old were you?	I have never had sexual intercourse	494	73.4
	11 years old or younger	43	6.4
	12 years old	29	4.3
	13 years old	26	3.9
	14 years old	42	6.2
	15 years old	18	2.7
	16 years old	10	1.5
During your life, how many people have you had sex	17 years old or older	11	1.6
	I have never had sexual intercourse	499	74.1
	1 person	60	8.9
	2 people	31	4.6
	3 people	23	3.4
	4 people	14	2.1
During the past 3 months, how many people have you had sex	5 or more people	46	6.8
	I have never had sexual intercourse	500	74.4
	I have had sexual intercourse, but not during the past 3 months	44	6.5
	1 person	33	4.9
	2 people	23	3.4
	3 people	19	2.8
	4 people	29	4.3
5 people or more people	25	3.7	
The last time you had sex, did you drink alcohol or use drugs	I have never had sex	389	57.8
	Yes	29	4.3

before you had sex?	No	251	37.3
	I don't remember	4	0.6
When you have sex, how often do you or your partner use a condom?	I have never had sexual Intercourse	392	58.2
	Yes	22	3.3
	No	259	38.5
When you have sex, what one method did you or your partner mostly use to prevent pregnancy?	I have never had sexual intercourse	495	73.6
	No method was used to prevent pregnancy	40	5.9
	Birth control pills	17	2.5
	Condoms	103	15.3
	Depo Provera (injectable birth control)	4	0.6
	Withdrawal	4	0.6
	Some other method	4	0.6
Not sure	6	0.9	

5.4.10 BODY WEIGHT

This section has items that focused on body weight and how participants describe their body weight. When participants were asked to describe their body weight, it was found that 137 participants (20.4%) reported being very under-weight, 157 participants (23.3%) were slightly under weight, 292 participants (43.3%) were about the right weight, 78 participants (11.6%) were slightly overweight and 9 participants were very overweight. Furthermore, when asked what are they doing about their weight, 147 participants (21.8%) indicated that are trying to lose weight, 231 participants (34.3%) are trying to gain weight, 184 participants (27.3%) decided to stay on the same bodyweight and 111 participants (16.5%) said they are doing anything about their weight.

It was further found that seventy-six participants (11.3%) in the past 30 days have taken diet pill without the advice of a doctor's either to lose weight or gain weight. Additionally, 158 participants (23.5%) have gone without eating for 24hours or more to lose weight in the past 30

days. Likewise, 67 participants also indicated that in the past 30 days, they have taken laxatives and vomited to keep them from gaining weight. Table 5.11 below reports the body weight of the participants.

Table 5.11: Body weight (n=673)

Risk behavior	Responses	Frequency n	(%)
How do you describe your weight?	Very underweight	137	20.4
	Slight underweight	157	23.3
	About the right weight	292	43.3
	Slightly overweight	78	11.6
	Very overweight	9	1.3
Which of the following are you trying to do about your weight?	Lose weight	147	21.8
	Gain weight	231	34.3
	Stay the same weight	184	27.3
	I am not trying to do anything about my weight	111	16.5
During the past 30days, did you take any diet pills, powders, or liquids without a doctor's advice to lose weight or keep from gaining weight	Yes	76	11.3
	No	597	88.7
During the past 30 days, did you go without eating for 24 hours or more (also called fasting) to lose weight or keep from gaining weight?	Yes	158	23.5
	No	515	76.5
During the past 30 days, did you vomit or take laxatives to lose weight or keep from gaining weight?	Yes	67	10.0
	No	606	90.0

5.4.11 PHYSICAL ACTIVITY

This section presents the results on the participants' engagement in physical activity (Table 5.12). Two hundred and seventy three participants were physically active for sixty minute during the past 7 days ranging from 61 participants for 1 day of the 7 days to 104 students being active for all 7 days. The vast majority of the participants (443) spent their time watching television

ranging from 168 students for less than an hour while 57 participants for an hour a day to 108 students for more than 2 or more hour per day. Only three hundred and fifteen students indicated that they attend Physical Education Classes during certain days of school week. The number of days in which they attend physical education classes ranging from 1 day (89 students) to 5 days (51 students). Three hundred and sixty five students expressed that during the past 12 months they played in 1 to 3 or more sport teams. One hundred and fifty one students in 1 team, 88 in 2 teams and 126 in 3 or more teams.

Table 5.12: Physical Activity (n=673)

Risk behavior	Responses	Frequency n	(%)
During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?	0 days	400	59.4
	1 day	61	9.1
	2 days	34	5.1
	3 days	17	2.5
	4 days	21	3.1
	5 days	25	3.7
	6 days	11	1.6
	Everyday	104	15.5
On an average school day, how many hours do you watch TV?	I do not watch TV, play video game	230	34.2
	Less than 1 hour per day	168	25.0
	1 hour per day	63	9.4
	2 hours per day	70	10.4
	3 hours per day	29	4.3
	4 hours per day	44	6.5
	5 or more hours per day	3	0.4
On an average school day, how many hours do you play videos or computer games or use computer for something that is not school work?	I do not watch TV, play video games or computer games	301	44.7
	Less than 1 hour per day	207	30.8
	1 hour per day	57	8.5
	2 hours per day	41	6.1
	3 hours per day	16	2.4
	4 hours per day	19	2.8
In an average week when you are in school, on how many days do you go to physical education (PE) classes?	0 days	358	53.2
	1 day	89	13.2
	2 days	120	17.8
	3 days	37	5.5
	4 days	18	2.7

	5 days	51	7.6
During the past 12 months, on how many sports teams did you play?	0 teams	308	45.8
	1 team	151	22.4
	2 teams	88	13.1
	3 or more teams	126	18.7

5.4.12 OTHER HEALTH-RELATED TOPICS

Regarding other health-related topic, five hundred and seventy-two participants (85.0%) have been taught about AIDS and HIV infection in their various schools. However, 92 participants (13.7%) indicated that they haven't been taught about AIDS and HIV infection at school. Also, when participants were asked whether they have been told if they have asthma or tuberculosis by a doctor or a nurse, 73 participants (10.8%) responded with yes while 564 participants (83.8%) participants responded with no. Furthermore, 43 participants (6.4%) indicated that they still have asthma or tuberculosis infection. Table 5.13 summarized the findings on other health-related topics.

Table 5.13: Other health-related topic (n=673)

Risk behavior	Responses	Frequency n	(%)
Have you ever been taught about AIDS or HIV infection in school?	Yes	572	85.0
	No	92	13.7
	Not sure	9	1.3
Has a doctor or nurse ever told you that you have Asthma or tuberculosis?	Yes	73	10.8
	No	564	83.8
	Not sure	36	5.3
Do you still have Asthma or Tuberculosis?	Yes	43	6.4
	No	579	86.0
	Not sure	51	7.6

5.4.13 DIETARY BEHAVIOR

When participants were asked how many times did they eat fresh fruit in the past 7 days, 266 participants (39.5%) ate fruit 6 or 7 times, 102 participants (15.2%) ate fruit 4 or 5 times, 182 participants (27.0%) ate fruit 2 or 3 times and 70 participants (10.4%) ate fruit for 1 day.

Furthermore, when asked that in the past 7 days how often participants did eat uncooked vegetables? 140 participants (20.8%) mentioned 6 or 7 days, 99 participants (14.7%) mentioned 4 or 5 days, 108 participants (16.0%) mentioned 2 or 3 days and 83 participants (12.3%) mentioned 1 day. Also, when participants were asked how many time did they ate tinned or cooked vegetables in the past 7 days, 169 participants (25.1%) participants ate vegetables for 6 or 7 days, 146 participants (21.7%) ate vegetables for 4 or 5 days, 153 participants (22.7%) ate vegetables for 2 or 3 days and 119 participants ate vegetables for 1 day.

Additionally, when participants were asked how often did they eat fast foods in the past 7 days, 346 participants (51.4%) mentioned for 6 or 7 days, 78 participants (11.6%) mentioned 4 or 5 days, 147 participants (21.8%) and 46 participants (6.8%) mentioned 1 day. Table 5.14 reports on the engagement of participants concerned with food during the past 7 days.

Table 5.14: Dietary behavior (n=673)

Risk behavior	Responses	Frequency n	(%)
How many times did you eat fresh fruit within the past 7 days?	6 or 7	266	39.5
	4 or 5	102	15.2
	2 or 3	182	27.0
	1 day	70	10.4
	0 day	53	7.9
How often did you eat uncooked vegetables within the past 7 days?	6 or 7	140	20.8
	4 or 5	99	14.7
	2 or 3	108	16.0
	1 day	83	12.3
	0 day	243	36.1
How often did you eat vegetables that were tinned or cooked within the past 7 days?	6 or 7	169	25.1
	4 or 5	146	21.7
	2 or 3	153	22.7
	1 day	86	12.8
	0 day	119	17.7
How often did you eat fast foods like suya, chips, fried chicken, pie etc. within the past 7 days?	6 or 7	346	51.4
	4 or 5	78	11.6
	2 or 3	147	21.8
	1 day	46	6.8

	0 day	56	8.3
How often did you drink a can, bottle or glass of soda, such as Coke, Fanta, etc. within the past 7 days?	6 or 7	249	37.0
	4 or 5	146	21.7
	2 or 3	170	25.3
	1 day	50	7.4
	0 day	58	8.6
How often did you eat foods like potato chips, chocolate, sweets, popcorn, and cake within the past 7 days?	6 or 7	227	33.7
	4 or 5	151	22.4
	2 or 3	179	26.6
	1 day	81	12.0
	0 day	35	5.2



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5.5 THE PREVALENCE OF HEALTH RISK BEHAVIORS AND ITS ASSOCIATION WITH THE DEMOGRAPHIC VARIABLES

5.5.1 THE MANN WHITNEY-U TEST RESULT FOR HEALTH RISK BEHAVIORS AND GENDER

Table 5.15: Personal safety

Risk Behavior	Gender	Mean Rank	U	Sig Levels
When you rode a bike “okada rider” during the past 12 months, how often did you wear a helmet?	Male	333.6	54536.500	0.594
	Female	341.26		
How often do you wear a seat belt when riding in a car driven by someone else?	Male	330.62	53391.500	0.324
	Female	345.12		
During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?	Male	347.26	51926.500	0.056
	Female	323.93		
During the past 12 months, how many times did you drive a car or other vehicle when you had been drinking alcohol?	Male	350.89	50560.000	0.000*
	Female	319.31		

Asymptotic significances are displayed. The significance level is .05.

Table 5.15 presents the variables about personal safety among the participants in the current study. A Mann-Whitney U test showed that there was a statistically significant difference ($U = 50560, P = 0.000$) between the two gender groups who have indicated that in the past 12 months they have driven a car under the influence of alcohol. Other variables showed no statistically significant difference between the two gender groups as the P values were higher than the level of significance.

Table 5.16: Violence – related behaviors

Risk Behavior	Gender	Mean Rank	U	Sig Levels
How many days within the past month (30 days) did you carry a weapon such as a knife “lebe”, screwdriver or broken bottle?	Male Female	345.64 325.99	52538.000	0.060
How many days within the past month (30 days), did you carry a gun?	Male Female	347.85 323.18	51704.500	0.000*
How many days within the past month (30 days) did you carry a weapon such as a gun, knife “lebe”, screwdriver or broken bottle while at school?	Male Female	347.68 323.40	51770.000	0.001*
How many times within the past month (30 days) have you used a mathematical compass or divider as a weapon at school?	Male Female	341.45 331.33	54117.500	0.318
How many days within the past month (30 days) did you not go to school (miss school) because you felt you would be unsafe at school?	Male Female	345.29 326.44	52670.500	0.067
How many days within the past month (30 days) did you not go to (miss) school because you felt you would be unsafe on your way to or from school?	Male Female	341.07 331.82	54263.000	0.337
How many times within the past 6 months has someone threatened or injured you with a weapon such as a gun, knife, screwdriver, mathematical compass, divider or broken bottle at school?	Male Female	354.40 314.84	49238.000	0.000*
How many times within the past 12 months were you in a physical fight?	Male Female	355.05 314.01	48990.000	0.001*
How many times within the past 12 months were you in a physical fight in which you were injured and had to be treated by a doctor or a nurse?	Male Female	351.75 318.22	50236.500	0.000*
How many times within the past 12 months were you in a physical fight while in school?	Male Female	360.19 307.46	47053.000	0.000*
Did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose within the past 12 months?	Male Female	357.45 311.47	48238.500	0.000*
Have you ever been forced physically to have sexual intercourse when you did not want to?	Male Female	344.45 327.51	52987.000	0.033*

Asymptotic significances are displayed. The significance level is .05.

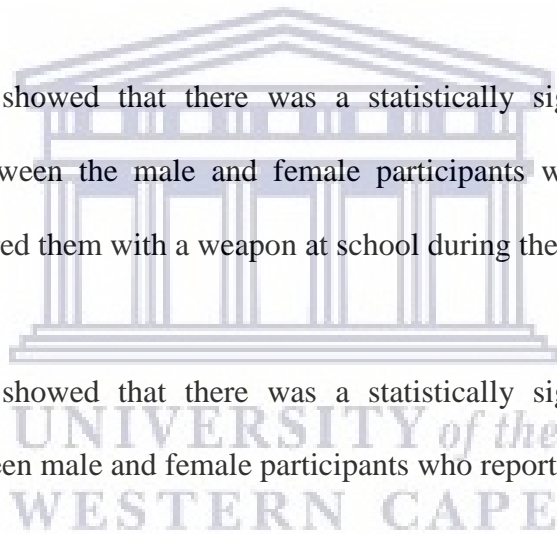
Regarding the violence-related variables, Table 5.16 presents the statistical significant differences between the two gender groups. A Mann-Whitney U test showed that there was a statistically significant difference ($U= 51704.500$, $P= 0.000$) between the male and female participants who reported that they did carry a gun during the past month/30 days.

A Mann-Whitney U test showed that there was a statistically significant difference ($U= 51770.000$, $P= 0.001$) between the male and female participants who reported the number of days they did carry a weapon while at school during the past 30 days.

A Mann-Whitney U test showed that there was a statistically significant difference ($U= 49238.000$, $P= 0.000$) between the male and female participants who reported about times someone threatened or injured them with a weapon at school during the past 6 months.

A Mann-Whitney U test showed that there was a statistically significant difference ($U= 48990.000$, $P=0.001$) between male and female participants who reported that they have engaged in a physical fight.

A Mann-Whitney U test showed that there was a statistically significant difference ($U= 50236.500$, $P= 0.000$) between male and female participants who reported on the time they have been involved in a physical fight and had to be treated by a doctor or a nurse in the past 12 months.



A Mann-Whitney U test showed that there was a statistically significant difference ($U=47053.000$, $P= 0.000$) between the two gender groups who reported on how many time they have engaged in a physical fight why they are in school in the past 12 months.

A Mann-Whitney U test showed that there was a statistically significant difference ($U=48238.500$, $P= 0.000$) between the male and the female participants who reported on the time they have been hit, slap or physical hurt by their boyfriend or girlfriend on purpose in the past 12 months.

A Mann-Whitney U test showed that there was a statistically significant difference ($U=52987.000$, $P= 0.033$) between the male and female participants who have been forced to have sexual intercourse when they did not want to in the past 12 months.

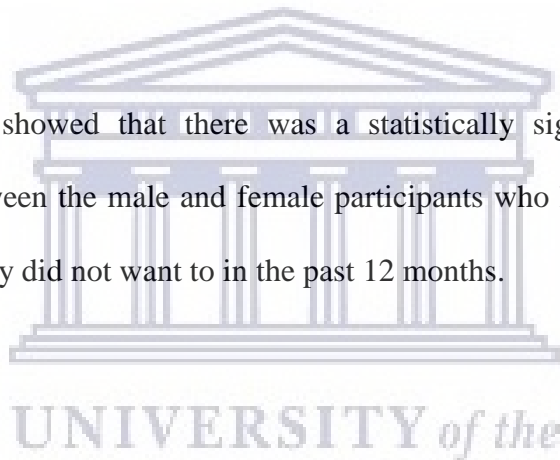


Table 5.17: Bullying

Risk Behavior	Gender	Mean Rank	U	Sig Levels
Have you been bullied with the school premises within the past 12 months?	Male	363.25	45091.500	0.000*
	Female	303.57		
Have you ever been electronically bullied within the past 12 months? (Including being bullied through What Sapp, twitter, text message and other social media)	Male	344.19	53083.500	0.087
	Female	327.84		

Asymptotic significances are displayed. The significance level is .05.

From the Table 5.17, out of the variable of bullying, only the question that asked if participants have been bullied within the school premises in the past 12 months shows statistically significant differences between the two gender groups. A Mann-Whitney U test showed that there was a

statistically significant difference ($U= 45091.500$, $P= 0.000$) between the male and female participants who have been bullied within the school premises.

Table 5.18: Sad feeling and attempts at suicide

Risk Behavior	Gender	Mean Rank	U	Sig Levels
Within the past 12 months have you ever thought of committing suicide?	Male	340.96	54301.500	0.461
	Female	331.95		
Within the past 12 months have you attempted suicide?	Male	337.03	55786.500	0.994
	Female	336.97		
Have you ever experienced feeling of sadness or hopelessness within the past 12 months?	Male	326.33	51774.500	0.059
	Female	350.59		
Have you ever nursed the thought of killing yourself in the past 12 months?	Male	336.27	55520.500	0.861
	Female	337.93		
Within the past 12 month how many times did you actually attempt suicide?	Male	336.68	55674.000	0.927
	Female	337.41		
If you attempted suicide within the past 12 months, did any attempt result in an injury, poisoning or overdose that had to be treated by a doctor or nurse?	Male	341.45	54116.500	0.140
	Female	331.33		

Asymptotic significances are displayed. The significance level is .05.

From Table 5.18, no variables of sad feeling and attempts at suicide shows a statistically significant difference between the two gender groups as their P values were higher than the level of significance.

Table 5.19: Smoking

Risk Behavior	Gender	Mean Rank	U	Sig Levels
Have you ever tried cigarette smoking, even one or two puffs?	Male	356.83	48319.500	0.000*
	Female	311.74		
How old were you when you smoked a whole cigarette for the first time?	Male	359.65	47256.500	0.000*
	Female	308.15		
During the past 30 days, on how many days did you smoke cigarettes?	Male	356.92	48287.000	0.000*
	Female	311.63		
During the past 30 days, on the days you	Male	356.28	48528.500	0.000*

smoked, how many cigarettes did you smoke per day?	Female	312.45		
During the past 30 days, how did you usually get your own cigarettes?	Male	356.44	48466.500	0.000*
	Female	312.24		
During the past 30 days, on how many days did you smoke in school premises?	Male	356.22	48551.000	0.000*
	Female	312.52		
Have you ever smoked cigarettes daily, that is, at least one cigarette every day for 30 days?	Male	345.29	52672.000	0.002*
	Female	326.45		
During the past 12 months, did you ever try to quit smoking cigarettes?	Male	331.29	53643.000	0.326
	Female	344.27		
During the past 30 days, on how many did you did you use stuff “taba” or shisha?	Male	355.78	48714.500	0.000*
	Female	313.08		
During the past 30 days, on how many days did you use snuff “taba” or shisha in school premises?	Male	354.12	49342.000	0.000*
	Female	315.20		
Do your parents/ guardians engage in smoking?	Male	352.61	49912.000	0.003*
	Female	317.12		

Asymptotic significances are displayed. The significance level is .05.

Table 5.19 presents the variables of smoking among the participants in the present study. A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48319.500$, $P = 0.000$) between the two gender groups who in their lifetime have tried smoking cigarette either one or more puff.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 47256.500$, $P = 0.000$) between the male and female participants who reported on the age they smoked a whole cigarette for the first time.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48287.000$, $P = 0.000$) between the male and female participants who reported on the days they did smoke cigarettes in the past 30 days.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48528.500$, $P = 0.000$) between male and female participants who reported how many cigarettes they smoke on the day they smoked in the past 30 days.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48466.500$, $P = 0.000$) between the two gender groups who reported on how they usually get their cigarette in the past 30 days.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48551.000$, $P = 0.002$) between the two gender groups who reported on the days they have smoked cigarettes within the school premises in the past 30 days.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 52672.000$, $P = 0.000$) between the male and female participants who have at least smoked a smoked one stick of cigarette every day in the past 30 days.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48714.500$, $P = 0.000$) between the two gender groups who reported on the days they have used stuff “taba” or shisha in the past 30 days.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 49342.000$, $P = 0.000$) between the two gender groups who reported on the days they have used stuff “taba” or shisha within the school premises in the past 30 days.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 49912.000$, $P = 0.003$) between the male and female participants who reported that their parents or guardian do smoke.

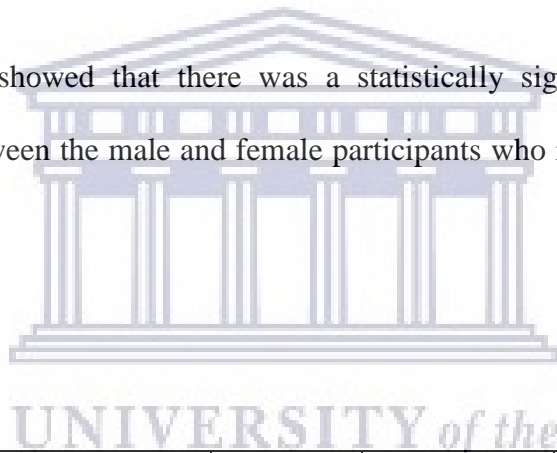


Table 5.20: Alcohol

Risk Behavior	Gender	Mean Rank	U	Sig Levels
During your lifetime, how often have you had at least one drink of alcohol?	Male	344.62	52923.00	0.166
	Female	327.29		
How old were you when you had your first drink of alcohol?	Male	344.11	53115.00	0.205
	Female	327.94		
How often did you have at least one drink of alcohol within the past month (30 days)?	Male	353.73	49487.500	0.001*
	Female	315.69		
How often did you have 5 or more drinks of alcohol in a row, that is, within a couple of hour during the past month (30 days)?	Male	351.51	50327.000	0.002*
	Female	318.52		
How many days did you have at least one drink of alcohol at school during school time within the past month (30 days)?	Male	352.07	50115.000	0.001*
	Female	317.81		

Asymptotic significances are displayed. The significance level is .05.

Regarding the alcohol variables, Table 5.20 presents the statistically significant differences between the two gender groups. A Mann-Whitney U test showed that there was a statistically significant difference ($U = 49487.500$, $P = 0.001$) between the two gender groups who reported how often they have at least one drink of alcohol in the past 30 days.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 50327.000$, $P = 0.002$) between the male and females participants who reported on how often they took 5 or more drinks of alcohol in a row, that is, within a couple of hours in the past 30 days.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 50115.000$, $P = 0.001$) between the two gender groups who reported on the days they have at least one drink of alcohol at school during school time in the past 30 days.

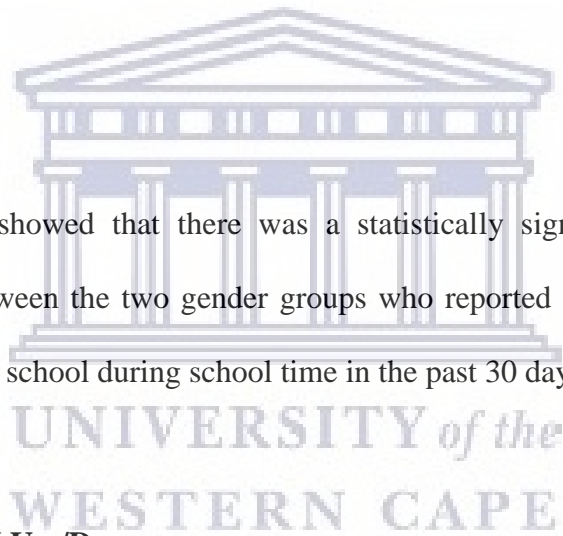


Table 5.21: Marijuana/SK Use/Drug use

Risk Behavior	Gender	Mean Rank	U	Sig Levels
During your life, how many times have you used marijuana “Igbo/weed/ganja” or SK?	Male	361.35	46614.500	0.000*
	Female	305.98		
How old were you when you tried marijuana or SK for the first time?	Male	355.28	48906.000	0.000*
	Female	313.72		
During the past month (30 days), how often did you use marijuana or SK?	Male	356.98	48262.500	0.000*
	Female	311.55		
How often did you use marijuana or SK at school during school time within the past month (30 days)?	Male	356.84	48317.500	0.000*
	Female	311.73		

Asymptotic significances are displayed. The significance level is .05.

Table 5.21 presents the variables about marijuana/SK/drug use among the participants in the present study. A Mann-Whitney U test showed that there was a statistically significant difference ($U = 46614.500$, $P = 0.000$) between the male and female participants who have used marijuana “Igbo/weed/ganja” or SK” in their lifetime.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48906.00$, $P = 0.000$) between the two gender groups who reported on the age they were when they first tried marijuana or SK.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48262.500$, $P = 0.000$) between the male and female participants who reported how often they have used marijuana or SK in the past 30 days.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48317.500$, $P = 0.000$) between the male and female participants who reported how often they have used marijuana or SK in the past 30 days during school time.

