**THE EFFECT OF PHYSICAL EDUCATION PROGRAMMES ON THE WELLBEING OF SECONDARY SCHOOL STUDENTS IN NIGERIA**

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**ABSTRACT**

The study was conducted basically to find out the effect of physical education programmes on the well-being of secondary school students in Otta Local Government Area of Ogun State. The population for this study consisted of male and female students in three selected secondary schools in Otta Local Government Area of Ogun State. Two hundred secondary school students were served with questionnaire forms to elicit responses on information about influence of physical exercise and well-being, influence of tourism and well-being, influence of engaging in sports and well-being, influence of recreation and well-being, and influence of gymnastic activities and well-being. Data obtained were analysed using frequency counts, percentage scores and chi-square (x2) method of data analysis. The findings revealed that physical exercises contribute to the well-being of every secondary school students. It also revealed that engaging in sporting activities will improve the well-being of secondary school students. It is recommended that physical education programmes should be intensive enough to have effects on secondary school students. Also, teachers or physical educators should educate students on the effect of physical education programmes and the effects it has on their health.

**CHAPTER ONE**

**INTRODUCTION**

**1.1 Background Of The Study**

Physical Education is a systematic instruction in sports, training, practice, gymnastics, exercises, and hygiene given as part of a school or college program. Physical Education is the study, practice, and appreciation of the art and science of human movement (Hardman, 2002b). Physical Education is course in the curricula that utilizes the learning in the cognitive, affective, and psychomotor domains in a play or movement exploration setting (Kirui, 2007). In this study, it refers to an instructional program built around basic motor activities, which help achieve the goal of physical, emotional and mental wellbeing for every pupil, student and student-teachers. It includes education in health, hygiene, first aid, personal safety, and the teaching of manipulative skills. It is an integral part of the schooling process. In schools Physical Education is usually referred to by the abbreviation P.H.E.

The teacher is considered to be the major and first instrument in education. School relies upon teacher in preparing generations of students and in facing problems that hinder their ability to perform duties represented in student progress and leveraging their level. There is no doubt that Physical Education course carries a primary significance among the entire student body with all their differences, status and experience. Thus, teacher is the corner stone in learning and teaching, and the most important factor in education process. This requires the availability of an effective teacher who seeks to be competent and influential. His desire stems from professional commitment to provide the best education possible to his student in one hand, and to his need in facing regulatory process and situations of management in learning environment, on the other hand. Tal, et al (1993) and Kurdi (1986) cited by Abedalbasit, (2013) points out that revealing the importance magnitude of Physical Education is the school's responsibility. This can be achieved through providing sufficient opportunities to sports practicing, achieving physical fitness, adopt health information and habits, and safe attitudes in order to enable a Physical Education program that helps in stabilizing their emotions and assure themselves through several activities.

**1.2 Statement of the