Table 5.22: Other Drug Use

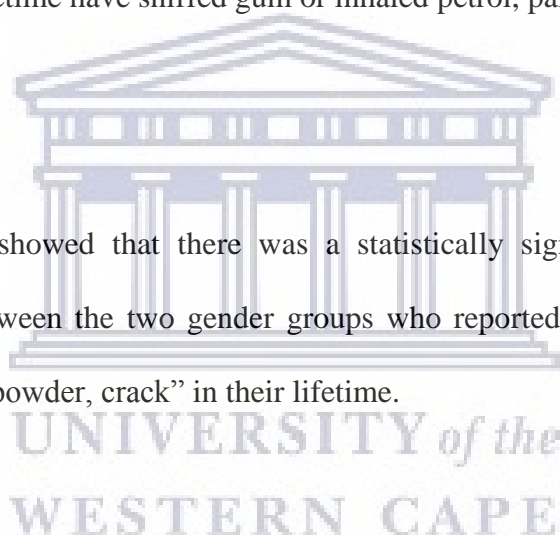
Risk Behavior	Gender	Mean Rank	U	Sig Levels
How often have you sniffed gum or inhaled petrol, paint or paint thinners to get high during your lifetime?	Male	358.82	47568.500	0.000*
	Female	309.20		
How often have you used cocaine “gbana” including powder, crack during your lifetime?	Male	356.83	48320.000	0.000*
	Female	311.74		
How often have you used a needle to inject any illegal drug into your body during your lifetime?	Male	356.71	48364.500	0.000*
	Female	311.89		

How many times have you taken a prescription drug during your lifetime?	Male	350.64	50652.000	0.002*
	Female	319.62		
Has anyone offered, sold, or given you an illegal drug at school premises within the past 12 months?	Male	347.17	51963.500	0.002*
	Female	324.05		

Asymptotic significances are displayed. The significance level is .05.

Regarding the other drug use variables, Table 5.22 presents the statistically significant differences among the two gender groups. A Mann-Whitney U test showed that there was a statistically significant difference ($U = 47568.500$, $P = 0.000$) between the male and female participants who in their lifetime have sniffed gum or inhaled petrol, paint or paint thinners to get high.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48320.000$, $P = 0.000$) between the two gender groups who reported on how often they used cocaine “gbana” including powder, crack” in their lifetime.



A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48364.500$, $P = 0.000$) between the male and female participants who in their lifetime have used a needle to inject an illegal drug into their body.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 50652.000$, $P = 0.002$) between the two gender groups who reported on the times they have taken a prescription drug, and an illegal drug within the school premises ($U = 51963.000$, $P = 0.002$).

Table 5.23: Sexual Behavior

Risk Behavior	Gender	Mean Rank	U	Sig Levels
Have you ever had sexual intercourse with someone? (when the penis enters the vagina or the anus)?	Male	371.85	42656.500	0.000*
	Female	292.61		
How old were you when you had sexual intercourse	Male	369.29	43622.500	0.000*
	Female	295.87		
During your life, how many people have you had sex	Male	367.46	44312.500	0.000*
	Female	298.20		
During the past 3 months, how many people have you had sex	Male	367.86	44162.500	0.000*
	Female	297.70		
The last time you had sex, did you drink alcohol or use drugs before you had sex?	Male	353.91	49420.500	0.000*
	Female	315.46		
When you have sex, how often do you or your partner use a condom?	Male	356.64	48392.500	0.001*
	Female	311.99		
When you have sex, what one method did you or your partner mostly use to prevent pregnancy?	Male	367.92	44141.000	0.000*
	Female	297.63		

Asymptotic significances are displayed. The significance level is .05.

Table 5.23 presents the variables about sexual behavior among the participants in the present study. A Mann-Whitney U test showed that there was a statistically significant difference ($U = 42656.500$, $P = 0.000$) between the male and female participants who have had sexual intercourse (when the penis enters the vagina or the anus”.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 43622.500$, $P = 0.000$) between the two gender groups who reported on the age they first had sexual intercourse.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 44312.500$, $P = 0.000$) between the male and female participants who reported on the people they have had sex with during their lifetime.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 44162.500$, $P = 0.000$) between the male and female participants who reported on the numbers of people they have had sex with in the past 3 months.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 49420.500$, $P = 0.000$) between the two gender groups who reported on the times they used drug and alcohol before they have sex the last time they have sexual intercourse.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48392.500$, $P = 0.001$) between the male and female participants who reported how often they used a condom with their partner when they have sexual intercourse.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 44141.000$, $P = 0.000$) between the two gender groups who had some method they used to prevent pregnancy when they had sex with their partner.

Table 5.24: Body Weight

Risk Behavior	Gender	Mean Rank	U	Sig Levels
How do you describe your weight?	Male	318.16	48692.500	0.003*
	Female	361.00		
Which of the following are you trying to do about your weight?	Male	338.47	55242.500	0.818
	Female	335.13		

During the past 30days, did you take any diet pills, powders, or liquids without a doctor's advice to lose weight or keep from gaining weight	Male Female	345.41 326.28	52624.000	0.021*
During the past 30 days, did you go without eating for 24 hours or more (also called fasting) to lose weight or keep from gaining weight?	Male Female	337.44 336.44	55630.500	0.928
During the past 30 days, did you vomit or take laxatives to lose weight or keep from gaining weight?	Male Female	343.67 328.51	53283.000	0.053

Asymptotic significances are displayed. The significance level is .05.

Regarding body weight variables, Table 5.24 presents the statistically significant differences between the two gender groups. A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48692.500, P = 0.003$) between the male and female participants who were able to describe their body weight.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 52624.000, P = 0.021$) between the two gender groups who have taken diet pills, powders, or liquids without a doctor's advice to lose weight or keep from gaining weight in the past 30 days.

Table 5.25: Physical Activity

Risk Behavior	Gender	Mean Rank	U	Sig Levels
During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?	Male Female	348.11 322.85	51608.500	0.059
On an average school day, how many hours do you watch TV?	Male Female	335.55 338.84	55250.000	0.822
On an average school day, how many hours do you play videos or computer games or use computer for something that is not school work?	Male Female	345.46 326.22	52605.500	0.174
In an average week when you are in	Male	339.48	54859.500	0.683

school, on how many days do you go to physical education (PE) classes?	Female	333.84		
During the past 12 months, on how many sports teams did you play?	Male	364.12	45572.500	0.000*
	Female	302.46		

Asymptotic significances are displayed. The significance level is .05.

Table 5.25 presents the variables of physical activity among the participants in the present study. A Mann-Whitney U test showed that there was a statistically significant difference ($U = 45572.500$, $P = 0.000$) between the male and female participants who reported on the numbers of sports teams they played with in the past 12 months.

Table 5.26: Other Health Related Issues

Risk Behavior	Gender	Mean Rank	U	Sig Levels
Have you ever been taught about AIDS or HIV infection in school?	Male	322.36	50275.500	0.000*
	Female	355.65		
Has a doctor or nurse ever told you that you have Asthma or tuberculosis?	Male	355.82	48699.500	0.000*
	Female	313.03		
Do you still have Asthma or Tuberculosis?	Male	350.46	50722.00	0.001*
	Female	319.86		

Asymptotic significances are displayed. The significance level is .05.

In relation to other health-related issues, Table 5.26 presents the statistically significant differences between the two gender groups. A Mann-Whitney U test showed that there was a statistically significant difference ($U = 50275.500$, $P = 0.000$) between the two gender groups who signified that they have been taught about AIDS or HIV infection in the school.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 48699.500$, $P = 0.000$) between the male and female participants who have been informed by the doctor or nurse that they have Asthma and tuberculosis.

A Mann-Whitney U test showed that there was a statistically significant difference ($U = 50722.000$, $P = 0.001$) between the male and female participants who indicated that they still have Asthma or Tuberculosis.

Table 5.27: Dietary behavior

Risk Behavior	Gender	Mean Rank	U	Sig Levels
How many times did you eat fresh fruit within the past 7 days?	Male	333.27	54388.000	0.556
	Female	341.76		
How often did you eat uncooked vegetables within the past 7 days?	Male	347.15	51968.000	0.114
	Female	324.07		
How often did you eat vegetables that were tinned or cooked within the past 7 days?	Male	345.90	52439.500	0.170
	Female	325.66		
How often did you eat fast foods like suya, chips, fried chicken, pie etc. within the past 7 days?	Male	340.45	54493.500	0.573
	Female	332.60		
How often did you drink a can, bottle or glass of soda, such as Coke, Fanta, etc. within the past 7 days?	Male	339.79	54744.500	0.662
	Female	333.45		
How often did you eat foods like potato chips, chocolate, sweets, popcorn, and cake within the past 7 days?	Male	310.64	45857.000	0.000*
	Female	370.58		

Asymptotic significances are displayed. The significance level is .05.

With regards to dietary behavior, Table 5.27 presents the statistically significant differences between the two gender groups. A Mann-Whitney U test showed that there was a statistically significant difference ($U = 45857.000$, $P = 0.000$) between the two gender groups who reported

how often they eat food like potato chips, chocolate, sweets, popcorn, and cake in the past 7 days.



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5.5.2 THE KRUSKAL WALLIS / POST-HOC COMPARISONS TEST RESULTS FOR HEALTH RISK BEHAVIORS AND CLASS/GRADE

Table 5.28: Personal Safety

Risk Behavior	Class	Mean Rank	K-W Test	Sig Levels	Decision	Post hoc
When you rode a bike “okada rider” during the past 12 months, how often did you wear a helmet?	SS 1 SS 2 SS 3	336.62 315.73 376.71	8.548	0.014*	Reject the null hypothesis	SS 1 & SS 2
How often do you wear a seat belt when riding in a car driven by someone else?	SS 1 SS 2 SS 3	328.90 347.38 340.74	1.317	0.518	Retain the null hypothesis	_____
During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?	SS 1 SS 2 SS 3	332.38 346.24 333.13	1.110	0.574	Retain the null hypothesis	_____
During the past 12 months, how many times did you drive a car or other vehicle when you had been drinking alcohol?	SS 1 SS 2 SS 3	329.53 347.57 338.65	3.350	0.187	Retain the null hypothesis	_____

Asymptotic significances are displayed. The significance level is .05.

With regard to personal safety, Table 5.28 indicates that there was a statistically significant difference among the participants who reported on how often they wear helmet any time they rode a bike “Okada rider” in the past 12 months ($H = 8.548$, $P = 0.014$), and the identified post hoc difference lies between senior class 1 and senior class 2.

Table 5.29: Violence – Related Behaviors

Risk Behavior	Class	Mean Rank	K-W Test	Sig Levels	Decision	Post hoc
How many days within the past month (30 days) did you carry a weapon such as a knife “lebe”, screwdriver or broken bottle?	SS 1 SS2 SS 3	342.48 337.05 321.63	2.118	0.347	Retain the null hypothesis	_____
How many days within the past month (30 days), did you carry a gun?	SS 1 SS 2 SS 3	330.83 340.59 347.70	3.683	0.159	Retain the null hypothesis	_____
How many days within the past month (30 days) did you carry a weapon such as a gun, knife “lebe”, screwdriver or broken bottle while at school?	SS 1 SS 2 SS 3	325.39 350.30 345.25	9.810	0.007*	Reject the null hypothesis	SS 1 & SS 2
How many times within the past month (30 days) have you used a mathematical compass or divider as a weapon at school?	SS 1 SS 2 SS 3	325.01 349.40 347.94	5.638	0.060	Retain the null hypothesis	_____
How many days within the past month (30 days) did you not go to school (miss school) because you felt you would be unsafe at school?	SS 1 SS2 SS 3	315.73 346.69 378.79	21.712	0.000*	Reject the null hypothesis	SS 1 & SS 2 SS 1 & SS 3
How many days within the past month (30 days) did you not go to (miss) school because you felt you would be unsafe on your way to or from school?	SS 1 SS 2 SS 3	328.28 346.32 344.43	3.314	0.191	Retain the null hypothesis	_____
How many times within the past 6 months has someone threatened or injured you with a weapon such as a gun, knife, screwdriver, mathematical compass, divider or broken bottle at school?	SS 1 SS 2 SS 3	330.93 348.37 333.29	2.183	0.336	Retain the null hypothesis	_____

How many times within the past 12 months were you in a physical fight?	SS 1 SS 2 SS 3	334.26 341.27 336.88	0.244	0.885	Retain the null hypothesis	_____
How many times within the past 12 months were you in a physical fight in which you were injured and had to be treated by a doctor or a nurse?	SS 1 SS 2 SS 3	325.85 353.71 337.78	7.486	0.024*	Reject the null hypothesis	SS 1 & SS 2
How many times within the past 12 months were you in a physical fight while in school?	SS 1 SS 2 SS 3	318.09 359.42 349.06	11.599	0.003*	Reject the null hypothesis	SS 1 & SS 2
Did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose within the past 12 months?	SS 1 SS 2 SS 3	325.71 347.96 348.60	5.222	0.073	Retain the null hypothesis	_____
Have you ever been forced physically to have sexual intercourse when you did not want to?	SS 1 SS 2 SS 3	330.63 353.44 324.93	8.624	0.013*	Reject the null hypothesis	SS 3 & SS 2 SS 1 & SS 2

Asymptotic significances are displayed. The significance level is .05.

In relation to violence-related behavior, Table 5.29 illustrates that there was a statistically significant difference among the participants who reported on the days and times they have carried weapons such as a gun, knife “lebe”, screwdriver or broken bottle while at school in the past month (30 days) ($H = 9.810$, $P = 0.007$), with a post hoc difference between senior class 1 and senior class 2. Additionally, there was a statistically significant difference among the participants who reported on the time they did not go to school (miss school) in the past 30 days because they felt they will be unsafe at school ($H = 21.712$, $P = 0.000$), and the identified post hoc difference lies between senior class 1 and senior class 2, as well as senior class 1 and senior class 3.

Furthermore, a statistically significant difference was identified among the participants who reported on the time they have been involved in a physical fight and had to be treated by a doctor or a nurse in the past 12 months ($H = 7.486, P = 0.024$), and the post hoc difference was prominent between senior class 1 and senior class 2. Likewise, a statistically significant difference was noted among participants who reported on how many time they have engaged in a physical fight why they are in school in the past 12 months ($H = 11.599, P = 0.003$), and the post hoc difference was eminent between senior class 1 and senior class 2.

In addition, the results further indicate that there was a statistically significant difference among the participants who have been forced to have sexual intercourse when they did not want to in the past 12 months ($H = 8.624, P = 0.013$), with the post hoc difference between senior class 3 and senior class 2, as well as senior class 1 and senior class 2.

Table 5.30: Bullying

Risk Behavior	Class	Mean Rank	K-W Test	Sig Levels	Decision	Post hoc
Have you been bullied with the school premises within the past 12 months?	SS 1	326.90	8.315	0.016*	Reject the null hypothesis	SS 1 & SS 2
	SS 2	361.53				
	SS 3	320.63				
Have you ever been electronically bullied within the past 12 months? (Including being bullied through What Sapp, twitter, text message and other social media).	SS 1	328.70	10.865	0.004*	Reject the null hypothesis	SS 3 & SS 2 SS 1 & SS 2
	SS 2	359.14				
	SS 3	319.95				

Asymptotic significances are displayed. The significance level is .05.

In relation to bullying, Table 5.30 indicates that there was a statistically significant difference among the participants who have been bullied within the school premises ($H = 8.315$, $P = 0.016$), and the post hoc differences lie between senior class 1 and senior class 2. Furthermore, a statistically significant difference was also noted among the participants who reported that they have been electronically bullied through a variety of social media such as Whatsapp, BBM, texting and other social media during the past 12 months ($H = 10.865$, $P = 0.004$), and the post hoc differences were eminent between senior class 3 and senior class 2 as well as in senior class 1 and senior class 2.

Table 5.31: Sad Feeling and Attempt Suicide

Risk Behavior	Class	Mean Rank	K-W Test	Sig Levels	Decision	Post hoc
Within the past 12 months have you ever thought of committing suicide?	SS 1 SS 2 SS 3	342.01 331.92 332.25	0.675	0.714	Retain the null hypothesis	_____
Within the past 12 months have you attempted suicide?	SS 1 SS 2 SS 3	329.11 356.48 323.63	12.466	0.002*	Reject the null hypothesis	SS 3 & SS 2 SS 1 & SS 2
Have you ever experienced feeling of sadness or hopelessness within the past 12 months?	SS 1 SS 2 SS 3	334.88 337.12 342.70	0.198	0.519	Retain the null hypothesis	_____
Have you ever nursed the thought of killing yourself in the past 12 months?	SS 1 SS 2 SS 3	332.71 344.70 334.98	1.310	0.519	Retain the null hypothesis	_____
Within the past 12 month how many times did you actually attempt suicide?	SS 1 SS 2 SS 3	334.37 349.66 321.36	6.281	0.043*	Reject the null hypothesis	SS 3 & SS 2
If you attempted suicide within the past 12 months, did any attempt result in an injury, poisoning or overdose that had to be treated by a doctor or nurse?	SS 1 SS 2 SS 3	335.10 344.42 321.36	2.720	0.257	Retain the null hypothesis	_____

Asymptotic significances are displayed. The significance level is .05.

Regarding sad feelings and suicidal attempt, Table 5.31 illustrates that there was a statistically significant difference among the participants who have attempted suicide in the past 12 months ($H = 12.466$, $P = 0.002$), with a post hoc difference between senior class 3 and senior class 2 as well as senior class 1 and senior class 2. Furthermore, there was a statistically significant difference among the participants who reported on the times they did attempt to commit suicide in the past 12 months ($H = 6.281$, $P = 0.043$), and the identified post hoc difference lies between senior class 3 and senior class 2.

Table 5.32: Smoking

Risk Behavior	Class	Mean Rank	K-W Test	Sig Levels	Decision	Post hoc
Have you ever in your lifetime tried cigarette smoking, even one or two puffs?	SS 1 SS 2 SS 3	324.71 336.70 371.84	11.736	0.003*	Reject the null hypothesis	SS 1 & SS 3
How old were you when you smoked a whole cigarette for the first time?	SS 1 SS 2 SS 3	323.71 343.32 362.62	8.716	0.013*	Reject the null hypothesis	SS 1 & SS 3
During the past 30 days, on how many days did you smoke cigarettes?	SS 1 SS 2 SS 3	322.73 343.27 365.45	12.029	0.002*	Reject the null hypothesis	SS 1 & SS 3
During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?	SS 1 SS 2 SS 3	325.95 336.96 367.92	11.141	0.004*	Reject the null hypothesis	SS 1 & SS 3
During the past 30 days, how did you usually get your own cigarettes?	SS 1 SS 2 SS 3	330.47 333.39 361.80	6.293	0.043*	Reject the null hypothesis	SS 1 & SS 3
During the past 30 days, on how many days did you smoke in school premises?	SS 1 SS 2 SS 3	329.85 343.11 345.86	3.266	0.195	Retain the null hypothesis	_____

Have you ever smoked cigarettes daily, that is, at least one cigarette every day for 30 days?	SS 1 SS 2 SS 3	335.61 337.00 340.90	0.420	0.810	Retain the null hypothesis	_____
During the past 12 months, did you ever try to quit smoking cigarettes?	SS 1 SS 2 SS 3	311.69 358.59 368.43	14.991	0.001*	Reject the null hypothesis	SS 1 & SS 2 SS 1 & SS 3
During the past 30 days, on how many did you use stuff “taba” or shisha?	SS 1 SS 2 SS 3	340.01 326.82 347.09	2.575	0.276	Retain the null hypothesis	_____
During the past 30 days, on how many days did you use snuff “taba” or shisha in school premises?	SS 1 SS 2 SS 3	334.18 337.98 343.10	0.683	0.711	Retain the null hypothesis	_____
Do your parents/guardians engage in smoking?	SS 1 SS 2 SS 3	337.59 343.11 324.25	1.165	0.558	Retain the null hypothesis	_____

Asymptotic significances are displayed. The significance level is .05.

With regard to smoking, Table 5.32 indicates that there was a statistically significant difference among participants who in their lifetime have tried smoking cigarette either one or more puff ($H = 11.736$, $P = 0.003$), and the post hoc difference was eminent between senior class 1 and senior class 2. Additionally, a statistically significant difference was also noted among participants who reported on the age they smoked a whole cigarette for the first time ($H = 8.716$, $P = 0.013$), and the post hoc difference was found between class senior 1 and senior class 3.

Furthermore, there was a statistically significant difference among the participants who reported on the days they did smoke cigarettes in the past 30 days ($H = 12.029$, $P = 0.002$), and a considerable post hoc difference was recognized between senior class 1 and senior class 3. In addition, a statistically significant difference was found among participants who reported how

many cigarettes they smoke on the day they smoked in the past 30 days ($H = 11.141$, $P = 0.004$), and the important difference of the post hoc lies between senior class 1 and senior class 3.

Likewise, it was also identified that there was a statistically significant difference among participants who reported on how they usually get their cigarette in the past 30 days ($H = 6.293$, $P = 0.043$), and the post hoc difference was eminent between senior class 1 and senior class 3. Moreover, the result further indicates that there was a statistically significant difference among the participants who had tried to quit smoking cigarette in the past 30 days ($H = 14.991$, $P = 0.001$), and the post hoc differences were prominent between senior class 1 and seniors class 2, as well as senior class 1 and senior class 3.

Table 5.33: Alcohol

Risk Behavior	Class	Mean Rank	K-W Test	Sig Levels	Decision	Post hoc
During your life, how often have you had at least one drink of alcohol?	SS 1 SS 2 SS 3	320.34 353.34 353.82	7.131	0.028*	Reject the null hypothesis	_____
How old were you when you had your first drink of alcohol?	SS 1 SS 2 SS 3	312.77 362.71 357.92	14.547	0.001*	Reject the null hypothesis	SS 1 & SS 3 SS 1 & SS 2
How often did you have at least one drink of alcohol within the past month (30 days)?	SS 1 SS 2 SS 3	329.23 339.87 353.49	2.668	0.263	Retain the null hypothesis	_____
How often did you have 5 or more drinks of alcohol in a row, that is, within a couple of hour during the past month (30 days)?	SS 1 SS 2 SS 3	330.09 334.13 361.49	4.985	0.083	Retain the null hypothesis	_____
How many days did you have at least one drink of alcohol at school during school time within the past month (30 days)?	SS 1 SS 2 SS 3	330.67 343.45 342.97	1.443	0.486	Retain the null hypothesis	_____

Asymptotic significances are displayed. The significance level is .05.

In relation to alcohol consumption, Table 5.33 illustrates that there was a statistically significant difference among participants who reported on the age they were when they first had a drink of alcohol ($H = 14.547$, $P = 0,001$), and the important differences of post hoc were between senior class 1 and senior class 3, as well as senior class 1 and senior class 2.

Table 5.34: Marijuana/SK Use/Drug Use

Risk Behavior	Class	Mean Rank	K-W Test	Sig Levels	Decision	Post hoc
During your life, how many times have you used marijuana “Igbo/weed/ganja” or SK?	SS 1	330.51	2.317	0.314	Retain the null hypothesis	_____
	SS 2	345.78				
	SS 3	339.18				
How old were you when you tried marijuana or SK for the first time?	SS 1	330.35	2.678	0.262	Retain the null hypothesis	_____
	SS 2	343.65				
	SS 3	343.48				
During the past month (30 days), how often did you use marijuana or SK?	SS 1	328.74	3.803	0.149	Retain the null hypothesis	_____
	SS 2	344.37				
	SS 3	346.65				
How often did you use marijuana or SK at school during school time within the past month (30 days)?	SS 1	329.47	3.184	0.204	Retain the null hypothesis	_____
	SS 2	345.03				
	SS 3	343.44				

Asymptotic significances are displayed. The significance level is .05.

From Table 5.34, no variable of marijuana/SK/drug use shows a statistical significant difference between the three class/grade groups as their P values were higher than the level of significance.

Table 5.35: Other Drug use

Risk Behavior	Class	Mean Rank	K-W Test	Sig Levels	Decision	Post hoc
How often have you sniffed gum or inhaled petrol, paint or paint thinners to get high during your lifetime?	SS 1	323.95	8.934	0.011*	Reject the null hypothesis	SS 1 & SS 2
	SS 2	351.80				
	SS 3	346.56				
How often have you used cocaine “gbana” including powder, crack during your lifetime?	SS 1	333.22	5.210	0.074	Retain the null hypothesis	_____
	SS 2	350.29				
	SS 3	323.39				
How often have you used a needle to inject any illegal drug into your body during your lifetime?	SS 1	338.75	2.786	0.248	Retain the null hypothesis	_____
	SS 2	342.47				
	SS 3	322.16				
How many times have you taken a prescription drug during your lifetime?	SS 1	329.25	2.432	0.296	Retain the null hypothesis	_____
	SS 2	344.47				
	SS 3	345.07				
Has anyone offered, sold, or given you an illegal drug at school premises within the past 12 months?	SS 1	329.10	6.459	0.040*	Reject the null hypothesis	SS 1 & SS 2
	SS 2	350.22				
	SS 3	335.04				

Asymptotic significances are displayed. The significance level is .05.

With regards to other drug use, Table 5.35 indicates that there was a statistically significant difference among the participants who in their lifetime have sniffed gum or inhaled petrol, paint or paint thinners to get high ($H = 8.934$, $P = 0.011$), and a considerable post hoc difference was identified between senior class 1 and senior class 2. Furthermore, a statistically significant difference was noted among the participants who reported that they have been offered, sold or given illegal drug within the school premises ($H = 6.459$, $P = 0.040$), and the post hoc difference was prominent between senior class 1 and senior class 2.

Table 5.36: Sexual Behavior

Risk Behavior	Class	Mean Rank	K-W Test	Sig Levels	Decision	Post hoc
Have you ever had sexual intercourse with someone? (when the penis enters the vagina or the anus)?	SS 1	329.37	1.821	0.402	Retain the null hypothesis	_____
	SS 2	346.33				
	SS 3	341.34				
When you had sexual intercourse how old were you?	SS 1	326.72	3.171	0.205	Retain the null hypothesis	_____
	SS 2	348.93				
	SS 3	344.03				
During your life, how many people have you had sex	SS 1	327.58	3.626	0.163	Retain the null hypothesis	_____
	SS 2	352.30				
	SS 3	335.51				
During the past 3 months, how many people have you had sex	SS 1	331.95	1.713	0.425	Retain the null hypothesis	_____
	SS 2	347.87				
	SS 3	331.35				
The last time you had sex, did you drink alcohol or use drugs before you had sex?	SS 1	325.98	4.732	0.094	Retain the null hypothesis	_____
	SS 2	357.28				
	SS 3	331.17				
When you have sex, how often do you or your partner use a condom?	SS 1	323.41	7.972	0.019*	Reject the null hypothesis	_____
	SS 2	363.32				
	SS 3	327.13				
When you have sex, what one method did you or your partner mostly use to prevent pregnancy?	SS 1	331.62	1.602	0.449	Retain the null hypothesis	_____
	SS 2	337.08				
	SS 3	351.87				

Asymptotic significances are displayed. The significance level is .05.

In relation to sexual behavior, Table 5.36 illustrates that there was a statistically significant difference among participants who used a condom, including their partner when they have sex ($H = 7.972, P = 0.019$).

Table 5.37: Body Weight

Risk Behavior	Class	Mean Rank	K-W Test	Sig Levels	Decision	Post hoc
How do you describe your weight?	SS 1 SS 2 SS 3	340.75 334.84 330.46	0.320	0.852	Retain the null hypothesis	_____
Which of the following are you trying to do about your weight?	SS 1 SS 2 SS 3	332.43 346.02 333.36	0.754	0.686	Retain the null hypothesis	_____
During the past 30days, did you take any diet pills, powders, or liquids without a doctor’s advice to lose weight or keep from gaining weight	SS 1 SS 2 SS 3	329.13 359.20 318.63	14.847	0.001*	Reject the null hypothesis	SS 3 & SS 2 SS 1 & SS 2
During the past 30 days, did you go without eating for 24 hours or more (also called fasting) to lose weight or keep from gaining weight?	SS 1 SS 2 SS 3	338.36 349.07 311.28	5.486	0.064	Retain the null hypothesis	_____
During the past 30 days, did you vomit or take laxatives to lose weight or keep from gaining weight?	SS 1 SS 2 SS 3	337.65 343.63 323.13	3.229	0.199	Retain the null hypothesis	_____

Asymptotic significances are displayed. The significance level is .05.

Regarding body weight, Table 5.37 indicates that there was a statistically significant difference among participants who have taken diet pills, powder or liquids to lose weight or gain weight without a doctor’s advice or prescription ($H = 14.847$, $P = 0.001$), with a post hoc differences between senior class 3 and senior class 2, as well as senior class 1 and senior class 2.

Table 5.38: Physical Activity

Risk Behavior	Class	Mean Rank	K-W Test	Sig Levels	Decision	Post hoc
During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?	SS 1 SS 2 SS 3	307.81 356.00 383.96	21.177	0.000*	Reject the null hypothesis	SS 1 & SS 2
On an average school day, how many hours do you watch TV?	SS 1 SS 2 SS 3	317.02 361.92 347.52	7.936	0.019*	Reject the null hypothesis	SS 1 & SS 2
On an average school day, how many hours do you play videos or computer games or use computer for something that is not school work?	SS 1 SS 2 SS 3	323.61 353.53 344.35	3.792	0.150	Retain the null hypothesis	————
In an average week when you are in school, on how many days do you go to physical education (PE) classes?	SS 1 SS 2 SS 3	352.27 327.67 311.34	5.541	0.063	Retain the null hypothesis	————
During the past 12 months, on how many sports teams did you play?	SS 1 SS 2 SS 3	352.60 327.07 311.51	5.415	0.067	Retain the null hypothesis	————

Asymptotic significances are displayed. The significance level is .05.

With regard to physical activity, Table 5.38 illustrates that there was a statistically significant difference among the participants who were physically active for a total of at least 60 minutes per day in the past 7 days ($H = 21.177$, $P = 0.000$), with a considerable post hoc difference between senior class 1 and senior class 2. In addition, there was a statistically significant difference among the participants who reported on hours they watch TV on the average of school days ($H = 7.936$, $P = 0.019$), and the identified post hoc difference lies between senior class 1 and senior class 2.

Table 5.39: Other Health – Related Issues

Risk Behavior	Class	Mean Rank	K-W Test	Sig Levels	Decision	Post hoc
Have you ever been taught about AIDS or HIV infection in school?	SS 1	340.22	0.859	0.651	Retain the null hypothesis	_____
	SS 2	336.81				
	SS 3	328.35				
Has a doctor or nurse ever told you that you have Asthma or tuberculosis?	SS 1	325.52	7.900	0.019*	Reject the null hypothesis	SS 1 & SS 2
	SS 2	355.88				
	SS 3	334.75				
Do you still have Asthma or Tuberculosis?	SS 1	328.87	4.486	0.106	Retain the null hypothesis	_____
	SS 2	350.38				
	SS 3	335.38				

Asymptotic significances are displayed. The significance level is .05.

In relation to other health-related issues, Table 5.39 indicates that there was a statistically significant difference among participants who have been informed by the doctor or nurse that they have Asthma or tuberculosis ($H = 7.900$, $P = 0.019$), and the post hoc difference was eminent between senior class 1 and senior class 2.

Table 5.40: Dietary behavior

Risk Behavior	Class	Mean Rank	K-W Test	Sig Levels	Decision	Post hoc
How many times did you eat fresh fruit within the past 7 days?	SS 1	354.11	5.842	0.054	Retain the null hypothesis	_____
	SS 2	316.78				
	SS 3	325.97				
How often did you eat uncooked vegetables within the past 7 days?	SS 1	329.99	1.134	0.567	Retain the null hypothesis	_____
	SS 2	346.06				
	SS 3	341.80				
How often did you eat vegetables that were tinned or cooked within the past 7 days?	SS 1	346.41	1.645	0.439	Retain the null hypothesis	_____
	SS 2	326.94				
	SS 3	329.01				
How often did you eat fast foods like suya, chips, fried chicken, pie etc. within the past 7 days?	SS 1	349.80	5.212	0.074	Retain the null hypothesis	_____
	SS 2	334.07				
	SS 3	306.50				
How often did you drink a can, bottle or glass of	SS 1	347.87	2.993	0.224	Retain the null	_____
	SS 2	319.78				

soda, such as Coke, Fanta, etc. within the past 7 days?	SS 3	337.95			hypothesis	_____
How often did you eat foods like potato chips, chocolate, sweets, popcorn, and cake within the past 7 days?	SS 1	347.72	3.135	0.209	Retain the null hypothesis	_____
	SS 2	318.99				
	SS 3	339.80				

Asymptotic significances are displayed. The significance level is .05.

From Table 5.40, no variable of dietary behavior shows a statistically significant difference between the three class/grade groups as their *P* values were higher than the level of significance.



5.5.3 THE KRUSKAL WALLIS/POST HOC COMPARISON TEST RESULTS FOR HEALTH RISK BEHAVIORS AND AGE

Table 5.41: Personal Safety

Risk Behavior	K-W Test	Sig Levels	Decision	Post hoc
During the past 12 months when you rode a bike “okada rider”, how often did you wear a helmet?	7.415	0.116	Retain the null hypothesis	_____
How often do you wear a seat belt when riding in a car driven by someone else?	2.150	0.708	Retain the null hypothesis	_____
During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?	6.476	0.166	Retain the null hypothesis	_____
During the past 12 months, how many times did you drive a car or other vehicle when you had been drinking alcohol?	19.822	0.001*	Reject the null hypothesis	<14yrs -- 17yrs> 14yr -- 17yrs>

Asymptotic significances are displayed. The significance level is .05.

With regard to personal safety, Table 5.41 presents the statistically significant differences and Kruskal Wallis values. There was a statistically significance difference among the participants who reported the times that they have driven a car or other vehicle when they were under the influence of alcohol ($H = 19.822$, $P = 0.001$), and the post hoc differences were prominent between the ages below 14 and 17 years above, as well as 14 and 17 years above.

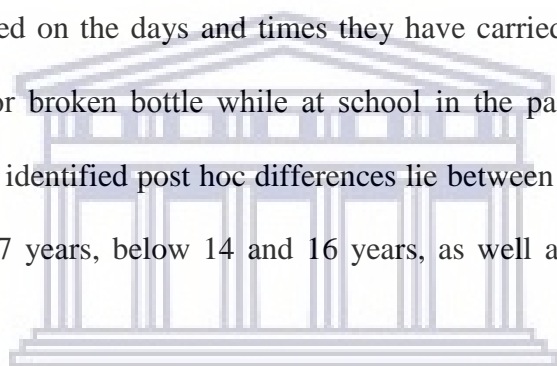
Table 5.42: Violence – Related Behaviors

Risk Behavior	K-W Test	Sig Levels	Decision	Post hoc
How many days within the past month (30 days) did you carry a weapon such as a knife “lebe”, screwdriver or broken bottle?	3.103	0.541	Retain the null hypothesis	_____
How many days within the past month (30 days), did you carry a gun?	15.100	0.004*	Reject the null hypothesis	14yrs - 17yrs>
How many days within the past month (30 days) did you carry a weapon such as a gun, knife “lebe”, screwdriver or broken bottle while at school?	30.703	0.000*	Reject the null hypothesis	14yr-15yrs 14yrs-16yrs 14yrs-17yrs> <14yrs-16yrs <14yrs-17yrs>
How many times within the past month (30 days) have you used a mathematical compass or divider as a weapon at school?	25.758	0.000*	Reject the null hypothesis	14yrs - 17yrs> <14yrs-17yrs> 15yrs-17yrs>
How many days within the past month (30 days) did you not go to school (miss school) because you felt you would be unsafe at school?	34.567	0.000*	Reject the null hypothesis	14yrs-16yrs 14yrs-17yrs> <14yrs-17yrs> 15yrs-17yrs>
How many days within the past month (30 days) did you not go to (miss) school because you felt you would be unsafe on your way to or from school?	18.405	0.001*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs> 16yrs-17yrs> 15yrs-17yrs>
How many times within the past 6 months has someone threatened or injured you with a weapon such as a gun, knife, screwdriver, mathematical compass, divider or broken bottle at school?	15.721	0.003*	Reject the null hypothesis	14yrs-15yrs 14yrs-17yrs> 14yrs-<14yrs
How many times within the past 12 months were you in a physical fight?	6.571	0.159	Retain the null hypothesis	_____
How many times within the past 12 months were you in a physical fight in which you were injured and had to be treated by a doctor or a nurse?	12.688	0.013*	Reject the null hypothesis	14yrs-16yrs
How many times within the past 12 months were you in a physical fight while in school?	14.287	0.006*	Reject the null hypothesis	<14yrs-17yrs. 14yrs-17yrs>
Did your boyfriend or girlfriend ever hit, slap, or physically hurt you on	14.660	0.005*	Reject the null	<14yrs-16yrs

purpose within the past 12 months?			hypothesis	
Have you ever been forced physically to have sexual intercourse when you did not want to?	8.826	0.066	Retain the null hypothesis	_____

Asymptotic significances are displayed. The significance level is .05.

In relation to violence-related behaviors, Table 5.42 illustrates that there was a statistically significant difference among the participants who reported on the days and times they have carried gun in the past 30 days ($H = 15.100$, $P = 0.004$), with a post hoc difference between the age 14 and 17 years above. Additionally, there was a statistically significant difference among the participants who reported on the days and times they have carried weapons such as a gun, knife “lebe”, screwdriver or broken bottle while at school in the past month (30 days) ($H = 30.703$, $P = 0.000$), and the identified post hoc differences lie between the ages 14 and 15 years, 14 and 16 years, 14 and 17 years, below 14 and 16 years, as well as below 14 and 17 years above.



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Furthermore, a statistically significant difference was identified among the participants who reported on the time they have used a mathematical compass or divider as a weapon during school period in the past 30 days ($H = 25.758$, $P = 0.000$), and the post hoc differences were prominent between the ages 14 and 17 years above, below 14 and 17 years above, as well as 15 and 17 years above. In addition, there was a statistically significant difference among the participants who reported on the days they did not go to school (miss school) in the past 30 days because they felt they will be unsafe at school ($H = 34.567$, $P = 0.000$), and the post hoc differences were found between the ages below 14 and 17 years above, 14 and 17 years above, 16 and 17 years above, as well as 15 and 17 years above.

Likewise, there was a statistically significant difference among the participants who reported on the days they did not go to school (miss school) in the past 30 days because they felt they will be unsafe on their way to or from school ($H = 18.405$, $P = 0.001$), with the post hoc differences between the ages below 14 and 17 years above, 14 and 17 years above, 16 and 17 years above, as well as 15 years and 17 years above. Also, a statistically significant difference has been identified among the participants who reported on the times they have been threatened and injured with a weapon such as a gun, knife, screwdriver, mathematical compass, divider or broken bottle while at school ($H = 15.721$, $P = 0.003$), and the important differences of the post hoc were recognized between the ages 14 and 15 years, 14 and 17 years above, as well as 14 and below 14 years.

In addition, the results further indicate that there was a statistically significant difference among the participants who reported on the time they have been involved in a physical fight and had to be treated by a doctor or a nurse in the past 12 months ($H = 12.688$, $P = 0.013$), with the post hoc difference between the age 14 and 16 years. Also, a statistically significant difference was identified among the participants who reported on the time they have been involved in a physical fight during school period ($H = 14.287$, $P = 0.006$), and the considerable post hoc differences were between the ages below 14 and 17 years, as well as 14 and 17 years above.

Lastly on the violence-related behaviors, a statistically significant difference was also identified among the participants who reported that they have been hit, slap and physically hurt on purpose by their boyfriend or girlfriend in the past 12 months ($H = 14.660$, $P = 0.005$), and the post hoc difference was prominent between the age below 14 and 16 years.

Table 5.43: Bullying

Risk Behavior	K-W Test	Sig Levels	Decision	Post hoc
Have you been bullied with the school premises within the past 12 months?	3.735	0.443	Retain the null hypothesis	_____
Have you ever been electronically bullied within the past 12 months? (Including being bullied through What Sapp, twitter, text message and other social media)	5.065	0.281	Retain the null hypothesis	_____

Asymptotic significances are displayed. The significance level is .05.

From Table 5.43, no variable of bullying shows a statistically significant difference among age categories groups as their *P* values were higher than the level of significance.

Table 5.44: Sad Feeling and Attempt Suicide

Risk Behavior	K-W Test	Sig Levels	Decision	Post hoc
Within the past 12 months have you ever thought of committing suicide?	8.933	0.063	Retain the null hypothesis	_____
Within the past 12 months have you attempted suicide?	11.543	0.021*	Reject the null hypothesis	14yrs-17yrs>
Have you ever experienced feeling of sadness or hopelessness within the past 12 months?	8.408	0.078	Retain the null hypothesis	_____
Have you ever nursed the thought of killing yourself in the past 12 months?	4.057	0.398	Retain the null hypothesis	_____
Within the past 12 month how many times did you actually attempt suicide?	9.390	0.052	Retain the null hypothesis	_____
If you attempted suicide within the past 12 months, did any attempt result in an injury, poisoning or overdose that had to be treated by a doctor or nurse?	9.477	0.050*	Retain the null hypothesis	_____

Asymptotic significances are displayed. The significance level is .05.

Regarding the sad feelings and suicidal attempt, Table 5.44 illustrates that there was a statistically significant difference among the participants who have attempted suicide in the past 12 months ($H = 11.543$, $P = 0.021$), with a post hoc difference between the age 14 and 17 years above.

Table 5.45: Smoking

Risk Behavior	K-W Test	Sig Levels	Decision	Post hoc
Have you ever in your lifetime tried cigarette smoking, even one or two puffs?	39.197	0.000*	Reject the null hypothesis	<14yrs-16yrs <14yrs-17yrs> 14yrs-16yrs 14yrs-17yrs> 15yrs-17yrs>
How old were you when you smoked a whole cigarette for the first time?	31.813	0.000*	Reject the null hypothesis	14yrs-15yrs 14yrs-16yrs 14yrs-17yrs> <14yrs-17yrs>
During the past 30 days, on how many days did you smoke cigarettes?	46.774	0.000*	Reject the null hypothesis	14yrs-15yrs 14yrs-16yrs 14yrs-17yrs> <14yrs-16yrs <14yrs-17yrs> 15yrs-17yrs>
During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?	31.107	0.000*	Reject the null hypothesis	14yrs-16yrs 14yrs-17yrs> 14yrs-16yrs <14yrs-17yrs>
During the past 30 days, how did you usually get your own cigarettes?	33.151	0.000*	Reject the null hypothesis	14yrs-15yrs 14yrs-16yrs 14yrs-17yrs> 14yrs-17yrs>
During the past 30 days, on how many days did you smoke in school premises?	19.329	0.001*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs> 15yrs-17yrs>
Have you ever smoked cigarettes daily, that is, at least one cigarette every day for 30 days?	20.478	0.000*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs> 16yrs-17yrs>
During the past 12 months, did you ever try to quit smoking cigarettes?	7.113	0.130	Retain the null	————

			hypothesis	
During the past 30 days, on how many did you use stuff “taba” or shisha?	23.291	0.000*	Reject the null hypothesis	14yrs-16yrs 14yrs-17yrs> <14yrs-17yrs>
During the past 30 days, on how many days did you use snuff “taba” or shisha in school premises?	17.180	0.002*	Reject the null hypothesis	14yrs-17yrs>
Do your parents/ guardians engage in smoking?	5.675	0.225	Retain the null hypothesis	————

Asymptotic significances are displayed. The significance level is .05.

With regard to smoking, Table 5.45 indicates that there was a statistically significant difference among participants who in their lifetime have tried smoking cigarette either one or more puff ($H = 39.197, P = 0.000$), and the post hoc differences were eminent between the ages below 14 and 16 years, below 14 and 17 years above, 14 and 16 years, 14 and 17 years above, as well as 15 and 17 years above. In addition, a statistically significant difference was also noted among participants who reported on the age they smoked a whole stick of cigarette for the first time ($H = 31.813, P = 0.000$), and the post hoc differences were found between the ages 14 and 15 years, 14 and 16 years, 14 and 17 years above, as well as below 14 and 17 years above.

Furthermore, there was a statistically significant difference among the participants who reported on the days they did smoke cigarettes in the past 30 days ($H = 46.774, P = 0.000$), and a considerable post hoc differences were recognized between the ages 14 and 15 years, 14 and 16 years, 14 and 17 years, below 14 and 16 years, below 14 and 17 years above, as well as 15 and 17 years above. Likewise, a statistically significant difference was found among participants who reported how many sticks of cigarette they smoke on the day they smoked in the past 30 days ($H = 31.107, P = 0.000$), and the important differences of the post hoc lies between the ages 14 and 16 years, 14 and 17 years above, 14 and 16 years, as well as below 14 and 17 years above.

Moreover, it was also identified that there was a statistically significant difference among participants who reported on how they usually get their cigarette in the past 30 days ($H = 33.151$, $P = 0.000$), and the post hoc differences were eminent between the ages 14 and 15 years, 14 and 16 years, 14 and 17 years above, as well as 14 and 17 years above. Additionally, the result further indicates that there was a statistically significant difference among the participants who reported on the days they smoked within the school premises in the past 30 days ($H = 19.329$, $P = 0.001$), and the post hoc differences were prominent between the ages below 14 and 17 years above, 14 and 17 years, as well as 15 and 17 years above.

The results further indicate that there was a statistically significant difference among participants who at least have tried smoked one cigarette or some cigarettes every day in the past 30 days ($H = 20.478$, $P = 0.000$), with a post hoc differences that lies between the ages below 14 and 17 years above, 14 and 17 years above, as well as 16 and 17 years above. Also, a statistically significant difference was identified among the participants who have used stuff/taaba or “shisha” in the past 30 days ($H = 23.291$, $P = 0.000$), and the identified post hoc differences lies between the ages 14 and 16 years, 14 and 17 years above, as well as below 14 and 17 years above. Similarly, a statistically significant difference was also noted among participants who have used stuff/taaba or “shisha” in the past 30 days within the school premises ($H = 17.180$, $P = 0.002$), and the post hoc difference was found between the age 14 and 17 years above.

Table 5.46: Alcohol

Risk Behavior	K-W Test	Sig Levels	Decision	Post hoc
During your life, how often have you had at least one drink of alcohol?	14.077	0.007*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs>
How old were you when you had your first drink of alcohol?	16.467	0.002*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs>
How often did you have at least one drink of alcohol within the past month (30 days)?	21.290	0.000*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs>
How often did you have 5 or more drinks of alcohol in a row, that is, within a couple of hour during the past month (30 days)?	20.290	0.000*	Reject the null hypothesis	14yrs-16yrs 14yrs-17yrs>
How many days did you have at least one drink of alcohol at school during school time within the past month (30 days)?	16.185	0.003*	Reject the null hypothesis	14yrs-16yrs

Asymptotic significances are displayed. The significance level is .05.

In relation to alcohol consumption, Table 5.46 illustrates that there was a statistically significant difference among participants who reported how often they have had at least one drink of alcohol during their life ($H = 14.077$, $P = 0.007$), and the important differences of post hoc were between the ages below 14 and 17 years above, as well as 14 years and 17 years above. Additionally, a statistically significant difference was also noted among participants who reported on the age they were when they first had a drink of alcohol ($H = 16.467$, $P = 0.002$), and the post hoc differences were prominent between the ages below 14 and 17 years above, as well as 14 years and 17 years above.

Furthermore, there was a statistically significant difference among the participants who reported how often they have taken at least one drink of alcohol in the past 30 days ($H = 21.290$, $P =$

0.000), and a considerable post hoc differences were recognized between the ages below 14 and 17 years above, as well as 14 years and 17 years above. In addition, a statistically significant difference was found among participants who have had 5 or more drinks of alcohol in a row, that is within a couple of hours in the past 30 days ($H = 20.290$, $P = 0.000$), with a post hoc differences between the ages 14 and 16 years, as well as 14 and 17 years above. Lastly, a statistically significant difference was also noted among participants who have had at least one drink of alcohol in the past 30 days during school time ($H = 16.185$, $P = 0.003$), and the identified post hoc difference lies between the age 14 and 16 years.

Table 5.47: Marijuana/SK Use/Drug Use

Risk Behavior	K-W Test	Sig Levels	Decision	Post hoc
During your life, how many times have you used marijuana “Igbo/weed/ganja” or SK?	14.899	0.005*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs>
How old were you when you tried marijuana or SK for the first time?	21.133	0.000*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs>
During the past month (30 days), how often did you use marijuana or SK?	25.309	0.000*	Reject the null hypothesis	14yrs-16yrs 14yrs-17yrs> <14yrs-17yrs> 15yrs-1yrs>
How often did you use marijuana or SK at school during school time within the past month (30 days)?	26.500	0.000*	Reject the null hypothesis	<14yrs-17yrs> <14yrs-16yrs 14yrs-17yrs> 14yrs-16yrs

Asymptotic significances are displayed. The significance level is .05.

Regarding Marijuana/drug use, Table 5.47 indicates that there was a statistically significant difference among participants who have used marijuana “Igbo/weed/ganja” or SK” in their lifetime ($H = 14.899$, $P = 0.005$), and the post hoc difference was prominent between the ages below 14 and 17 years above, as well as 14 and 17 years above. In addition, a statistically

significant difference was also noted among participants who reported on the age they were when they first tried marijuana or SK ($H = 21.133$, $P = 0.000$), and the identified post hoc difference lies between the ages below 14 and 17 years above, as well as 14 and 17 years above.

Furthermore, there was a statistically significant difference among the participants who reported how often they have used marijuana or SK in the past 30 days ($H = 25.309$, $P = 0.000$), and a considerable post hoc differences were recognized between the ages 14 and 16 years, 14 and 17 years above, below 14 and 17 years above, as well as 15 and 17 years above. Likewise, a statistically significant difference was also noted among participants who reported how often they have used marijuana or SK in the past 30 days during school time ($H = 26.500$, $P = 0.000$), with a post hoc differences between the ages below 14 and 17 years above, below 14 and 16 years, 14 and 17 years above, as well as 14 and 16 years.

Table 5.48: Other Drug use

Risk Behavior	K-W Test	Sig Levels	Decision	Post hoc
How often have you sniffed gum or inhaled petrol, paint or paint thinners to get high during your lifetime?	25.071	0.000*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs> 15yrs-17yrs>
How often have you used cocaine “gbana” including powder, crack during your lifetime?	11.096	0.026*	Reject the null hypothesis	_____
How often have you used a needle to inject any illegal drug into your body during your lifetime?	6.463	0.167	Retain the null hypothesis	_____
How many times have you taken a prescription drug during your lifetime?	19.138	0.001*	Reject the null hypothesis	15yrs-17yrs> 14yrs-17yrs>
Has anyone offered, sold, or given you an illegal drug at school premises within the past 12 months?	11.424	0.022*	Reject the null hypothesis	<14yrs-17yrs>

Asymptotic significances are displayed. The significance level is .05.

With regards to other drug use, Table 5.48 indicates that there was a statistically significant difference among the participants who in their lifetime have sniffed gum or inhaled petrol, paint or paint thinners to get high ($H = 25.071, P = 0.000$), and a considerable post hoc differences were identified between the ages below 14 and 17 years above, 14 and 17 years above, as well as 15 and 17 years above. Furthermore, a statistically significant difference was noted among the participants who have used cocaine “gbana” including powder, crack” in their lifetime ($H = 11.096, P = 0.026$) with no identifiable post hoc difference among the age categories.

Additionally, there was a statistically significant difference among the participants who have taken a prescription drug in their lifetime ($H = 19.138, P = 0.001$), and the identified post hoc difference lies between the ages 15 and 17 years above, as well as 14 and 17 years above. Moreover, a statistically significant difference was noted among the participants who reported that they have been offered, sold or given illegal drug within the school premises ($H = 11.424, P = 0.022$), and the post hoc difference was prominent between the age below 14 and 17 years above.

Table 5.49: Sexual Behavior

Risk Behavior	K-W Test	Sig Levels	Decision	Post hoc
Have you ever had sexual intercourse with someone? (when the penis enters the vagina or the anus)?	34.836	0.000*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs> 15yrs-17yrs> 16yrs-17yrs>
When you had sexual intercourse how old were you?	39.061	0.000*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs> 15yrs-17yrs> 16yrs-17yrs>

During your life, how many people have you had sex	32.878	0.000*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs> 15yrs-17yrs> 16yrs-17yrs>
During the past 3 months, how many people have you had sex	34.922	0.000*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs> 15yrs-17yrs> 16yrs-17yrs>
The last time you had sex, did you drink alcohol or use drugs before you had sex?	11.992	0.017*	Reject the null hypothesis	————
When you have sex, how often do you or your partner use a condom?	6.868	0.143	Retain the null hypothesis	————
When you have sex, what one method did you or your partner mostly use to prevent pregnancy?	27.864	0.000*	Reject the null hypothesis	<14yrs-17yrs> 14yrs-17yrs> 15yrs-17yrs> 16yrs-17yrs>

Asymptotic significances are displayed. The significance level is .05.

In relation to sexual behavior, Table 5.49, illustrates that there was a statistically significant difference among participants who have had sexual intercourse (when the penis enters the vagina or the anus” ($H = 34.836$, $P = 0.000$), with a post hoc differences between the ages below 14 and 17 years above, 14 and 17 years above, 15 and 17 years above, as well as 16 and 17 years above. Additionally, a statistically significant difference was also noted among participants who reported on the age they first had sexual intercourse ($H = 39.061$, $P = 0.000$), and the post hoc differences were prominent between the ages below 14 and 17 years above, 14 and 17 years above, 15 and 17 years above, as well as 16 and 17 years above.

Furthermore, there was a statistically significant difference among the participants who reported on the people they have had sex with during their lifetime ($H = 32.878$, $P = 0.000$), and a considerable post hoc differences were recognized between the ages below 14 and 17 years

above, 14 and 17 years above, 15 and 17 years above, as well as 16 and 17 years above. Also, a statistically significance difference was noted among participants who reported on the numbers of people they have had sex with in the past 30 days ($H = 34.922$, $P = 0.000$), with a post hoc difference between the ages below 14 and 17 years above, 14 and 17 years above, 15 and 17 years above, as well as 16 and 17 years above. Lastly, a statistically significant difference was also noted among participants who had some method they used to prevent pregnancy when they had sex with their partner ($H = 27.864$, $P = 0.000$), and the post hoc difference was prominent between the ages below 14 and 17 years above, 14 and 17 years above, 15 and 17 years above, as well as 16 and 17 years above.

Table 5.50: Body Weight

Risk Behavior	K-W Test	Sig Levels	Decision	Post hoc
How do you describe your weight?	3.558	0.469	Retain the null hypothesis	_____
Which of the following are you trying to do about your weight?	2.526	0.640	Retain the null hypothesis	_____
During the past 30days, did you take any diet pills, powders, or liquids without a doctor's advice to lose weight or keep from gaining weight	12.781	0.012*	Reject the null hypothesis	14yrs-17yrs>
During the past 30 days, did you go without eating for 24 hours or more (also called fasting) to lose weight or keep from gaining weight?	6.147	0.188	Retain the null hypothesis	_____
During the past 30 days, did you vomit or take laxatives to lose weight or keep from gaining weight?	10.869	0.028*	Reject the null hypothesis	16yrs-15yrs

Asymptotic significances are displayed. The significance level is .05.

Regarding body weight, Table 5.50 indicates that there was a statistically significant difference among participants who have taken diet pills, powder or liquids to lose weight or gain weight without a doctor's advice or prescription ($H = 12.871$, $P = 0.012$), with a post hoc difference between the age 14 and 17 years above. Furthermore, there was a statistically significant difference among the participants who have vomited or took laxatives to lose weight or gain weight in the past 30 days ($H = 10.869$, $P = 0.028$), and the identified post hoc difference lies between the age 16 and 15 years.

Table 5.51: Physical Activity

Risk Behavior	K-W Test	Sig Levels	Decision	Post hoc
During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?	8.821	0.066	Retain the null hypothesis	_____
On an average school day, how many hours do you watch TV?	2.502	0.644	Retain the null hypothesis	_____
On an average school day, how many hours do you play videos or computer games or use computer for something that is not school work?	4.452	0.348	Retain the null hypothesis	_____
In an average week when you are in school, on how many days do you go to physical education (PE) classes?	5.462	0.243	Retain the null hypothesis	_____
During the past 12 months, on how many sports teams did you play?	5.914	0.206	Retain the null hypothesis	_____

Asymptotic significances are displayed. The significance level is .05.

From Table 5.51, no variable of physical activity shows a statistically significant difference among age categories groups, as their P values were higher than the level of significance.

Table 5.52: Other Health – Related Issues

Risk Behavior	K-W Test	Sig Levels	Decision	Post hoc
Have you ever been taught about AIDS or HIV infection in school?	17.867	0.001*	Reject the null hypothesis	17yrs>-15yrs 16yrs-15yrs
Has a doctor or nurse ever told you that you have Asthma or tuberculosis?	8.501	0.075	Retain the null hypothesis	_____
Do you still have Asthma or Tuberculosis?	17.695	0.001*	Reject the null hypothesis	14yrs-15yrs 14yyrs-17yrs> 16yrs-17yrs>

Asymptotic significances are displayed. The significance level is .05.

In relation to other health-related issues, Table 5.52 indicates that there was a statistically significant difference among participants who signified that they have been taught about AIDS or HIV infection in the school ($H = 17.867$, $P = 0.001$), and the post hoc differences were eminent between the ages above 17 and 15 years, as well as 16 and 15 years. Additionally, there was a statistically significant difference among the participants indicated that they still have Asthma or Tuberculosis ($H = 17.695$, $P = 0.001$), and the identified post hoc differences lies between the ages 14 and 15 years, 14 and 17 years above, as well as 16 years and 17 years above.

Table 5.53: Dietary behavior

Risk Behavior	K-W Test	Sig Levels	Decision	Post hoc
How many times did you eat fresh fruit within the past 7 days?	5.780	0.216	Retain the null hypothesis	_____
How often did you eat uncooked vegetables within the past 7 days?	13.109	0.011*	Reject the null hypothesis	<14yrs-15yrs
How often did you eat vegetables that were tinned or cooked within the past	7.317	0.120	Retain the null	_____

7 days?			hypothesis	
How often did you eat fast foods like suya, chips, fried chicken, pie etc. within the past 7 days?	6.707	0.152	Retain the null hypothesis	_____
How often did you drink a can, bottle or glass of soda, such as Coke, Fanta, etc. within the past 7 days?	6.408	0.171	Retain the null hypothesis	_____
How often did you eat foods like potato chips, chocolate, sweets, popcorn, and cake within the past 7 days?	8.300	0.081	Retain the null hypothesis	_____

Asymptotic significances are displayed. The significance level is .05.

With regards to dietary behavior, Table 5.53 indicates that there was a statistically significant difference among the participants who reported to have eaten uncooked vegetables in the past 7 days ($H = 13.109$, $P = 0.011$), and a considerable post hoc difference was identified between the age below 14 and 15 years.

5.6 THE PREVALENCE OF LEISURE BOREDOM

This section presents findings regarding participants' leisure boredom. When participants were asked if leisure time drags on and on with, 126 participants (18.7%) agree, and 78 participants (11.6%) strongly agree that leisure time drags on and on for them. Furthermore, in response to a question, if leisure time is boring to them, it was revealed that 78 participants (11.6%) agree, and 61 participants (9.1%) strongly agree that leisure time is very boring to them. In addition, when asked "During my leisure time, I feel like I'm just bored and hanging around", 161 participants (23.9%) agree, and 136 participants (20.2%) strongly agree that they are always bored and felt like hanging around during their leisure time.

When participants asked the question “in my leisure time, I usually don't like what I'm doing, but I don't know what else to do”, 127 participants (18.9%) agree, and 35 participants (5.2%) strongly agree that they usually don't like what they are doing and don't know what else they could do during their leisure time. Table 5.54 summarizes the questions relating to leisure boredom and the frequency of each response option.

Table 5.54: Leisure boredom

The Leisure Boredom Scale	Strongly disagree		Disagree		Neither disagree or agree		Agree		Strongly agree	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
1. For me, leisure time just drags on and on.	233	34.6	142	21.1	94	14.0	126	18.7	78	11.6
2. During my leisure time, I become highly involved in what I do.	111	16.5	74	11.0	160	23.8	222	33.0	106	15.8
3. Leisure time is boring.	243	36.1	208	30.9	83	12.3	78	11.6	61	9.1
4. If I could leave school now and have enough money, I would have plenty of exciting things to do for the rest of my life.	213	31.6	114	21.4	83	12.3	135	20.1	98	14.6
5. During my leisure time, I feel like I'm just bored and hanging around.	199	29.6	138	20.5	161	23.9	161	23.9	136	20.2
6. In my leisure time, I usually don't like what I'm doing, but I don't know what else to do.	200	29.7	197	29.3	114	16.9	127	18.9	35	5.2
7. Leisure time gets me aroused and going.	153	22.7	134	19.9	99	14.7	166	24.7	121	18.0
8. Leisure experiences are an important part of my quality of life.	101	15.0	59	8.8	119	17.7	247	36.7	147	21.8
9. I am excited about leisure time.	87	12.9	86	12.8	93	13.8	213	31.6	194	28.8

10. In my leisure time, I want to do something, but I don't know what to do.	132	19.6	126	18.7	174	25.9	164	24.4	77	11.4
11. I waste too much of my leisure time sleeping.	221	32.8	152	22.6	83	12.3	111	16.5	106	15.8
12. I like to try new leisure activities that have never tried before.	98	14.6	60	8.9	120	17.8	260	38.6	135	20.1
13. I am very active during my leisure time.	96	14.3	104	15.5	88	13.1	228	33.9	157	23.3
14. Leisure time activities do not excite me.	229	34.0	170	25.3	86	12.8	100	14.9	88	13.1
15. I do not have many leisure activities available to me.	176	26.2	159	23.6	116	17.2	134	19.9	88	13.1
16. During my leisure time, I almost always have something to do.	78	11.6	72	10.7	137	20.4	234	34.8	152	22.5

5.7 THE DEGREE OF LEISURE BOREDOM AND ITS ASSOCIATION WITH DEMOGRAPHIC VARIABLES

Table 5.55: Degree of Leisure Boredom, stratified by gender and grade (N=673)

	Senior Class 1		Senior Class 2		Senior Class 3	
Gender	Median	IQR	Median	IQR	Median	IQR
Males	44	39 - 47	43	37.25 - 47	43	37.25 - 47
Females	43	38 - 47	44	38 - 47	44.50	37.25 - 50.75

+IQR = Interquartile range

The results of degree of leisure boredom as shown in Table 5.55, show that male participants in senior class 1 has a median score of 44 with an interquartile range of 39 to 47 and female participants in senior class 1 has a median score of 43 with an interquartile range of 38 to 47. Furthermore, in senior class 2, it was revealed that male participants has a median score of 43 with an interquartile range of 37.25 to 47 while female participants has a median score of 44 with interquartile range of 38 to 47. In addition, female participants in class 3 were also reported to have median scores of 44.50 with an interquartile range of 37.25 to 50.75 and male participants in senior class 3 have a median score of 44.50 with an interquartile range of 37.25 to 50.75. .

5.8 SPEARMAN CORRELATION BETWEEN LEISURE BOREDOM AND HEALTH RISK BEHAVIOR CONSTRUCT

Table 5.56: Spearman correlation of leisure boredom with health risk behavior

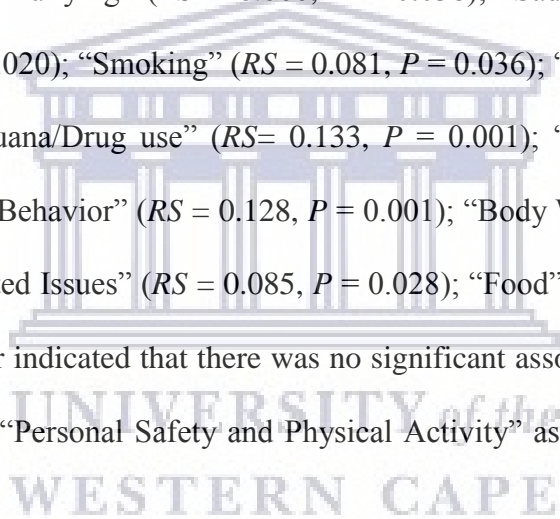
Health Risk Behavior Constructs	Correlation Coefficient	Sig.
Personal Safety	0.007	0.866
Violence Related Behavior	0.101**	0.009
Bully	0.080*	0.038
Sad feeling and Attempts at suicide	0.090*	0.020
Smoking	0.081*	0.036
Drinking Alcohol	0.112**	0.004
Marijuana/SK/Drug use	0.133**	0.001
Other Drug Use	0.126**	0.001
Sexual Behavior	0.128**	0.001
Body Weight	0.099*	0.010
Physical Activity	0.064	0.097

Other Health Related Issues	0.085*	0.028
Dietary behavior	0.094*	0.014

*Correlation is significant at the 0.05

** Correlation is significant at the 0.01

The results of the Spearman Correlation between the leisure boredom and health risk behavior construct as shown in Table 5.56, indicated there was a significant, weak but positive association among the health risk behavior constructs and leisure boredom for “Violence Related Behaviors” ($RS = 0.101, P = 0.009$); “Bullying” ($RS = 0.080, P = 0.038$); “Sad feeling and Attempts at suicide” ($RS = 0.090, P = 0.020$); “Smoking” ($RS = 0.081, P = 0.036$); “Drinking Alcohol” ($RS = 0.112, P = 0.004$); “Marijuana/Drug use” ($RS = 0.133, P = 0.001$); “Other Drug Use” ($RS = 0.126, P = 0.001$); “Sexual Behavior” ($RS = 0.128, P = 0.001$); “Body Weight” ($RS = 0.099, P = 0.010$); “Other Health Related Issues” ($RS = 0.085, P = 0.028$); “Food” ($RS = 0.094, P = 0.014$). However, the results further indicated that there was no significant association among the health risk behavior construct for “Personal Safety and Physical Activity” as P value was higher than the level of significance.



CHAPTER SIX

DISCUSSION

6 INTRODUCTION

The aim of the study was to establish the prevalence of adolescents' health risk behaviors and the association with leisure boredom among high school adolescents in Shomolu Local Government Area of Lagos state, Nigeria. Therefore, the discussion of this present study will be structured based on the objectives of the study which include the socio-demographic profile of the high school adolescents, prevalence of health risk behaviors (personal safety, violence-related behaviors, expressed feeling of sadness and suicidal ideation, substance use, drinking of alcohol, sexual behaviors, and physical activity) and degree of leisure boredom. In addition, the associated factors of health risk behaviors and leisure boredom among high school adolescents will also be discussed. The prevalence of risk behaviors will also be compared with similar studies conducted in other countries. Finally the limitations of this present study will also be outlined.

6.1 SOCIODEMOGRAPHIC PROFILE OF HIGH SCHOOL ADOLESCENTS

In this current study of the prevalence of health risk behavior and its association with leisure boredom, there were slightly more male compared to female participants. The distribution of the sample was similar to the gender distribution of the Local Government Area (50.5 % males, 49.5% females) (Lagos Bureaus of Statistics, 2016). Shomolu Local Government Area population consists of more males than females and this is also found within the educational

structure. In the present study, among the 673 participants who participated during data collection, 56.0% (N=377) were male and 44.0% (N=296) were female.

6.2 PREVALENCE OF HEALTH RISK BEHAVIORS

Participants' engagement in health risk behaviors will be discussed first, thereafter, the degree of leisure boredom and its association with health risk behavior among high school students will be discussed. The prevalence of health risk behaviors will also be discussed with respects to repercussions as a result of personal safety, violence-related behavior/aggression, bullying, feeling sad/attempt to suicide, alcohol, marijuana/SK use/drug use, sexual behavior, physical activity. In addition, within this discussion, participants' age of introduction to health risk behaviors will also be emphasized. This is because early commencement of health risk behaviors may have some adverse consequences on the occupational performance, psychological abilities, and skills of the individual involved. Furthermore, discussion on grade and gender will emphasize its significance to intervention planning and implementation.

6.2.1 PREVALENCE OF PERSONAL SAFETY

The finding of the current study highlighted that adherence to personal/road safety among the participants was poor, which might have resulted in disastrous effects. This is evident from the 13.0% of the participants who risked injury and death by driving after drinking alcohol and those who reported being driven by someone who had been drinking alcohol (30.1%). Also, it was noted that less than half of the participants (41.2%) indicated that they never wore a helmet when riding on a bike, and few of the participants (16.8%) appeared not to use a seatbelt when driven by someone else. This may mean that the participants were predisposed to road car accidents as

commuters or passengers, pedestrians and as a driver. This finding of the present study is in contrast with a study conducted by Shults, Haegerich, Bhat and Zhang (2016) in the United States on teens and seat belt use using data from 2011 Youth Risk Behavior Survey, it was revealed that only 51% of high school students always wear seatbelt when driven by someone else. These results might be due to a very strict traffic law been properly enforced in the United State by the law enforcement agency which is lacking and poor in Africa or developing countries. Strict laws often change individuals' behaviors and they become more law-abiding when the laws are been enforced regularly.

6.2.2 AGGRESSIVE BEHAVIORS/VIOLENCE-RELATED BEHAVIORS

In the current study, acts of aggression or assault can manifest and be expressed among the participants' as violence, and/or bullying, the consequences which may perhaps lead to injury, confinement, trauma, disability, death, criminal activities such as domestic or partner violence which ranges from physical assault or abuse to rape and decrease in role performance as a result of living under anxiety or fear.

From the findings of the study, it has been found that 7.6% of the participants had carried gun and participants that have carried a weapon while in the school premises were 9.1%. Likewise, 18.1% was reported to have used mathematical compass/divider as a weapon while in school premises, 24.4% of the participants also have fought in school and 33.9% of the participants have been injured and treated while engaging a fight. Additionally, 10.3% of the participants have been forced into sexual intercourse. Furthermore, the results of the study show that participants who were victims of these risk behaviors had been bullied at school (29.9%), bullied

electronically (15.9%), having been threatened and injured with weapon by someone (21.4%), missed school having felt unsafe on way (16%), and been slapped, hit, physically hurt on purpose by a partner (17.4%). The present findings are consistent with a quantitative study on Youth Risk Behavior Surveillance conducted in the United States by the Center for Disease Control and Prevention, where it was reported that 5.6% of the participants had carried weapons such as knife and other sharp tools at school premises, 7.7% of the participants had threatened other students with a weapon at school premises and 11% of the participants had engaged in physical fight at school premises. Likewise, with regards to being a victim of partner or domestic violence, 9.8% of the participants had been slapped by their partner, 7.4% of the participants had been forced physically into sexual intercourse and 19.9% of the participants had been bullied by their co-student at school (Center for Disease Control and Prevention, 2015). Therefore, based on these findings, it can be deduced that high school students in Shomolu, Nigeria appear to resort to more aggressive and violent measures than those in the United States.

In addition, partner violence was also widespread in South Africa as 9.8% of participants had been forced into sexual intercourse and 13.6% of the participants had also been slapped, hit and physically hurt by a partner (Reddy et al., 2003). Therefore, in comparison to Nigeria, the prevalence of partner violence was higher in South Africa on intimate partner violence on adolescents (Wubs, 2015). Likewise, as for peer violence, 19.3% of the participants had been involved in a physical fight with other students at school premises, 9.2% of the participants had carried weapons at school premises and 9.2% of the participants have threatened their colleagues with a weapon at school premises (Wubs, 2015). Additionally, engagement in these forms of violence has been associated with suicidal behaviors (Swahn, Bossarte, Palmier, & Yao, 2013).

Furthermore, suicide or attempts of suicide could also be considered as a form of aggressive or violent related behavior towards self. South African adolescents and youth appear to settle and solve interpersonal relationship disputes among themselves through violence more than both the United State and Nigeria (Reddy et al., 2003). The academic competence and performance of these participants tend to be affected and others tend to quit or withdraw from school, hence limiting their future potential and ability to greatly contribute to the development, advancement, and growth of the country.

However, bullying, carrying weapons and threatening others could cause participants feeling insecure at school (Jacobson, Riesch, Temkin, Kedrowski, & Kluba, 2011). Being a victim of aggressive behavior could reduce and restrain individual's occupational abilities and occupational performance. Violence-related risk behaviors could also restrict the victim from exercising occupational choice and occupational participation out for anxiety or distress. This would result in occupational deprivation and the ability of the individual's to build their social identity would be limited. These above-mentioned outcomes do not portray and make school for the students as the safest environment to be in for learning and socialization. Fear of the perpetrator could also be associated with experiences of occupational marginalization. This occupational risk factor was referred to as individuals' restriction in exercising decision-making power about when, how and what occupations to engage in (Townsend & Wilcock, 2004, p.81). Participants in this present study reported engaging in a physical fight, carrying weapons, being bullying, threatening others and being threatened, slapping a partner and being slapped. Some of these risk behaviors happened at school premises or environment, and this could have made other students feel insecure, to an extent that they would decide to be absent or not attend school, therefore

making them drop out of school. Individuals' carrying a weapon along with themselves could be indicative of an intention to utilize the weapon and in relation with a feeling or need to protect and defend oneself. Likewise, some weapons could have lethal effects, such as knives and guns. The school environment should provide a conducive surrounding for learning for students. It is worrisome and distressing to establish that some participants had sexually violated others rights, which is a criminal offense. Since health risk behaviors can co-occur aggressive behaviors could be associated with other behaviors. For example, partner violence and assault were found to be associated with suicidal behavior (Goncy, Sullivan, Farrell, Mehari, & Garthe, 2017; Swahn et al., 2013), indicating that partner violence could lead to disability and death.

6.2.3 SAD FEELINGS AND ATTEMPTS OF SUICIDE

The results of this study indicate that 32.2% of the participants have had the thought of committing suicide (suicide ideation) and also 15.6% of the participants have nursed the thought of killing themselves in the past 12 months before the conduction of this study. The findings of the current study are consistent with those of Price and Khubchandani, (2017) conducted in Zambia on adolescents risk behaviors and suicide ideation and suicide attempts where it was revealed that 32.2% have had the thought of committing suicide and 17.7% of the participants had seriously considered attempting suicide.

Furthermore in the current study, it has been found that 59.1% of the participants have experienced feelings of sadness and hopelessness. However, the findings of the present study differ from previous research conducted in United States by Kann, (2016), on youth risk behavior surveillance where 29.9% of adolescents have had a feeling of sadness and

hopelessness almost every day for at least 2 weeks in a row which make participants stop doing their usual activities.

Additionally, in the present study, it was revealed that 9.8% of the participants had attempted suicide in their lifetime and 10.3% of the participants had also attempted suicide one or more times during the past 12 months before the conduction of this study. The finding of the current study are consistent with a quantitative study conducted by Price and Khubchandani, (2017) in United States where 8.6% of the participants had attempted suicide one or more time. Likewise, the findings of the present study are consistent with the quantitative study conducted by Breet, Goldstone and Bantjes, (2018) on substance use and suicidal ideation which reported that 14.6% of the participants had actually attempted suicide.

Adolescent suicide as a preventable public health problem and is a significant concern for occupational therapist because suicidal behaviors have increased steadily over the past few decades amongst adolescents and young adults (McCulloch & Philip, 2014). The findings in this study are of public health significance. It is therefore important for occupational therapists and other mental health professionals to be of assistance in screening mental health difficulties and suicidal ideation among students who are at risk of suicide and refer them to mental health service providers. Occupational therapist should work with some government health policy makers both at state and federal level in formulating appropriate and effective psychological prevention and intervention programs for high school students. In addition, health programs from non-governmental organizations (NGO) should also be promoted to reach out to the community particularly to groups at high risk for suicide. Occupational therapists, Federal Government of

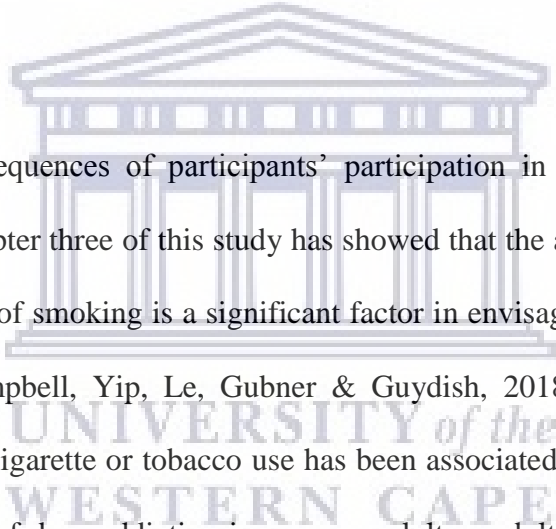
Nigeria and NGOs need to work together in order to provide on-site emotional support, consultations, suicide prevention, workshop sessions and seminars on counseling skills, mental health and general suicide awareness programs, and also educational programs toward the building of positive mental health as well as fostering protective factors among adolescents in Nigeria.

6.2.4 SMOKING

The findings of the current study show that of the 18.0% participants who had ever participated in smoking, 9% of the participants had started smoking before 13 years of age. From this study, it could be discerned that the age of introduction of the participants to smoking is too early and this may be due to a number of reasons such as family connectedness, media, and social context of individuals namely peers and community environment (Waller, Gardner, & Cluver, 2014). Furthermore, it was noted in the findings that some of the participants (3.4%) started smoking at the age of 8 years or younger. These findings appeared to be consistent with those of Ramlagan and Peltzer, (2012) who reported that learners (6.2%) initiated smoking before the age of 10 years in South Africa. However, in contrast to a quantitative study on Youth Risk Behavior Surveillance conducted in United States by the Center for Disease Control and Prevention, (2015) where it was revealed that the prevalence of participants who had ever smoked cigarette was 46.3% and the age of participants' introduction to smoking was reported 10.7% which is higher than the prevalence rate in the present study.

From this present study, it was observed that parental smoking actions have an effect on the participants and studies in other parts of the world have reported on the role parental and peer

influence in the initiation of cigarette smoking among adolescents and youths (Hock et al., 2014; Odukoya, Odeyemi, Oyeyemi & Upadhyay, 2013; Muttappallymyalil et al., 2012). Another important finding was that 10.5% of the participant had a parent or guardian who smokes tobacco and also there is a statistically significant different among the gender groups in this present study. Having parent or guardians whose smoke was found to be a significant contributing factors smoking initiation among the participants. These findings appeared to be consistent with a study conducted by Chatterjee et al., (2016) where it was reported that having a friend or peer who smokes tobacco was also a significant predictor of student initiation into smoking.



The evidence on the consequences of participants' participation in health risk behaviors as previously discussed in chapter three of this study has showed that the age at which participants' get introduced, particularly of smoking is a significant factor in envisaging participation in other health risk behaviors (Campbell, Yip, Le, Gubner & Guydish, 2018; Dey, Gmel, Studer & Mohler-Kuo, 2014). Early cigarette or tobacco use has been associated with other substance use and potential development of drug addiction in younger adult or adulthood (Richmond-Rakerd, Slutske, & Wood, 2017; Cheetham et al., 2015). Cigarette smoking had also been established to be a predicting factor of participation in other health risk behaviors that are not substance-related, such as suicide and sexual-related behaviors. Cosci et al., (2010, p.606) stated that early cigarette smoking could consequently bring about or cause the development of psychiatric or mental disorders among adolescents such as panic attacks and panic disorder. Early-onset of cigarette smoking also appears to have adverse and negative impacts on both psychological and physical wellbeing, including the quality of life of the individual (Hara, Inoue, Shimazu,

Yamamoto & Tsugane, 2010). Therefore, efforts to control tobacco among adults particularly parents may help to reduce teen smoking rates in our environment. In addition, efforts targeted at peer influences should also be fortified for effective tobacco control among adolescents and youth.

Furthermore, the World Health Organization reports that smoke-free laws not only protect people from second-hand smoke but also help current smokers quit and reduce smoking initiation (World Health Organization, 2013). There is currently no law banning smoking in public places in Lagos state where this study was conducted. However, Nigeria government is presently working towards the passage of its National tobacco control bill to the national assembly, which includes restriction and a ban on smoking in any form in the public in all the thirty-six states of the federation. This shows that tobacco use in the country might not be viewed as a major health threat, which is a different opinion of what literature proposes. For instance, tobacco use accounts for an estimated 4.5 million deaths a year in comparison to 3 million annual AIDS-related deaths (Grills, Singh, Singh, & Martin, 2015). Furthermore, in this present study, seventy (10.4%) of the participants has smoke cigarette in the school premises and 10.5% has also use snuff/shisha in the school premises. Therefore, the urgency of laws, policy, strategy, implementation and enforcement of control on tobacco use is emphasized here.

As tobacco use is one of the leading causes of preventable disease and premature death among individuals, cigarette smoking is of importance to the occupational therapy profession, despite the lack of study within occupational therapy literature specific to cigarette smoking or tobacco use. Tobacco use in the form of using snuff or smoking cigarettes can be described as an action

or task within a broader spectrum of doing or occupational performance. The burden of disease associated with chronic ailments such as mental illness, tuberculosis, and cancer has negative adverse effects on the health, well-being, occupational lives, and quality of life of individuals.

6.2.5 ALCOHOL USE

Most secondary school students in Nigeria are in the adolescence period, characterized by experimentation and acquisition of behaviors which carry a high risk of morbidity and mortality (Alex-Hart, Opara, & Okagua, 2015). In 2015, it was established that in Lagos State, Nigeria, 9.2% of adolescents have consumed alcohol in their lifetime (Alex-Hart, Opara & Okagua, 2015). The findings of Alex-Hart, Opara and Okagua (2015) on the prevalence of alcohol consumption among secondary school students in Southern Nigeria suggest that the prevalence of adolescents' consumption of alcohol has increased because the proportion appears to have tripled. This shows that high school students and youths engagement in consumption alcohol is a major concern in Nigeria because the effect of the risk behaviors could be detrimental to health, quality of life, and well-being of an individual (Dumbili, 2014).

The results of this present study indicate that 32.8% of the participants had drunk alcohol during their lifetime and 19.9% of the participants started drinking alcohol at the age of 12 years or younger. Furthermore, it was also noted in the findings that some of the participants (6.5%) started drinking alcohol at the age of 8 years or younger even though the legal drinking age in Nigeria is 18 years (Alex-Hart et al., 2015). Additionally, it was further revealed in this present study that there is a statistical difference among class group and age group of below 14 years, 14 years and 17 years of age. However, the findings of the current study do not support the previous

research conducted by Chen, (2014) in the United States on trends and patterns of concurrent substance use among adolescents, it was reported that 72.5% of the participants had drunk alcohol during their lifetime and 21.2% of the participants started drinking alcohol before the age of 13 years. Furthermore, in contrast to a research by Carney, Myers, Louw, Lombard and Flisher (2013) on the relationship between substance and delinquency among high school students, it was found that 49.1% of sample participants had drunk alcohol during their lifetime and 12% of them initiated use at the age 13 years or younger in South Africa. Although the prevalence statistics in this present study are not as high as the findings in the United State, but it was observed further that the prevalence of alcohol consumption in Nigeria is higher than that of Brazil (27.3%), Ghana (15.3%), and Ethiopia (10.4%) (Alex-Hart et al., 2015; Machado et al., 2013; Reda, Moges, Wondmagegn, & Biadgilign, 2012).

This occurrence of alcohol consumption among adolescents in Nigeria as indicated in this present study is still relatively high and remains a concern. These differences may be related to differences in the implementation of laws regulating drinking age. Although the drinking age of alcohol consumption in Nigeria is 18 years, the results from previous research showed that this law is not being implemented (Dumbili, 2015; Atoyebi & Atoyebi, 2013; Oshodi, Aina, & Onajole, 2010). The fact that more than a third of those who drank alcohol 30 days before the survey was also drunk within that period (with 19.5% of them drank 5 or more drinks of alcohol within a couple of an hour) shows the enormity of the problem. Such heavy drinking by adolescents could result in alcohol-related harm¹. Furthermore, early introduction to alcohol consumption is a risk factor for alcohol dependence and abuse later in life.

A previous study by Rojo-Mota, Pedrero-Pérez and Huertas-Hoyas (2017) indicated that drug addiction could result in a dysfunctional occupational performance which may negatively influence on the health, social, and academic. In consistent with the present study, it is clear that the problem of drunkenness could have influence on the adolescents in carrying out school-related tasks and activities. This seemed to echo a concern that was raised by Levy et al. (2014) and World Health Organization (2014) that adolescents scholastic achievement tend to gradually decrease because of engagement in risk behavior of alcohol use which may develop into drug addiction.

Additionally, it is expedient for Federal Government of Nigeria to formulate and implement policies adopting the 10-point policy thrusts of the WHO's resolution 'strategies to reduce the harmful use of alcohol' (WHO, 2009; Dumbili, 2014) in the country. The Federal lawmakers at the National House of Assembly should also reconsider the economic interests and the rise to the global call for action against the rising menace of alcohol consumption and alcohol-related issues of which Nigeria is one of the leading contributors in the world (Dumbili, 2014).

Furthermore, is there a need for Federal Government of Nigeria and other regulatory agency to clearly state what standard drink is and also specify the alcohol by volume (ABV) for all alcoholic beverages manufactured in the country or imported, and mandate labels to carry it. This policy will encourage pictorial warnings on the labels of bottles or can, as this will assist and help consumers to understand what is being communicated.

6.2.6 MARIJUANA/DRUG USE/OTHER DRUG USE

Marijuana or drug use is a major public health problem that adolescents and younger adults tend to engage in and it may have serious adverse effects on their health, quality of life, well-being and those in their environment (Volkow, Baler, Compton, & Weiss, 2014). These adverse effects are not narrowed to short-term effects but may also present as health complication in an adults life. For instance, the adolescent brain is still in development and this process may be affected by drug use. Drug use is an international problem of significant epidemiologic proportions that has particularly ruinous and destructive effects on youths because the early introduction to marijuana or drug use has been associated with unusual and deviant behavior (Volkow et al., 2014).

From the findings of the present study, it has been found that 13.8% of the participants have used marijuana in their lifetime and 7.5% of the participants had initiated the use of this marijuana/drug use before the age of 13 years. It was further recorded in the current that 3.3% of the latter subgroup started using marijuana/drug use before 8 years of age. In contrast, a research by Ramlagan and Peltzer (2012) in South Africa on Epidemiology of substance use and abuse reported that 4.2% of the sample participants started using marijuana/drug use at or before the age of 8 years which is slightly higher than the present study. In addition, this study is also in contrast to a quantitative study conducted on Youth Risk Behavior Surveillance in United States by the Center for Disease Control and Prevention, (2015) where it was revealed that 7.5% of the participants had begun marijuana/drug use before the age of 13 years and the lifetime use prevalence was above one-third of the sample (36.8%).

The findings of the present study revealed that 12.7% of the adolescents have sniffed gum/agents to get themselves high more than one time. In addition from the current study, it was observed also that 11.9% of the participants had use cocaine and 10.9% of the participants have used a needle to inject illegal drugs such as heroin into their body. The finding of the present study are consistent with a quantitative study conducted by Atoyebi and Atoyebi (2013) on the pattern of substance abuse among senior secondary school students in Osogbo, Nigeria where 6.4% of the participants have used cocaine in their lifetime, and 14.0% of the participant have sniffed agents to get themselves high.

More also, it was further revealed that 15.5% of the participants have used prescription drugs such as codeine, tramadol, Rohypnol. However, the findings of the current study do no support a quantitative research conducted by Johnson, Akpanekpo, Okonna, Adeboye and Udoh (2017) in Uyo, Nigerian on the prevalence and factors affecting psychoactive substance use among undergraduate students, it was reported that 78.9% of the participants had used codeine and 74.2% had taken tramadol during their lifetime.

In spite of the various efforts being put together by various tiers of Government in Nigeria and the National Drug Law Enforcement Agency [NDLEA] to curtail and curb the tide of drug abuse in the country there seems to be a consistent increase of growing cannabis by some states in the country and trading by some individuals for livelihood purposes (Afolabi, Ayilara, Akinyemi, & Ola-Olorun, 2012), easy access to this substance could have given a reason for the extensive use among the participants. This emphasizes the need for more tough and effective law enforcement by the federal government of Nigeria and the National Drug Law Enforcement Agency (NDLEA) against cannabis production and its distribution.

6.2.7 SEXUAL BEHAVIOR

The findings of the current study show that 27.0% of the participants have had sex and 6.4% of the participants started having sexual intercourse at the early age of 11 years and younger. The present study also reports that 20.2% of the participants engaged in this sexual behavior when they were 12 years or older. The present findings are consistent with a study conducted in the Port Harcourt, Nigeria by Olufemi, Paulin, and Akinbode, (2018) on the prevalence of early sexual debut among adolescents with 27.7% reported to have engaged in sexual intercourse and 18.6% had started before the age of 12 years or older. Additionally, the finding of the study is in contrast with the research by Tugli and Morwe, (2013) which was conducted in South Africa on sexual risk behaviors among rural learners where it was reported that 41.1% of the sample participants have had sex and 14.4% of the participants started having sexual intercourse at the age of 14 years.

In Nigeria, the prevalence of HIV/AIDS in 2016 was 2.9% between the ages of 15-25 years (World Health Organization, 2016). The majority of the participants in this present study fall within this age category and they have indicated to have engaged in sexual behaviors that could endanger them of contracting sexually transmitted diseases (STD) including HIV. Additionally, it was also revealed in this present study that 14.2% of the participants have had two or more sexual partners in the past three months preceding the data collection. Of further concern also in this study reports that 15.3% of the participant only use a condom during sexual intercourse with their partner during their lifetime and 4.3% showed that they had been under the influence of alcohol before having sex.

HIV/AIDS may have detrimental effects on health, quality of life, well-being and occupational performance of an individual. The disease may cause sickness, premature death and early retirements that result in productivity declination, loss of skills and experiences, therefore damaging an already constrained economy (Awofala & Ogundele, 2018). The presence of disease could restrict individual engagement in purposeful and meaningful occupations, thus resulting in occupational risk factors such as occupational imbalance. Bednarski (2016, p.8) revealed that occupational imbalances related to "the need for a range of occupations that promote health-giving routines and social inclusion." The shame and stigma involved when being infected with sexually transmitted diseases could prevent adolescents and youths from seeking medical attention. This shame and stigma could reduce adolescents' occupational engagement, thereby increasing the experience of occupational injustice. This threatens the country's future health care system and plans of having a healthy human resource-based by the year 2020 where there will be no new individuals infected with HIV/AIDS. The absence of measures that are readily available to students in high schools in Nigeria could lead to continued participation in these risk behaviors. One essential entity that is currently missing in the high school curriculum is the content related to safer sexual practices. Thus, the students may not be well informed about the risks and consequences of their behaviors; therefore most probably they are not able to make informed decisions.

6.3 DEGREE OF LEISURE BOREDOM

The results of this study show the degree of leisure boredom among the participants as reported in Table 5.55. From the present study, the highest degree of leisure boredom among the participants was Median score of 44 while the lowest degree of leisure boredom was Median

score of 43. Comparatively, in a study conducted by Kara and Özdeouglu (2017) that examined the relationship between leisure boredom and leisure constraints, it was found that the median scores for leisure boredom scale for adolescents and high school students in urban areas were 40-38, and 41-36 respectively; with the range being from 16 to 56. Thus in general in this current study, high school students in Shomolu Local Government, Lagos State reported a higher degree of leisure boredom. These findings appeared to be consistent with quantitative study conducted by Wegner, (1998) on the relationship between leisure boredom and substance use amongst high school students in Cape Town where it was revealed that Black Grade 8 students with median score of 46 experienced the highest degree of leisure boredom and may be at risk of using substances as an exciting way of to alleviate boredom.

6.4 AN OCCUPATIONAL SCIENCE PERSPECTIVE TO SUBSTANCE USE

Using Wilcock's (1990, p.3) occupational perspective of activity and health through the concepts "doing, being, becoming and belonging", substance use (as well as other risk behavior) can be regarded as a form of doing in which the participants are presently engaged. When this doing happens over a lengthy period of time, the consequences may envisage who and what the adolescent become in later life. Hitch, Pépin, and Stagnitti (2014, p.231) revealed that becoming includes aspect of "transformation, potentials, growth, and self-actualization." Through participation in substance use, adolescents could limit their potential to become what they desire and seek to become in life, despite being at school. However, from an occupational science perspective, the concept of occupational injustice will be used to discuss substance use.

Occupational injustice can be a cause and/or outcome of adolescent's participation in health risk behaviors. With regard to substance use, the findings of the study indicated that a variety of outcomes of occupational injustice might be have influence on the adolescents' participation. This could mean that adolescents' participation in substance use might constrain them from exploring their occupational choices related to health enhancing occupations that promote healthiness and well-being. This is in line with previous studies (Nizzero, Cote, & Cramm, 2017; Bell, Wegner, Blake, Jupp, Nyabenda & Turner, 2015) which indicated that individuals' daily occupational repertoire and performance seemed to be limited to only addiction-related behaviors, possibly resulting in occupational imbalance. Therefore, it may be deduced that adolescents' occupational performance and engagement that are particularly important for survival could be neglected which may influence their occupational potential. From this explanation, it is clear that the findings demonstrated that substance use as an occupation could lead addition among adolescents because of under-occupied and over occupied.

Occupational alienation is an outcome of occupational injustice related to the "forces outside the individual's jurisdiction dictate occupational choices in a way that obstructs or interrupts synchrony between the person's wish or ambition and their choices" (Whalley-Hammell, 2015, p.237). This was evident from the findings of the current study among the adolescents who shared that they have had feeling of being stressed, feeling inadequate, hopeless and without a sense of association or belonging. Eventually, this might have resulted some of the adolescents who indicated that they did experience some suicidal behaviors.

From the findings in the current study the adolescents reported early use of alcohol while at school. This could be possible because of a lack of emphasis on the policies for controlling alcohol consumption which might have led the adolescents to experience occupational deprivation. In addressing the emphasis on building policy and implementation, previous studies have reported a need for public health interventions and public policies that may be used to reduce alcohol consumption and alcohol-related harm among Nigerian adolescents (Dumbili, 2014; Dumbili & Onyima, 2018; Nelson, 2018).

6.5 LEISURE BOREDOM AND HEALTH RISK BEHAVIOR

In previous studies, it has been noted that leisure boredom seemed to be associated with substance use, alcohol consumption and other health risk behaviors amongst adolescents (Taylor, Hartman & Baldwin, 2015; Hendricks, Savahl & Florence, 2015; Caldwell & Smith, 1995; Iso-Ahola & Crowley, 1991). In a qualitative study conducted by Weybright, Caldwell, Ram, Smith, and Wegner (2015) in South Africa on proneness to boredom, it was established that poverty-stricken district environments that lack leisure opportunities tend to increase the risk of adolescents experiencing leisure boredom. In sequence, adolescents or younger adults may be depending on substance use and other drugs to alter or convert an under stimulating habitat into a stimulating environment, a process deteriorated by the early age of introduction and speed of progression through substances by South Africa adolescents (Akgul, 2015; Weybright et al., 2015; Miller, Caldwell, Weybright, Smith, Vergnani & Wegner, 2014).

The findings of the current study show that leisure boredom is positively associated with participants' participation in violence-related behaviors, bullying, sad feeling and attempts at

suicide, smoking of cigarette/tobacco, drinking of alcohol, marijuana/drugs use, other drug use, sexual intercourse, body weight, other health related issues and food taken. Therefore, there might be a possibility that adolescents engaging in these forms of health risk behavior such as smoking of a cigarette, drinking of alcohol may be alleviating leisure boredom by providing them with the excitement and the stimulation they are trying to find. Weybright et al., (2015) found that male high school students reported this to be a significant reason for their use of illicit drugs, drinking of alcohol and smoking.

It is important to note and understand the factors that predispose high school students to health risk behaviors. Such understanding is very essential in promoting healthy behaviors and preventing high health risk behavior been engaged by high school students. Several factors have been presumed to generate and increase health risk behaviors among high school students. This study also investigates leisure boredom as an influential factor of health risk behaviors among high school students in Shomolu Local Government, Lagos State. This finding is not unexpected as literature has consistently identified leisure as a context for the development of both healthy and unhealthy behaviors. It was indicated that adolescents who appear to experience leisure alienation tend to engage in higher levels of health risk behaviors (Adegoke, Olasupo, & Ayeni, 2014; Caldwell & Smith, 1995).

The perspective in which health risk behavior occurs is most frequently in leisure situation and leisure time (Sachsman, 2017; Miller et al., 2014). If an individual subjectively defines his or her own leisure activities, then participating in health risk behavior such as illicit drug use, drinking of alcohol, smoking of a cigarette, may be regarded as a leisure activity by some high school

students (Badura, Geckova, Sigmundova, Sigmund, Van Dijk & Reijneveld, 2018). Additionally, engagement in health risk behaviors by adolescent mostly occurs with their friends providing them with an opportunity for socialization and conformity with their mates (Hendricks, Savahl & Florence, 2015; Weybright et al., 2015). Carney et al., (2013) revealed that substance use or drug use was significantly associated with other forms of health risk behaviors in adolescents such as sexual behaviors and dangerous road related behavior i.e. personal safety.

Adolescent's engaging in health risk behavior meets their certain needs such as the need for excitement and stimulation and as a means of rebellion. Van Tilburg and Igou, (2017) found that high sensation-seekers experienced a low level of leisure boredom. The fact that leisure boredom and health risk behaviors significantly associated, this may have a negative potential impact on adolescents' occupational performance and function.

6.6 THE PERSON-OCCUPATION, PERSON-ENVIRONMENT, ENVIRONMENT-OCCUPATION INTERACTIONS

The Person-Environment-Occupation Model (PEO) (Law et al., 1996) serves as a theoretical framework for this present study. The PEO Model is a tool used in examining complex occupational performance issues and the dynamic experience of an individual engaged in an occupation within a community environment over time. From the occupational perspective of health risk behaviors, there are numbers of ways in which health risk behaviors and its association with leisure boredom among adolescents in Shomolu Local Government Area of Lagos State can be clearly understood using the PEO Model. The influence of the environment on occupation engagement of an individual must not be underestimated. The environment is

continually altering and unstable over time and space, which requires individuals to adapt their behaviors, and thus their occupational performance (Wegner & Caldwell, 2012).

6.6.1 PERSON-OCCUPATION INTERACTION

The Person-Occupation (P-O) interaction refers to the dynamic relationship that occurs as the person interacts with his or her various occupations. In the context of the current study, the P-O interaction implies the interaction that occurred as the adolescents engage in risky behaviors either at school, home or household. It shows how adolescents' innate and learned attributes influence their engagement in health risk behaviors, and also how these health risk behaviors influenced the adolescents' health, well-being, and quality of life.

In this present study, there is an indication of reduced personal competencies of participants after their engagement in some forms of health risk behaviors such as marijuana use, drinking of alcohol, smoking of cigarette, violence-related behavior. This could lead participants' being dysfunctional in most of their activities for daily living or daily function, academics performance in school, social relationship and interaction with friends, functional ability in the community and several forms of misbehavior. Additionally, a deficit in the experience of, or inability of the participant to engage in meaningful and purposeful activities such as leisure activities participation could also increase participants' likelihood of poor academic performance, ill-health, occupational performance dysfunction, and engagement in unhealthy behavior.

Lack of recreational facilities or centers might give reasons why adolescent in this present study engages in unpurposeful activities and do experience leisure boredom because the environment

does not have recreational resources and opportunities. All this health risk behavior happening among the adolescents in this present study might be because the environment in that Shomolu Local Government Area, Lagos State is not conducive, healthy and does not allow adolescents to engage in life skills and purposeful and meaningful activities.

Therefore, participants' engagement in leisure activities could offer them opportunities for healthy quality of life and healthy development; for example, engagement in school-based extracurricular activities was found to be a protective factor in those students reported with lower levels of marijuana use and other substances, higher grades and aspirations, and more positive academic attitudes (Caldwell & Faulk, 2013). In addition, participants' participation in leisure activities was found to be significantly correlated with and influential factors of health risk behaviors including substance abuse, sexual activities, violence, crime, cultism, and teenage pregnancy (Caldwell & Faulk, 2013). A quantitative study conducted by Adegoke and Ayoade (2014) on relationship among leisure, social self-image and risk behaviors of adolescents supported the present study that health risk behaviors, such as substance use and sexual risk behavior can be leisure related because they tend more often than not, to occur during free time in leisure settings, and be engaged in voluntarily for fun, pleasure, and relaxation.

6.6.2 PERSON-ENVIRONMENT INTERACTION

In the context of this study, the Person-Environment (P-E) interaction refers to the dynamic transaction relationship that occurred between the adolescents (high school students) and the environment (parents, peers, school, neighborhood, etc.). It indicates how the participants' engagement in health risk behaviors is been influenced or affected by the physical, cultural,

socioeconomic, social and the institutional environment. It also reveals the influence of adolescents on the environment. The environment had a major influence on the participants' experience of leisure boredom in free time and their engagement in some form of health risk behavior such as smoking of cigarette, marijuana use, drinking of alcohol, etc. In this present study, there was a clear indication of occupational deprivation and occupational imbalance among the participants.

Firstly, peer groups influence adolescents' social development. During adolescence, individuals have an intense need for belonging to a peer group. It has been found in this present study that participant had smoked cigarette, drinks alcohol, marijuana/drug use, take codeine, used snuff or shisha, sniffed gum, used cocaine "gbana" within and outside school premises or school time. These actions will definitely not be done alone as participants might have engaged in these health risk behaviors with their friends or group of friends because adolescents are more likely to engage in health risk behavior with peers than when they are alone. This, therefore, suggests that peer plays a major role in adolescent participation in health risk behavior because influence exerted by peer group might encourage the participants in this present study to change their own values, behaviors and own attitude in order to conform to the group norms. A quantitative study conducted by Adeniyi and Kolawole (2015) among 100 high school students from five secondary schools in Amuwo-Odofin, Lagos State, proved that peer pressure may lead adolescents to behave in a way that they do not usually do and also that adolescents are more vulnerable to peer influence because it is their time for experimenting with new identities and experiences.

The findings of the study highlighted that the school environment might also pose a risk factor on the participants in this present study engaging in health risk behavior. From this present study, it was found that participants had carried a weapon such as a knife, broken bottle, and gun and had used a mathematical compass as a weapon, engaged in a physical fight, bullied both within and outside school premises. In addition, it was further revealed in this present study that participants had miss school at some point time because they felt they are unsafe on their way to school and someone had threatened and injured them with weapons such as a knife, screwdriver on their way to school. Shomolu Local Government Area which is the study site for this present study, a suburb area and a low socioeconomic area in Lagos State is plagued by issues of metropolitan violence, stealing, gambling, substance use, street fighting, and other forms of social insecurity. Schools from this unorganized environment pose a greater risk of obstructing the quality of participant's functioning, increase chances of participants' delinquent behavior and engaging in some forms of the acts they see in the environment. It has been highlighted in a study conducted by Akubue (2016) that a good learning school environment has the advantage of fostering desirable healthy behavior and attitude among adolescents, developing problem solving, skills and creative thought, and encouraging adolescents' healthy interrelationship and fostering-centered methods among their friends.

6.6.3 ENVIRONMENT-OCCUPATION INTERACTION

The Environment-Occupation (E-O) interaction represents the dynamic relationship that exists between the adolescents (high school students) environment and the occupation. It reveals the influential role all aspects of the environment have on the occupation (health risk behaviors). In the context of the study, the O-E interaction describes the transaction influence of the

participants' environment on engagement in health risk behaviors, while also the behaviors are been influenced by the environment.

In promoting adolescent health, quality of life and well-being it is important to consider the influence of the environment on the precipitation and perpetuation of participants' occupational risk factors. From the occupational therapy profession, Law et al., (1996) proposed in the Person-Environment-Occupation (PEO) model that the environment be viewed as one of the three core constructs of human occupational performance. In this study, the environment comprises of cultural, socioeconomic, institutional, physical and social domains. Each domain is considered from the unique perspective of the participant, household, neighborhood, and community. The environment is continually shifting and changing over time and space, which requires the participants to adapt and change their behaviors, and thus, their occupational performance.

The adolescents that participated in this present study comes from the environment Shomolu Local Government Area, a low socio-economic of Lagos State that is experiencing issues of poverty, inadequate infrastructure, congestion, overpopulation. In addition, Shomolu Local Government Area is also known for activities of gangsterism “touts/area boys”, widespread of unemployment particularly among youths and older adults, gambling, youth violence, substance use, illegal extortion of money from people, prostitution, serious housing shortage, increase in crime rate such as murder, rape, manslaughter, armed robbery and stealing.

This environmental influence and lifestyle can affect the chance of the participants in this present study being attracted to unlawful activities and therefore might fall victims of certain crimes and

engage in some forms of health risk behavior. It has been revealed in this present study that participants have carried weapon such as knife broken bottle, had carried gun, have used mathematical compass as weapon, have engaged in physical fight where they were injured and had to be treated by doctor or nurse both within and outside school environment.

Furthermore, it has been highlighted in a study conducted by de Jager (2015) in South Africa that disadvantaged communities are perceived as a risk factor for adolescent engagement in health risk behavior such as substance use, violent-related behavior, risky sexual behavior, excessive alcohol consumption, gambling, and marijuana use. The more resources a community has, for example recreational activities for adolescents, youth and good role models, the lower the health risk behavior in that community (Youngblade, Curry, Novak, Vogel, & Shenkman, 2006).

The environment in which this present study was conducted is socially disorganized. When there are low employment and education opportunities, poverty, drug activities, crimes, gang activities and absence of cohesion among neighbors and environment networking, the environment is dysfunctional. This will result in divergence between the values of the parents, families, neighbors and the values of this disorganized environment, and the school also fails to synchronize them. This situation might cause the adolescents in this present study to lack social competence such as emotional regulation and pro-social behaviors. These pose the participants in this present study in engaging in any forms of health risk behavior or even drop out of schools.

In a study conducted by Stephenson (2009) on risky sexual behavior and its environmental influences, it was highlighted that prevailing economic conditions, such as poverty,

unemployment, drug activities, and the behaviors and attitude of adults in the environment strongly affected young individual's sexual behavior and other forms of health risk behavior. Swahn and Bossarte (2009) found that adolescents living in urban, disadvantaged environments were significantly more likely than the rest of the population to engage in health risk behavior. They specifically found that these adolescents were more involved in violent-related behavior such as use of weapon, vandalism, and selling of drugs (Swahn & Bossarte, 2009).

In this present study, it was found that there was higher degree of leisure boredom among the participants. Shomolu Local Government Area, the study site for this study has limited recreational resources and those that do exist are usually opened during a rare occasion such as children day, Muslims festive period, Christmas days, boxing days, or need to be paid for to have access, which prevents participants from accessing the facilities. In addition, playing fields and sports facilities at schools are usually locked up when schools are closed every day or rent out for various occasion such as wedding reception, burial reception, which also make it unusable for the adolescents for leisure participation. Likewise, some sports fields are locked up and surrounding with fences. This is mainly to prevent unwanted persons from vandalizing the sports facilities and equipment and also not using the area for illicit activities such as smoking of cigarette, marijuana/drug use or gang groups "touts/area boys" from taking over the sports fields.

Furthermore, the study site for this present study offers very limited leisure opportunities for participants to utilize leisure, and recreational resources in the environment. Participants in this study might have few options for exposure to and exploration of leisure activities, and this can yield high health risk behavior among adolescents. Additionally, there is very little engagement

in leisure activities that provide opportunities for meaningful participation and sustained involvement over time among adolescents. Therefore, the environment contributes significantly to participants' occupational deprivation in that participants are unable to engage in various range of healthy leisure activities due to these environment limitations. It has been highlighted by Wegner (1998) that the environment has a major influence on the adolescents' experience of leisure boredom in free time.

6.7 OCCUPATIONAL PERFORMANCE FIT

Within the PEO model, the three major components of person, environment, and occupation interact continually across time and space to determine occupational performance in which they increase or diminish their congruence. When these components fit closely together, occupational performance is optimized i.e., the closer their overlap or fit, the more harmoniously they are assumed to be interacting (Figure 6.1). The outcome of greater compatibility or fit is represented as more optimal occupational performance and the outcome of lower compatibility or fit is represented as sub-optimal occupational performance. In the present study, there is a lower compatibility outcome which represents a sub-optimal occupational performance (minimized fit) due to various unhealthy risk behaviors and a higher degree of leisure boredom among participants.

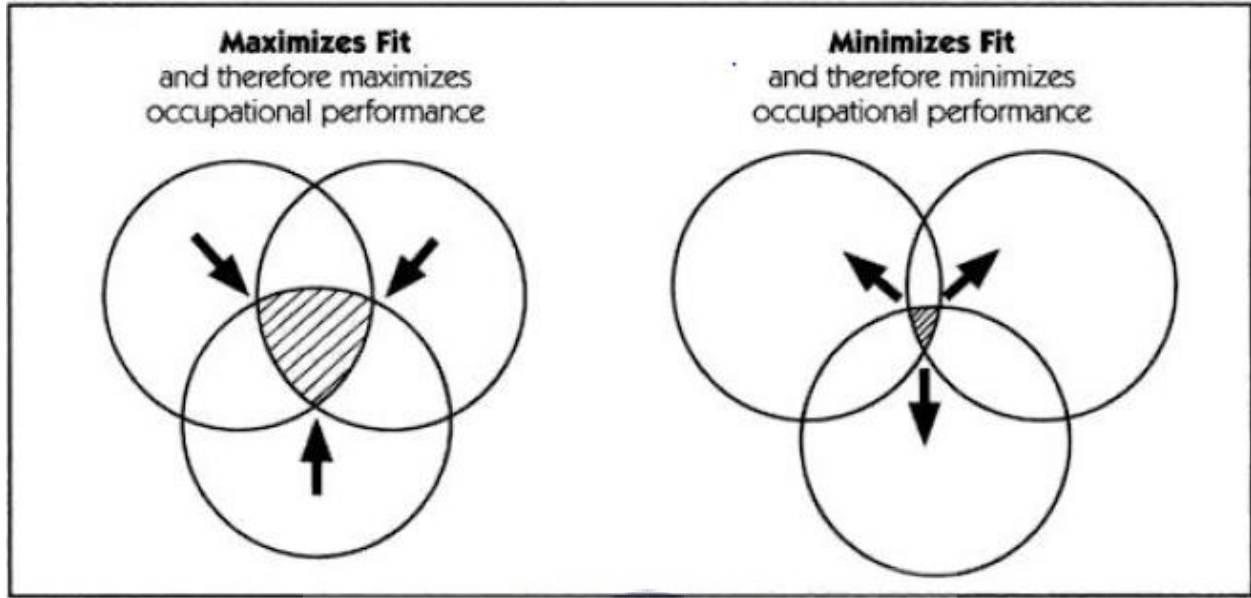


Figure 6.1: An illustration of changes to occupational performance as a consequence to changes in person, environment, and occupation fit.

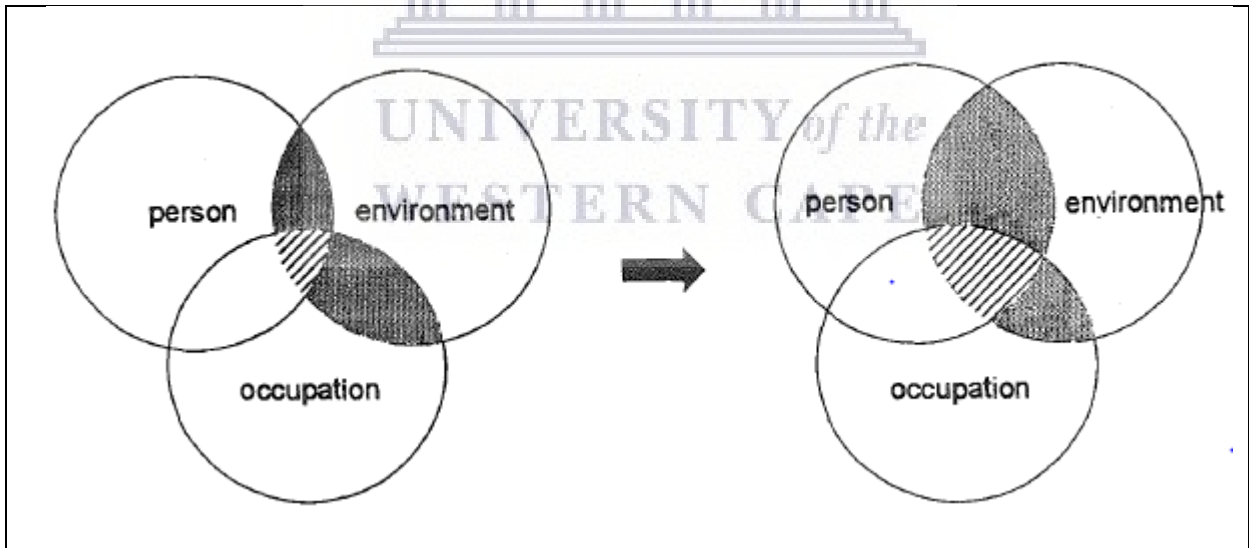


Figure 6.2: Effect of the intervention to Change Environment on Occupational Performance.

6.8 CONCLUSION

In conclusion, engagement of Nigeria high school students in health risk behaviors seem to create an enormous challenge for occupational therapists, as the consequences are likely to affect their occupational lives and performance. In the present study, the age at which participants are being introduced to risk behavior such as smoking, alcohol consumption, and substance use has been established, and this could be influential in participants engaging in health risk behaviors. These appeared to have severe consequences on health, quality of life and well-being of an individual. Occupational therapists should consider the role of leisure boredom on adolescent health, well-being, and development, and implement plans to address these challenges.

6.9 LIMITATIONS OF THE STUDY

There are several limitations that need to be taken into consideration regarding the current study. Firstly, honesty and accuracy of the participants in answering the questionnaire might have been compromised during data collection from two schools because the classes were overcrowded with students and students had to share a desk. This could not be sidestepped as there was no other venue available at that period. However, the integrity of all the data collection was not compromised as this only occurred in two schools out of the seven schools for the study.

Secondly, there could also have been self-reporting bias during data collecting. To reduce this, emphasis was laid on anonymity, voluntary participation, and honesty in reporting. Moreover, there were no familiar authorities that the participants would have thought would be able to trace them from the responses given. Thirdly, the results may pertain to only students who were

present at the venues when the questionnaires were been administered. However, the outcomes may not be significantly affected as those who were absent accounted for a smaller proportion.



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CHAPTER SEVEN

CONCLUSION AND RECOMMENDATIONS

7 INTRODUCTION

In this chapter the conclusion and recommendations on the research conducted on health risk behaviors and the associations with leisure boredom among high school adolescents are presented. In addition, each chapters of this present study are summarized to highlight their importance in the current study.

7.1 CHAPTER ONE

In this section, the research question, aim and objectives are presented.

7.1.1 RESEARCH QUESTION

Chapter one presented a problem that was related to leisure boredom and health risk behavior among adolescents in Shomolu Local Government Area of Lagos State because no previous study has been done regarding leisure and health risk behavior. The research question was “What is the prevalence of health risk behaviors and their association with leisure boredom among high school adolescents in Lagos, Nigeria?”

7.1.2 RESEARCH AIM

The primary aim of the study was to establish the prevalence of health risk behaviors and the association with leisure boredom among high school students in Shomolu Local Government Area of Lagos state, Nigeria.

7.1.3 OBJECTIVES OF THE STUDY

The objectives of the study were to:

- Describe the socio-demographic profile of high school adolescents who engage in various health risk behaviors in schools in the urban city of Lagos.
- Determine the prevalence of health risk behaviors which are (personal safety, violence-related behaviors, expressed feeling of sadness and suicidal ideation, substance use, drinking of alcohol, sexual behaviors, physical activity) among high school adolescents.
- Determine the degrees of leisure boredom.
- Identify potential associated factors of health risk behaviors and leisure boredom among adolescents.

7.2 CHAPTER TWO

Chapter two presented the theoretical framework of Person-Environment-Occupation model because it is argued that once the adolescents begin to engage in the occupation of health risk behavior and not engaging in leisure, this could have an influence on their health, quality of life and well-being. In this form, it affects their occupational performance to a point where they might experience occupational imbalance, occupational alienation, occupational deprivation, and occupational injustice. Adolescents' participation in unhealthy, negative or risky activities could also affect their health and well-being negatively and sets off a maladaptive cycle of dysfunction. The environment is continually shifting and changing over time and space, which requires adolescents to adapt and change their behavior, and thus their occupational performance. The environment, therefore, influences adolescents' behavior in two ways; firstly, the environment affords opportunities for occupational performance, and secondly environment press constrains

the adolescent and/or demands certain behavior. In this study, the economically deprived environment which the adolescents lived contributed to occupational deprivation and occupational imbalance in their free-time, maintaining and trapping the adolescents within the situation and contributing to a feeling of leisure boredom.

7.3 CHAPTER THREE

Chapter three presented the relevant literature pertaining to the proposed research study on health risk behaviors and the association with leisure boredom among high school adolescents. The literature of this thesis focuses on the adolescence developmental stage, domains of adolescent development and the prevalence of different types of health risk behaviors in different settings, and also the various factors relating to adolescents engagement in these risk behaviors. Behaviors that were studied include those related to personal safety, substance use, sexual behavior, violence, tobacco use, physical inactivity, alcohol, and other drugs use, aggression. In addition, leisure, leisure activities, leisure boredom were also discussed.

7.4 CHAPTER FOUR

Chapter four presented the research method that was used in this study which includes a cross-sectional study within a quantitative research approach. This cross-sectional, exploratory and descriptive approach was thought necessary for gaining insight to determine the health risk behaviors and the association with leisure boredom among high school adolescents. The data that comes from this quantitative research is numerical in form and takes the form of explaining the frequency, degree, value, and/or intensity of the variables. Furthermore, it allowed the researcher to obtain a deeper understanding of the phenomenon of health risk behaviors and its association

with leisure boredom mostly among high school adolescents. In addition, a validated and reliable self-administered questionnaire adapted from Adolescents Health Risk Behavior survey, South Africa Health Wise Survey and Leisure Boredom Scale assisted the researcher to get more understanding on the health risk behavior and leisure among adolescents.

Furthermore, the participant selection for this study was conducted through stratified random sampling in order to minimize the potential for a bias selection of participants. Inclusion and exclusion criteria were used to select the appropriate participants for the study. The inclusion criteria for the participants for this study includes students of mixed gender that are in Shomolu Local Government Area, students who are in senior class one (SS 1) to senior class three (SS 3) and students who are between the age of 12 to 18 years. Lastly, the statistical software package SPSS (version 25) was used to enter, clean and analyze the data (SPSS Incorporated, SPSS).

7.5 CHAPTER FIVE

Chapter five presented the results from the quantitative data analysis in an attempt to meet the specific objective of this study. Furthermore, this chapter provided descriptive statistics used to present an overview of social demographic profile and then present the prevalence of health risk behaviors of the study sample. Additionally, the prevalence of health risk behaviors and its association with demographic varies i.e. gender, class/grade and age was also described. Likewise, the degree of leisure boredom and its association with health risk behaviors was also described in this study. In the present study, among the 673 participants who participated during data collection, 56.0% (N=377) were male and 44.0% (N=296) were female.

7.6 CHAPTER SIX

The discussion of this present study was structured based on the objectives of the study which include the socio-demographic profile of the high school adolescents, prevalence of health risk behaviors which are (personal safety, violence-related behaviors, expressed feeling of sadness and suicidal ideation, substance use, drinking of alcohol, sexual behaviors, physical activity) and degree of leisure boredom. Additionally, the associated factors of health risk behaviors and leisure boredom among high school adolescents were also discussed.

The findings of the current study show that leisure boredom is positively associated with participants' participation in violence-related behaviors, bullying, sad feeling and attempts at suicide, smoking of cigarette/tobacco, drinking of alcohol, marijuana/drugs use, other drug use, sexual intercourse, body weight, other health related issues and food taken. Furthermore, it is an important note and understands the factors that predispose high school students to health risk behaviors. Such understanding is very essential in promoting healthy behaviors and preventing high health risk behavior been engaged by high school students.

7.7 RECOMMENDATIONS

This section presents the recommendations of the study in relation to occupational therapy practice, education and policy development.

7.7.1 OCCUPATIONAL THERAPY PRACTICE

It is evident from the findings that the adolescents seemed to lack opportunities to engage in their leisure exploration and participation. However, as occupational therapists, we have a role to play

in promoting a healthy lifestyle, wellbeing, and development of adolescents in Nigeria, particularly among adolescents residing in disadvantaged areas of the country. Part of this role as an occupational therapist is to consider how to address the challenge of leisure boredom, thus also tackling health risk behavior. Through facilitating leisure exploration and participation, occupational therapists can move beyond a deficit-based approach that addresses only risk behavior, to one that develops adolescent capabilities and assets. The Person Environment Occupation Model provides a useful framework to facilitate optimal occupational performance through interventions that target people, the environment and occupations. In partnerships with teachers, students, and community organizations, occupational therapists are well-placed to develop leisure programs in schools and communities. Occupational therapists should advocate for the creation and sustainability of leisure opportunities that are accessible, affordable, available and safe. The health promoting schools approach provides much scope for the involvement of occupational therapists in mainstream schools, for example, in developing school-based and after-school programs. Finally, occupational therapists, through their understanding of the association between occupation and health, should participate in further research in the field of leisure.

7.7.2 EDUCATION

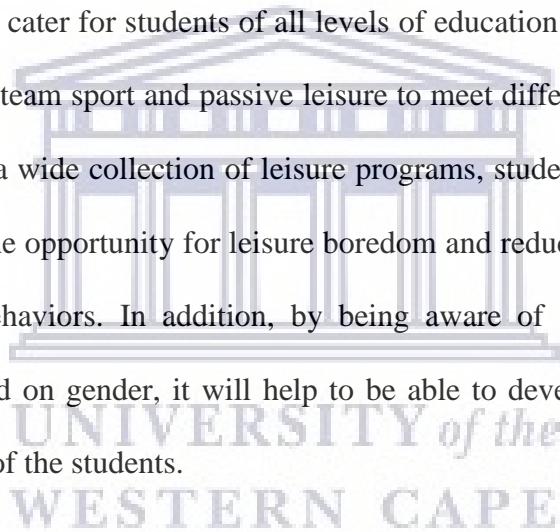
It evident in this present study that health risk behaviors among high school students in Shomolu Local Government Area of Lagos State are rising difficult situations that cannot be denied. Adolescent's population is increasing rapidly and urgent attention needs to be given in promoting health programs in high schools aims at combating the pressing challenges.

As also identified by the findings of this study, high school students in Shomolu Local Government Area are experiencing a high degree of boredom with their leisure activities and are therefore at risk. Although, there are some health risk behavior awareness programs on sexual activities, drug abuse and alcohol been organized by some institution, but their effectiveness are still limited because they occur infrequently or once in a while. These programs may make an impression on the students at the time they are presented, but do they have a long-term impact or effect on the students when asking ourselves this question?

The Nigeria high school educational curriculum lacks life-skills programs which enable students to develop the skills required to manage the challenges of their daily life. These life-skills programs have what it take to become part of a “lifestyles Approach” in promoting healthy living among students. However, a major disadvantage to this also is that many teachers in schools have either little knowledge or no training in life-skills and personal communication since it wasn’t included in the education curriculum. By partnering with the federal ministry of education, some educational institutes and teachers, occupational therapist could use their understanding of how to promote healthy lifestyle and wellness through occupation, as well as their experience in personal communication of group work in order to recommend for federal government and concern educational institution to include life-skills programs in the school curriculum and also to push for implementation of the effective life-skills programs in schools.

Furthermore, research on leisure education programs should be conducted to form part of the life-skills programs. These Life-skills programs should aim to enable students to actively delve into variety of different leisure activities as well as the necessary resources to pursue the leisure

activities and it could be in form of extracurricular activities and sports programs, reading, indoor games. Furthermore, it is also important to state that leisure awareness in schools in Nigeria may not be as developed as in developed countries. An advantage of including leisure education in life-skills programs is that a wide variety of skills, which affect the student's participation in leisure activities, could also be developed. These should include strategies such as boredom coping skills, leisure preparedness, and anxiety coping skills, stress management, time management, social skills and conflict resolution (Wegner, 1998, p.78). Therefore, high school programs in Nigeria concerned with students' life and recreation need to offer wide range programs and activities that cater for students of all levels of education in active individual sport activity, active competitive team sport and passive leisure to meet different leisure aspirations of the students. By providing a wide collection of leisure programs, students will be more likely to find activities that reduce the opportunity for leisure boredom and reduce the ratios of putting on a display of anti-social behaviors. In addition, by being aware of activity difference as an occupational therapist based on gender, it will help to be able to develop purposeful programs that meet the leisure needs of the students.



The occupational therapist should also bear in mind the process by which students make choices about activities, as this could provide a useful guide for leisure education program development: awareness, knowledge, skills, resourcefulness, strategies, assertion (doing) and reflection (Knox, 1998, cited in Wegner, 1998, p.79).

7.7.3 POLICY DEVELOPMENT FOR LEISURE PROMOTION

There are various federal ministries, state ministries, and agencies which have either direct or indirect responsibility to promote a healthy leisure lifestyle among adolescent. Federal ministry of education most especially need to understand and appreciate the value of leisure in adolescent development, quality of life and well-being; thus providing their support for leisure programs and other leisure promotion initiatives in the country. Additionally, the federal ministry of education and youth development should consider plan and strategies that reach out to adolescents with regard to art and culture, social development, sport, and recreation.

Federal Government of Nigeria in conjunction with Ministry of Education and Ministry of Youth Development both at the federal and state level in partnership with other relevant stakeholders in the educational sector in the country should ensure the development and the implementation of policies relating to leisure promotion at all stages of the society. Leisure policies should be developed to ensure the creation of appropriate leisure and recreational services, facilities and resources for adolescents. School management should examine their policies around leisure, recreation, sport, and ensure that these services are being implemented effectively.

7.8 FUTURE RESEARCH

More research is needed within the line of work on health risk behavior and leisure among adolescents and youth in Nigeria. Recommendations for future research on health risk behavior and leisure include:

- Development of school-based intervention programs that will promote healthy behaviors among adolescents in Lagos state.

- Moving beyond the scope of this study, it can be beneficial to explore systemic influences other than influenced by parents, peers, schools, and communities on health risk behavior. Possible other influences that can be explored are siblings, the media, laws in Nigeria, religion, and culture.
- Development, implementation, and evaluation of leisure promotion and education programs in high schools and communities.
- Investigating associations between health risk behavior and leisure boredom among groups of adolescents and youth who have dropped out of school, those in the rehabilitation center and drug unit in psychiatric hospitals.

7.9 CONCLUSION

In conclusion, this present research focuses attention on leisure boredom as an influencing factor to adolescents' health risk behavior in Nigeria. It is imperative to note that the attitude of adolescent's toward healthy lifestyle should be taken into consideration. Occupational therapist should consider the role of leisure boredom on adolescent health, well-being and development, and implement plans to address these challenges. McMeeking and Purkayastha (1995) put forward that there is "...a universal belief held by adolescents and younger adults, which crosses cultural divides and persist through time that there is "nowhere to go, and nothing to do" (McMeeking and Purkayastha, 1995, p.366, cited in Wegner 1998, p.79).

Therefore, the results of this present study are in support with a study conducted by Wegner (1998) on the relationship between leisure boredom and substance use among high school students in Cape Town. It was revealed for her study that adolescents are experiencing a high

degree of leisure boredom (Wegner, 1998, p.80). The concern is that, some form of health risk behaviors such as drinking, smoking, and substance use or drug abuse is providing many adolescents with the inspiration and pleasure that they are looking for, as against healthy way of meeting their desires (Wegner, 1998, p.80).

This present study laid emphasis on the important issues relevant to the future development of adolescent in Nigeria. As occupational beings, the future healthy lifestyle, quality of life and well-being of these adolescents' may be affected by their current engagement in these health risk behaviors, therefore it is essential as occupational therapist to center attention to this form of participation and develop appropriate intervention program. This study will create evidence that could be disseminated to the public. In addition to that, the role of occupational therapy and science in public health may be embraced, therefore enabling implementation of occupational school base intervention directed toward curbing participation in these risky behaviors.

The occupational therapy profession in Nigeria is still in the explorative phases within the health sector and public service. This study will therefore help inform and also add to the growth of occupational therapy profession by emphasizing the possible long-term adverse effects of participating in health risk behaviors. The level of awareness on leisure activity and risk behaviors that will be raised by this study could facilitate support for occupational therapy profession to approach intervention program to combat and prevent health risk behavior among adolescents' from an occupational perspective.

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APPENDIX

APPENDIX 1



OFFICE OF THE DIRECTOR: RESEARCH RESEARCH AND INNOVATION DIVISION

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30 October 2018

Mr FD Olatunji
Occupational Therapy
Faculty of Community and Health Sciences

Ethics Reference Number: BM18/8/2

Project Title: Investigating the prevalence of health risk behaviours and the association with leisure boredom among high school students in Lagos, Nigeria.

Approval Period: 19 October 2018 – 19 October 2019

I hereby certify that the Biomedical Science Research Ethics Committee of the University of the Western Cape approved the scientific methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report in good time for annual renewal.

The Committee must be informed of any serious adverse event and/or termination of the study.

A handwritten signature in black ink, appearing to read 'Josias'.

*Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape*

PROVISIONAL REC NUMBER -130416-050

FROM HOPE TO ACTION THROUGH KNOWLEDGE



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Office of the Head of Service,
Secretarial, Alausa, - Ikeja,
Lagos State.



PERMISSION TO CONDUCT RESEARCH IN SOME SELECTED HIGH SCHOOLS
IN SHOMOLU LOCAL GOVERNMENT

Dear Sir/Ma,

I am currently enrolled at the University of the Western Cape in the Masters' of Science in Occupational Therapy Program and I am self-sponsored. As a requirement for qualification, I have to complete a research thesis. The title of my research is "Investigating the prevalence of health risk behaviors and the association with leisure boredom among high school students in Lagos State. I have obtained ethical approval from the Higher Degrees Committees of the University of the Western Cape and the Biomedical Research ethics Committees to conduct the study, as stipulated in the attached letter.

The students that will participate in the study will be selected from six senior secondary schools that will represent six different areas of Shomolu Local Government Area. One stream per Form will be randomly selected and the students in those streams will participate in the research. However, a pilot study of the research instrument will be conducted prior to the data collection period and it will be piloted in a senior secondary school that will be willing to participate.

My interest in the field of study was ignited by my work as an Occupational Therapist at the Federal Neuropsychiatric Hospital, Yaba, Lagos State and Obafemi Awolowo University Teaching Hospital Complex (OAUTHC) Ile-Ife, Osun State.

I intend to cause minimal disruption to the school program during the process of data collection and suitable times will be negotiated with the schools. I therefore, kindly request permission to gain access to the above mentioned schools to conduct the study.

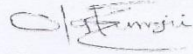
For more Information on the study please do not hesitate to contact me on:

Cellphone number: 07039126832/09051943309

Email: 3864509@myuwc.ac.za OR unthembu@uwc.ac.za OR lwegner@uwc.ac.za

I hope my request reaches your favorable consideration.

Yours Faithfully



Olatunji Funmibi Deji.

07039126832/09051943309



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LAGOS STATE GOVERNMENT

LS/C.530/506

25th FEB, 2019**The Tutor-General/Permanent Secretary**


Education District II
Maryland School Complex,
Maryland Ikeja.

LETTER OF INTRODUCTION

RE: RESEARCH ON INVESTIGATING THE PREVALENCE OF HEALTH RISK BEHAVIORS AND THE ASSOCIATION WITH LEISURE BOREDOM AMONG HIGH SCHOOL STUDENTS IN LAGOS STATE

I have the directive of the Head of Service to introduce Mr. **Olatunji Funmbi Deji**, a Postgraduate Student of Occupational Therapy Programme at the University of the Western Cape, South Africa.

2. The Student is writing his thesis titled "**INVESTIGATING THE PREVALENCE OF HEALTH RISK BEHAVIORS AND THE ASSOCIATION WITH LEISURE BOREDOM AMONG HIGH SCHOOL STUDENTS IN LAGOS STATE.**" The aim of the Research is to examine the health risk behaviors, lifestyles and leisure boredom time among Adolescents in Senior Secondary Schools.
3. On the basis of the above, the Researcher is requesting for permission to gather data through administering of questionnaires to Students in 6 (Six) selected Senior Secondary Schools in Shomolu Local Government Area. (A copy of the Questionnaire is herewith attached, please.)
4. I am to respectfully ask that you accord him all necessary assistance towards the successful implementation of the Research Work.
5. Kindly note that Mr. **Olatunji Funmbi Deji**, can be contacted on 07039126832
6. Thank you.


Toyin Onanuga (Mrs.)
For: Permanent Secretary

OFFICE OF THE HEAD OF SERVICE

Block 20, The Secretariat, Obafemi Awolowo Way, Ikeja, Lagos, Nigeria. P.M.B.: 21530, Ikeja. Tel: 08191478681
E-mail: ps@lagosstate.gov.ng Website: www.lagosstate.gov.ng

CALCULATION OF SAMPLE SIZE

Mathematically,

$$N = \frac{Z^2 (1-a)^2 p(1-p)}{d^2} \quad (\text{Lwanga and Lemeshow, 1991})$$

Where;

N= the minimum sample size,

Z_{α} = standard normal deviate of α at 99% confidence level (i.e. probability of making a type 1 error) = 2.575, $100(1-a)\%$ = Confidence level,

P = Anticipated population proportion,

d = Absolute precision required on either side of the proportion (in percentage points), Using this proportion;

- | | |
|---------------------------------------|---------------------|
| (a) Anticipated population proportion | 50% |
| (b) Confidence level | 99% |
| (c) Absolute precision (15%-25%) | 5 percentage points |

P = 0.50,

d = 0.05

$$N = \frac{(2.575)^2 \times 0.5(1-0.5)}{0.05^2} = 691.$$



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INFORMATION SHEET FOR PARTICIPANTS

PROJECT TITLE: Investigating the Prevalence of Health Risk Behaviors and the association with leisure boredom among High school Students in Lagos, Nigeria.

December, 2018

Dear Participant

What is this study about?

This is a research project that is being conducted by Olatunji Funmibi Deji from the University of the Western Cape. I am inviting you to participate in this research project because you are among senior class 1 to senior class 3 students. The purpose of this research project is to find out more about the health, lifestyles and use of leisure time among adolescents who are in senior class 1 to senior class 3.

What will I be asked to do if I agree to participate?

You will be asked to fill in a survey about health risk behavior and leisure time by completing a questionnaire (Adolescent Health Risk Behavior Survey (ADHRS) and Leisure Boredom Scale (LBS). The survey will take about 35-45 minutes to complete. This will take place in your school during free period or break time.

Would my participation in this study be kept confidential?

The researcher undertakes to protect your identity. To ensure your anonymity, you will only be known by a unique identification number which you will use when you complete the survey on

the questionnaires. The surveys are anonymous and will not contain information that may personally identify you. To also help protect your confidentiality all information gathered will be stored in a locked filing cabinet. The school (principals and teachers) at your school or any unauthorized party will not be able to access the information. If i write a report or article about this research project, your identity will be protected to the maximum extent possible. In accordance with legal requirements and/or professional standards, we will disclose to the appropriate individuals and/or authorities' information that comes to our attention concerning child abuse or neglect or potential harm to you or others. Data collected will be disseminated in the form of publications and conferences presentation.

What are the risks of this research?

All human interactions and talking about self or others carry some amount of risks. Some of the questions asked in the survey and during the focus group might make you feel uncomfortable, for example, embarrassed. I will nevertheless minimize such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional such as the local government educational counselor and psychologist for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about the health risk behaviors, lifestyles and leisure boredom time among adolescents who are in senior class 1 to senior class 3. We hope that, in the future, other people might benefit from this study through improved understanding of how to assist young people who find themselves in a similar position.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

Is any assistance available if I am negatively affected by participating in this study?

There are no direct risks associated with participating in this study. However, you will be referred to an appropriate health professional, should you feel emotional or overwhelmed as a result of questioning or inability to perform a task.

What if I have questions?

This research is being conducted Olatunji Funmibi Deji at the University of the Western Cape. If you have any questions about the research study itself, please contact Olatunji Funmibi Deji at: work number +27603872323 or +2347039126832, email: 3864509@myuwc.ac.za

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Dr. Thuli Mthembu at Tel: (+27723101503) or Email: tmthembu@uwc.ac.za or Address: University of the Western Cape, Private Bag X17, Bellville, 7535

OR

Prof. Lisa Wegner at Tel: (021) 959-3151 or Email: lwegner@uwc.ac.za or Address: University of the Western Cape, Private Bag X17, Bellville 7535

Prof Mogammad Shaheed Soeker

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Prof Anthea Rhoda

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Biomedical Research Ethics Committee

University of the Western Cape

Email: research-ethics@uwc.ac.za

Tel: (021) 959-4111

This research has been approved by the University of the Western Cape's Research Ethics Committee. (REFERENCE NUMBER: *to be inserted on receipt thereof from the applicable Research Ethics Committee*)

Email: research-ethics@uwc.ac.za





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INFORMATION SHEET AND PERMISSION LETTER FOR PARENTS

PROJECT TITLE: Investigating the Prevalence of Health Risk Behaviors and the association with leisure boredom among High school Students in Lagos, Nigeria.

December, 2018

Dear Parent/Legal Guardian

What is this study about?

This is a research project that is being conducted by Olatunji Funmibi Deji from the University of the Western Cape. We are inviting your child to participate in this research project because he/she is one of the senior class 1 to senior class 3 students in a selected school in Shomolu Local Government Area. The purpose of this research project is to find out more about the health risk behaviors, lifestyles and leisure boredom time among adolescent in senior class 1 to 3.

What will my child be asked to do if I agree for him/her to participate?

Your child will be asked to complete questionnaires pertaining to health risk behavior and leisure boredom time use using (the Adolescents Health Risk Behaviors Survey (AHRBS) and the Leisure Boredom Scale (LBS). The survey will take about 35-45 minutes to complete. This will take place either in your child school.

Would my child's participation in this study be kept confidential?

The researcher undertakes to protect your child's identity. To ensure your anonymity, he/she will be only known by a unique identification number which he/she will use when you complete the survey on the questionnaires. The surveys are anonymous and will not contain information that may personally identify your child's. To also help protect your child's confidentiality all information gathered will be stored in a locked filing cabinet. The school (principals and teachers) at your child's school or any unauthorized party will not be able to access the information. If i write a report or article about this research project, your child's identity will be protected to the maximum extent possible. In accordance with legal requirements and/or professional standards, we will disclose to the appropriate individuals and/or authorities' information that comes to our attention concerning child abuse or neglect or potential harm to your child's or others. Data collected will be disseminated in the form of publications and conferences presentation.

What are the risks of this research?

All human interactions and talking about self or others carry some amount of risks. Some of the questions asked in the survey and during the focus group might make your child feel uncomfortable, for example, embarrassed. I will nevertheless minimize such risks and act promptly to assist your child if he/she experience any discomfort, psychological or otherwise during the process of your child's participation in this study. Where necessary, an appropriate referral will be made to a suitable professional such as the local government educational counselor and psychologist for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help your child personally, but the results may help the investigator learn more about the health risk behaviors, lifestyles and leisure boredom time among adolescents who are in senior class 1 to senior class 3. We hope that, in the future, other people might benefit from this study through improved understanding of how to assist young people who find themselves in a similar position.

Do I have to be in this research and may I stop participating at any time?

Your child participation in this research is completely voluntary. Your child may choose not to take part at all. If your child decides to participate in this research, he/she may stop participating at any time. If your child decides not to participate in this study or if he/she stop participating at any time, he/she will not be penalized or lose any benefits to which he/she otherwise qualifies.

Is any assistance available if I am negatively affected by participating in this study?

There are no direct risks associated with your child participating in this study. However, he/she will be referred to an appropriate health professional, should your child feel emotional or overwhelmed as a result of questioning or inability to perform a task.

What if I have questions?

This research is being conducted Olatunji Funmibi Deji at the University of the Western Cape. If you have any questions about the research study itself, please contact Olatunji Funmibi Deji at: work number +27603872323 or +2347039126832, email: 3864509@myuwc.ac.za

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Dr. Thuli Mthembu at Tel: (+27723101503) or Email: tmthembu@uwc.ac.za or Address:
University of the Western Cape, Private Bag X17, Bellville, 7535
OR

Prof. Lisa Wegner at Tel: (021) 959-3151 or Email: lwegner@uwc.ac.za or Address: University
of the Western Cape, Private Bag X17, Bellville 7535

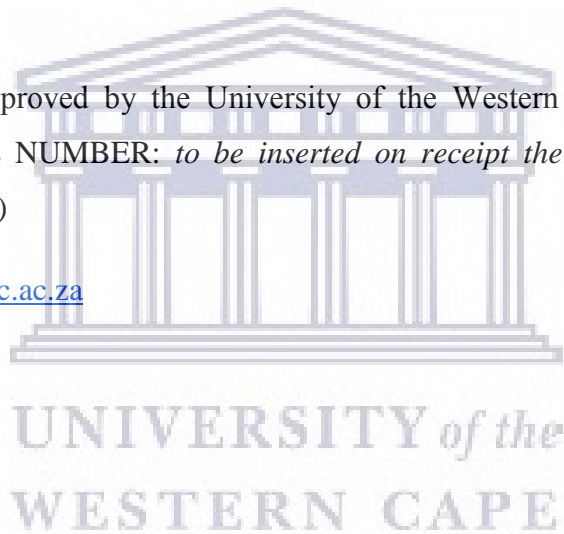
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Email: research-ethics@uwc.ac.za
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This research has been approved by the University of the Western Cape's Research Ethics Committee. (REFERENCE NUMBER: *to be inserted on receipt thereof from the applicable Research Ethics Committee*)

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AWỌN ALAYE NIPA IWADII YI FUN AWON OBI

IŞE AKANŞE KOKO-ỌRỌ: Şişe ayewo awon iwa ibaje ti Iwalaaye ewu Ilera pelu awon ayeye akoko isinmi laarin awon ile-ekọ giga ile-ekọ giga ni ipinle Eko, Nigiria.

Okudu 2018

Olufe Obi / Alaabo ofin

Kinni iwadi yii da le lori?

Eyi je ise iwadi kan ti Olatunji Funmibi Deji ti nse nipase Universiti ti Western Cape. A n pe omọ re lati kopa ninu iwadi yi nitoripe o je okan ninu awon kilasi giga kini si awon omọ-iwe-omọ-iwe keta ti o ni ikekọ ni ile-iwe ti a yan ni Ipinle Ijoba Ibugbe Shomolu. Idi ti ise iwadi yi ni lati wa diẹ sii nipa awon iwa ibalo ilera, awon igbesi aye ati akoko isinmi fun igba aladun laarin awon odọ ni ipele kilasi kini si keta.

Kini won yo beere lowo omọ mi lati se ti mo ba gba lati je ko kopa ninu iwadii yii?

A o beere omọ re lati pari ibeere ti o niise pelu iwa ibaje ilera ati idaraya fun akoko isinmi pelu lilo (Iwadi Awon Eje Ilera Awon omode (AHRBS) ati Iwon Ayewo igbafẹ (LBS). Eyi yoo sele boya ninu ile-iwe omọ re.

Şe ikopa omọ mi ninu iwadi yii ni asiri toju?

Oluwadi na n şalaye lati dabobo idanimọ omọ re. Lati rii daju pe iwọ ko ni ailoruko, o ni yoo mo nikan nipase nomba idanimọ ti o yoo lo nigbati o ba pari iwadi naa lori awon iwe ibeere. Awon iwadi naa je asiri ati kii yoo ni alaye ti o le se idanimọ omọ re. Lati tun se iranlowo lati dabobo

asiri ọmọ rẹ gbogbo alaye ti a kojọpọ ni ao fipamọ sinu apo ile ti o pa. Ile-iwe (awọn olori ati awọn olukọ) ni ile-iwe ọmọ rẹ tabi eyikeyi ẹgbẹ ti a ko gba aṣẹ ko ni anfani lati wọle si alaye naa. Ti mo ba kọ ijabọ kan tabi akọsilẹ nipa isẹ iwadi yi, idanimọ ọmọ rẹ yoo ni idaabobo si iye ti o le ẹeṣe. Ni ibamu pẹlu awọn ibeere ofin ati / tabi awọn ipolowo oṣogbọn, a yoo ẹ afihan si awọn eniyan ti o yẹ ati / tabi awọn alakoso 'alaye ti o wa si imọ wa nipa ibajẹ ọmọ tabi fifọ tabi ipalara ti o lewu si ọmọ rẹ tabi awọn omiiran. Awọn data ti a gba ni yoo pin kakiri ni awọn iwe ti awọn iwe-aṣẹ ati awọn apejọ ipade.

Kini awọn ewu ti o wa ninu iwadi yi?

Gbogbo awọn ibaraenisọrọ eniyan ati sọrọ nipa ara tabi awọn ẹlomiran n gbe diẹ ninu awọn ewu. Diẹ ninu awọn ibeere ti o beere ninu iwadi ati nigba ẹgbẹ idojukọ le mu ki ọmọ rẹ lero, fun apeṣe, ti dāmu. Ṣugbọn emi yoo jẹ ki iru awọn iru ewu beẹ dinku ki o si ẹ ni kiakia lati ẹ iranlọwọ fun ọmọ rẹ ti o ba ni iriri eyikeyi idamu, àkóbá tabi bibẹkọ nigba ilana ti ipa ọmọ rẹ ninu iwadi yii. Ni ibiti o wa dandan, iforobalẹ ti o yẹ lati ẹ si oṣogbọn ti o wulo gẹgẹbi alakoso ile-iwe ijọba ti agbegbe ati onimọ-ibalopọ-ara ọkan fun iranlọwọ siwaju sii tabi abojuto.

Kini awọn anfani ti o wa ninu iwadi yii?

A ko ẹ iwadi yii lati ran ọmọ rẹ lọwọ funrararẹ, ṣugbọn awọn esi naa le ẹ iranlọwọ fun oluwadi naa ni imọ siwaju sii nipa iwa ihuwasi ilera, awọn igbesi aye ati akoko isinmi fun awọn ọmọde ti o wa ni ori-iwe giga kini si kilasi giga keta. A nireti pe, ninu ojo iwaju, awọn eniyan miiran le ni anfani lati inu iwadi yii nipasẹ imọran ti o dara si bi a ẹ le ẹ iranlọwọ fun awọn ọdọ ti o wa ara wọn ni ipo kanna.

Ṣe Mo ni lati wa ninu iwadi yii lati pe se kiri maa kopa mo nigbakugba?

Ifaramọ ọmọ rẹ ninu iwadi yii jẹ atinuwa patapata. Ọmọ rẹ le yan lati ma ẹ alabapin ni gbogbo. Ti ọmọ rẹ ba pinnu lati kopa ninu iwadi yi, o le duro lati ṣajọ ni eyikeyi akoko. Ti ọmọ rẹ ba pinnu lati ma kopa ninu iwadi yii tabi ti o ba dawọ duro ni eyikeyi akoko, o ko ni ni ipalara tabi padanu awọn anfani kankan ti o ba ni iyatọ.

Şe iranlwoyo eyikeyi ti o ba wa ti a ba ni ikun ni ikuna nipase kopa ninu iwadi yii?

Ko si awon ewu ti o to si pelu omu re ti o kopa ninu iwadi yii. Sibesibe, o yoo toka si ogbonran ilera ti o ye, boya omu re ba ni ibanuje tabi ibanuje nitori abajade ibeere tabi ailagbara lati se ise kan.

Ti mob a wan i ibeere nko?

Iwadi yii wa ni Olatunji Funmibi Deji ni University of Western Cape. Ti o ba ni ibeere eyikeyi nipa iwadi iwadi ara re, jowo kan si Olatunji Funmibi Deji ni: nomba ise +27603872323 tabi +2347039126832, imeeli: 3864509@myuwc.ac.za

O ye ki o ni awon ibeere nipa iwadi yii ati awon eto re bi alabasepo kan tabi ti o ba fe lati safo eyikeyi awon isoro ti o ti ni iriri ti iwadi naa, jowo kan si:

Dokita Thuli Mthembu ni Teli fonu: (+27723101503) tabi Imeeli: tmthembu@uwc.ac.za tabi Adiresi: University of the Western Cape, Private Bag X17, Bellville, 7535

TABI

Ojogbon Lisa Wegner ni Teli fonu: (021) 959-3151 tabi Imeeli: lwegner@uwc.ac.za tabi Adiresi: University of the Western Cape, Private Bag X17, Bellville 7535

Ojogbon Mogammad Shaheed Soeker

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Iwe igbimọ Iwadi Iṣoogun ti Iwadii ti Iwadi

University of Western Cape

Imeeli: research-ethics@uwc.ac.za

Tẹli: (021) 959-4111

Iwadi yii ti fọwọsi nipasẹ Ile-ẹkọ Yunifasiti ti Ile-igbimọ Iwadi Iwadii ti Western Cape. (Nomba NIBI: lati fi sii lori iwe-ẹri lati ọdọ Igbimọ Iwadi Iwadi ti o wulo)

Imeeli: research-ethics@uwc.ac.za



QUESTIONNAIRE**PART A: SOCIAL - DEMOGRAPHIC VARIABLES**

You are required to circle only one option as it applies to you in any of the following questions below.

1. How old are you?
2. What is your sex? Male Female
3. What class are you?
4. What is your religion? Christianity Islam Traditional
5. What is the name of your school?
6. Are you a Nigerian? Yes No

PART B: THE ADOLESCENT HEALTH RISK BEHAVIOR SURVEY**SECTION I: following questions are about personal safety**

7. When you rode a bike “okara rider” during the past 12 months, how often did you wear a helmet?
 I did not ride bike during the past 12 month Never wore helmet Rarely wore helmet
 Most of the time I wore helmet Always wore helmet
8. How often do you wear a seat belt when riding in a car driven by someone else? Never Rarely
 Sometimes Most of the time Always
9. During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol? 0 times 1 time 2 or 3 times 4 or 5 times
 6 or more times
10. During the past 12 months, how many times did you drive a car or other vehicle when you had been drinking alcohol? 0 times 1 time 2 or 3 times 4 or 5 times 6 or more times

SECTION II: The following questions are about violence-related behaviors.

11. During the past month (30 days), on how many days did you carry a weapon such as a knife “lebe”, screwdriver or broken bottle? Never (0 days) Rarely (1 day) Sometimes (2 or 3 days)
 Often (4 or 5 days) Very often (6 or more days)
12. During the past month (30 days), on how many days did you carry a gun? Never (0 days)
 Rarely (1 day) Sometimes (2 or 3 days) Often (4 or 5 days) Very often (6 or more days)
13. During the past month (30 days), on how many days did you carry a weapon such as a gun, knife “lebe”, screwdriver or broken bottle while at school? Never (0 days) Rarely (1 day)
 Sometimes (2 or 3 days) Often (4 or 5 days) Very often (6 or more days)

14. During the past month (30 days), how many times have you used a mathematical compass or divider as a weapon at school? Never (0 times) Rarely (1 time) Sometimes (2 or 3 times) Often (4 or 5 times) Very often (6 or more times)
15. During the past month (30 days), on how many days did you not go to school (miss school) because you felt you would be unsafe at school? 0 days 1 day 2 or 3 days 4 or 5 days 6 or more days
16. During the past month (30 days), on how many days did you not go to (miss) school because you felt you would be unsafe on your way to or from school? 0 days 1 day 2 or 3 days 4 or 5 days 6 or more days
17. During the past 6 months, how many times has someone threatened or injured you with a weapon such as a gun, knife, screwdriver, mathematical compass, divider or broken bottle at school? Never (0 times) Rarely (1 time) Sometimes (2 or 3 times) Often (4 or 5 times) Very often (6 or more times)
18. During the past 12 months, how many times were you in a physical fight? Never (0 times) Rarely (1 time) Sometimes (2 or 3 times) Often (4 or 5 times) Very often (6 or more times)
19. During the past 12 months, how many times were you in a physical fight in which you were injured and had to be treated by a doctor or a nurse? Never (0 times) Rarely (1 time) Sometimes (2 or 3 times) Often (4 or 5 times) Very often (6 or more times)
20. During the past 12 months, how many times were you in a physical fight why in school? Never (0 times) Rarely (1 time) Sometimes (2 or 3 times) Often (4 or 5 times) Very often (6 or more times)
21. During the past 12 months, did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose? Yes No
22. Have you ever been physically forced to have sexual intercourse when you did not want to? Yes No

SECTION III: The following questions are about bullying:

23. During the past 12 months, have you been bullied with the school premises? Yes No
24. During the past 12 months, have you ever been electronically bullied? (Including being bullied through What Sapp, BBM, texting and other social media) Yes No

SECTION IV: The following questions are about sad feeling and attempts at suicide:

25. Have you ever thought of committing suicide in the past 12 months? Yes No
26. Have you attempted suicide in the past 12 months? Yes No
27. Have you ever experienced feeling of sadness or hopelessness in the past 12 months? Yes No
28. Have you ever nursed the thought of killing yourself in the past 12 months? Yes No

29. How many times did you actually attempt suicide in the past 12 month? 0 time 1 time
 2 or 3 times 4 or 5 times 6 or more times
30. If you attempted suicide during the past 12 months, did any attempt result in an injury, poisoning or overdose that had to be treated by a doctor or nurse? Yes No

SECTION V: The following questions are about smoking:

31. Have you ever tried cigarette smoking, even one or two puffs? Yes No
32. How old were you when you smoked a whole cigarette for the first time? I have never smoked rolled tobacco or a whole cigarette 8 years old or younger 9 or 10 years old
 11 or 12 years old 13 or 14 years old 15 or 16 years old 17 years old or older
33. During the past 30 days, on how many days did you smoke cigarettes? 0 days 1 or 2 days
 3 to 5 days 6 to 9 days 10 to 19 days 20 to 29 days All 30 days
34. During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?
 I did not smoke cigarettes during the past 30 days Less than 1 cigarette per day
 1 cigarette per day 2 to 5 cigarettes per 6 to 10 cigarettes per day 11 to 20
 cigarettes per day More than 20 cigarettes per day
35. During the past 30 days, how did you usually get your own cigarettes? I did not smoke cigarettes during the past 30 days I bought them in a store, supermarket, plaza or from a street vendor I asked someone who smokes I gave someone else money to buy them for me I borrowed them from someone else A person 18 years old or older gave them to me I took them from a store or family member I got them some other way
36. During the past 30 days, on how many days did you smoke in school premises? 0 days 1 or 2 days 3 to 5 days 6 to 9 days 10 to 19 days 20 to 29 days All 30 days
37. Have you ever smoked cigarettes daily, that is, at least one cigarette every day for 30 days? Yes No
38. During the past 12 months, did you ever try to quit smoking cigarettes? Yes No I did Not smoke during the past 12 months
39. During the past 30 days, on how many did you did you use stuff “taba” or shisha? 0 days
 1 or 2 days 3 to 5 days 6 to 9 days 10 to 19 days 20 to 29 days
 All 30 days
40. During the past 30 days, on how many days did you use snuff “taba” or shisha in school premises? 0 days 1 or 2 days 3 to 5 days 6 to 9 days 10 to 19 days 20 to 29 days
 All 30 days
41. Do your parents/ guardians smoke? Both my parents/ guardians do not smoke Both my parents/ guardians smoke Only my father/ male guardian smokes Only my mother/ female guardian smokes I don't know

SECTION VI: The following questions are about drinking alcohol:

42. During your life, how often have you had at least one drink of alcohol (a beer, alomo, orimalu, bajinatu, whiskey, dry gin)? Never (0 days) Rarely (1 or 2 days) Sometimes (3 to 9 days) Often (10 to 19 days) Very often (20 or more days)
43. How old were you when you had your first drink of alcohol (a beer, alomo, orimalu, bajinatu, whiskey, dry gin) other than few sips? I have never had a drink of alcohol 8 years old or younger 9 - 10 years old 11- 12 years old 13 - 14 years old 15 - 16 years old 15 - 17 years old 18 years old or older
44. During the past month (30 days), how often did you have at least one drink of alcohol (a beer, alomo, orimalu, bajinatu, whiskey, dry gin)? Never (0 days) Rarely (1 or 5 days) Sometimes (6 to 9 days) Often (10 to 19 days) Very often (20 to 30 days)
45. During the past month (30 days), how often did you have 5 or more drinks of alcohol (a beer, alomo, orimalu, bajinatu, whiskey, dry gin) in a row, that is, within a couple of hours? Never (0 days) Rarely (1 or 5 days) Sometimes (6 to 9 days) Often (10 to 19 days) Very often (20 to 30 days)
46. During the past month (30 days), how many days did you have at least one drink of alcohol (a beer, alomo, orimalu, bajinatu, whiskey, dry gin) at school during school time? Never (0 days) Rarely (1 or 5 days) Sometimes (6 to 9 days) Often (10 to 19 days) Very often (20 to 30 days)
47. During the past 6 months, how often did you attend school (sit in the classroom) after drinking alcohol? I have never attended school after drinking alcohol Rarely (1 time) Sometimes (2 or 3 times) Often (4 or 5 times) Very often (6 or more times) I don't drink alcohol

SECTION VII: The following questions ask about Marijuana "Igbo/weed" or SK use and drug

use:

48. During your life, how many times have you used marijuana "Igbo/weed/ganja" or SK? Never (0 times) Rarely (1 or 2 times) Sometimes (3 or 9times) Often (10 or 19 times) Very often (20 or more times)
49. How old were you when you tried marijuana "Igbo/weed/ganja" or SK for the first time? I have never tried "Igbo/weed" or SK 8 years old or younger 9 or 10 years old 11 or 12 years old 13 or 14 years old 15 or 16 years old 17 years old or older
50. During the past month (30 days), how often did you use marijuana "Igbo/weed/ganaja" or SK? Never (0 days) Rarely (1 or 5 days) Sometimes (6 to 9 days) Often (10 to 19 days) Very often (20 to 30 days)

51. During the past month (30 days), how often did you use marijuana “Igbo/weed/ganja” or SK at school during school time? Never (0 days) Rarely (1 or 5 days) Sometimes (6 to 9 days) Often (10 to 19 days) Very often (20 to 30 days)

SECTION VIII: The following questions ask about other drug use.

52. During your life, how often have you sniffed gum or inhaled petrol, paint or paint thinners to get high? Never (0 times) Rarely (1 or 2 times) Sometimes (3 or 9times) Often (10 or 19 times) Very often (20 or more times) I don't know this drug
53. During your life, how often have you used cocaine “gbana” including powder, crack? Never (0 times) Rarely (1 or 2 times) Sometimes (3 or 9times) Often (10 or 19 times) Very often (20 or more times) I don't know this drug
53. During your life, how often have you used a needle to inject any illegal drug into your body? Never (0 times) Rarely (1 or 2 times) Sometimes (3 or 9times) Often (10 or 19 times) Very often (20 or more times) I don't know this drug
54. During your life, how many times have you taken a prescription drug (such codeine, tramadol, rohypnol, spirit all mixed with coca cola)? Never (0 times) Rarely (1 or 2 times) Sometimes (3 or 9times) Often (10 or 19 times) Very often (20 or more times) I don't know this drug
55. During the past 12 months, has anyone offered, sold, or given you an illegal drug at school premises? Yes No
56. During your life, where did you get the money to buy drugs? I used my pocket money I asked my parents/guardians for money and pretended it was for something else I used my own money that I worked for I stole money from my family members I stole items from my house and sold them I did not buy drugs

SECTION IX: The following questions are about your sexual behavior:

57. Have you ever had sexual intercourse (when the penis enters the vagina or the anus)? Yes No
58. How old were you when you had sexual intercourse (when the penis enters the vagina or the anus) for the first time? I have never had sexual intercourse 11 years old or younger 12 years old 13 years old 14 years old 15 years old 16 years old 17 years old or older
59. During your life, how many people have you had sex (when the penis enters the vagina or the anus) with? I have never had sexual intercourse 1 person 2 people 3 people 4 people 5 or more people
60. During the past 3 months, how many people have you had sex (when the penis enters the vagina or the anus) with? I have never had sex I have had sex, but not in the last 3 months 1 person 2 people 3 people 4 people 5 or more people

61. The last time you had sex (when the penis enters the vagina or the anus), did you drink alcohol or use drugs before you had sex? I have never had sex Yes No I don't remember
62. When you have sex (when the penis enters the vagina or the anus), how often do you or your partner use a condom? I have never had sexual intercourse Yes No
63. When you have sex (when the penis enters the vagina or the anus), what one method did you or your partner mostly use to prevent pregnancy? I have never had sex No method was used to prevent pregnancy Birth control pills Condoms Injection (e.g. Depo-Provera) Withdrawal (penis removed from vagina before ejaculation) Some other method Not sure

SECTION X: The following questions are about body weight:

64. How do you describe your weight? Very underweight (very thin) Slightly underweight (thin) About the right weight Slightly overweight (fat) Very overweight (very fat)
65. Which of the following are you trying to do about your weight? Lose weight Gain weight Stay the same weight I am not trying to do anything about my weight
66. During the past 30 days, did you take any diet pills, powders, or liquids without a doctor's advice to lose weight or keep from gaining weight? (Do not include meal replacement products such as slim fast). Yes No
67. During the past 30 days, did you go without eating for 24 hours or more (also called fasting) to lose weight or keep from gaining weight? Yes No
68. During the past 30 days, did you vomit or take laxatives to lose weight or keep from gaining weight? Yes No

SECTION XI: The following questions are about physical activity:

69. During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day (Add up all the time you spent in any kind of physical activity that increased your heart rate and made you breathe hard some of the time.) 0 days 1 day 2 days 3 days 4 days 5 days 6 days Everyday
70. On an average school day, how many hours do you watch TV? I do not watch TV, play video games or computer games Less than 1 hour per day 1 hour per day 2 hours per day 3 hours per day 4 hours per day 5 or more hours per day
71. On an average school day, how many hours do you play videos or computer games or use computer for something that is not school work? I do not watch TV, play video games or computer games Less than 1 hour per day 1 hour per day 2 hours per day 3 hours per day 4 hours per day 5 or more hours per day
72. In an average week when you are in school, on how many days do you go to physical education (PE) classes? 0 days 1 day 2 days 3 days 4 days 5 days

73. During the past 12 months, on how many sports teams did you play? 0 teams 1 team
2 teams 3 or more teams

Section XII: The following questions ask about other health- related topics:

74. Have you ever been taught about AIDS or HIV infection in school? Yes No Not sure
75. Has a doctor or nurse ever told you that you have Asthma or tuberculosis? Yes No
Not sure
76. Do you still have Asthma or Tuberculosis? Yes No Not sure

Section XIII: The following questions ask about the food you ate or drank in the past 7 days. Think about all the meals and snacks you had from the time you woke up until you went to bed. Be sure to include food you ate at home, at school, at restaurants or anywhere else:

77. During the past 7 days, how many times did you eat fresh fruit? Very often (6 or 7 days)
Often (4 or 5 days) Sometimes (2 or 3 days) Rarely (1 day) Never (0 days)
78. During the past 7 days, how often did you eat uncooked vegetables? (carrots, lettuce, cucumber, Peppers) Very often (6 or 7 days) Often (4 or 5 days) Sometimes (2 or 3 days)
Rarely (1 day) Never (0 days)
79. During the past 7 days, how often did you eat vegetables that were tinned or cooked?
Very often (6 or 7 days) Often (4 or 5 days) Sometimes (2 or 3 days)
Rarely (1 day) Never (0 days)
80. During the past 7 days, how often did you eat fast foods like suya, chips, fried chicken, pie, shayamah, fried fish, fried meat, puff puff, pizza or hamburger? Very often (6 or 7 days)
Often (4 or 5 days) Sometimes (2 or 3 days) Rarely (1 day) Never (0 days)
81. During the past 7 days, how often did you drink a can, bottle or glass of soda, such as Coke, Fanta, Sprite, Pepsi? (Do not include diet soda)? Very often (6 or 7 days)
Often (4 or 5 days) Sometimes (2 or 3 days) Rarely (1 day) Never (0 days)
82. During the past 7 days, how often did you eat foods like potato chips, chocolate, sweets, popcorn, cake? Very often (6 or 7 days) Often (4 or 5 days) Sometimes (2 or 3 days)
Rarely (1 day) Never (0 days)

Part C: LEISURE BOREDOM SCALE

1. For me, leisure time just drags on and on? Strongly disagree Disagree Neither disagree or agree Agree Strongly agree
2. During my leisure time, I become highly involved in what I do? Strongly disagree Disagree
Neither disagree or agree Agree Strongly agree

3. Leisure time is boring? Strongly disagree Disagree Neither disagree or agree Agree
Strongly agree
4. If I could leave school now and have enough money, I would have plenty of exciting things to do for the rest of my life? Strongly disagree Disagree Neither disagree or agree Agree
Strongly agree
5. During my leisure time, I feel like I'm just bored and hanging around? Strongly disagree
Disagree Neither disagree or agree Agree Strongly agree
6. In my leisure time, I usually don't like what I'm doing, but I don't know what else to do?
Strongly disagree Disagree Neither disagree or agree Agree Strongly agree
7. Leisure time gets me aroused and going? Strongly disagree Disagree Neither disagree or agree Agree Strongly agree
8. Leisure experiences are an important part of my quality of life? Strongly disagree Disagree
Neither disagree or agree Agree Strongly agree
9. I am excited about leisure time. Strongly disagree Disagree Neither disagree or agree
Agree Strongly agree
10. In my leisure time, I want to do something, but I don't know what to do? Strongly disagree
Disagree Neither disagree or agree Agree Strongly agree
11. I waste too much of my leisure time sleeping? Strongly disagree Disagree Neither disagree or agree
Agree Strongly agree
12. I like to try new leisure activities that have never tried before? Strongly disagree Disagree
Neither disagree or agree Agree Strongly agree
13. I am very active during my leisure time? Strongly disagree Disagree Neither disagree or agree
Agree Strongly agree
14. Leisure time activities do not excite m? Strongly disagree Disagree Neither disagree or agree
Agree Strongly agree

15. I do not have many leisure activities available to me? Strongly disagree Disagree Neither disagree or agree Agree Strongly agree

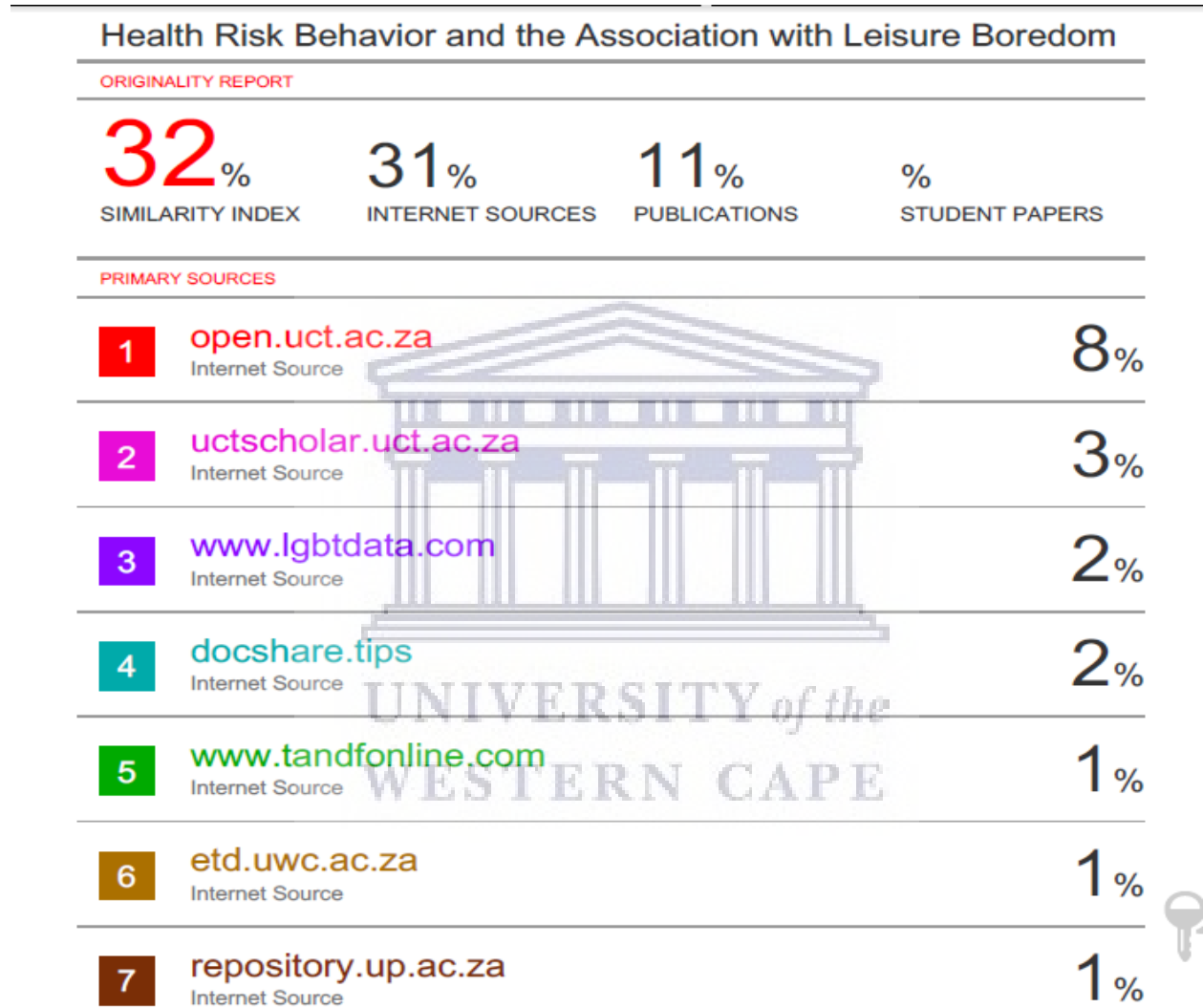
16. During my leisure time, I almost always have something to do? Strongly disagree Disagree Neither disagree or agree Agree Strongly agree



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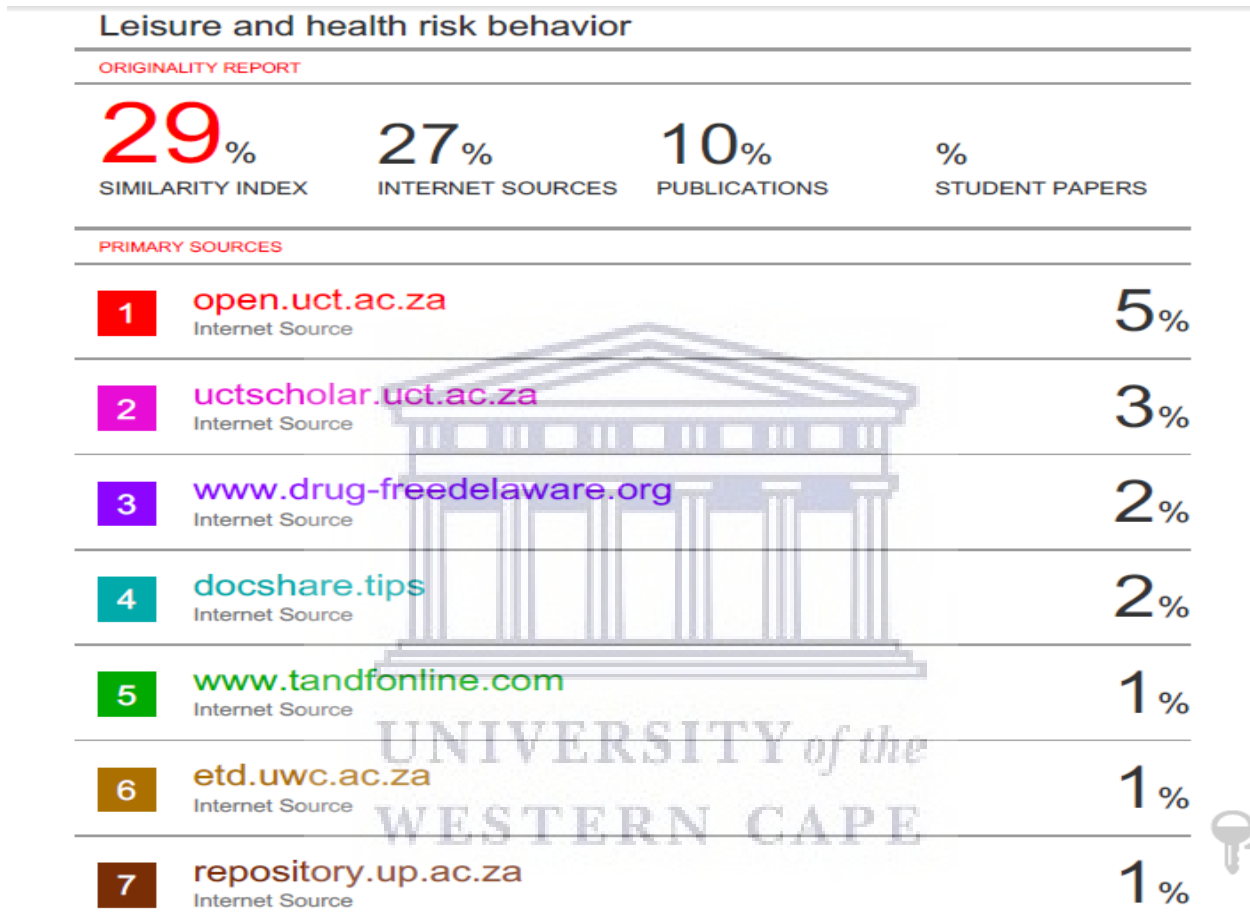
TURNITIN REPORT 1:

The first draft of my thesis on turnitin gives the result below.



TURNITIN REPORT 2:

The second draft of my thesis on turnitin gives the result below.



TURNITIN REPORT 3:

The final draft of my thesis on turnitin gives the result below.

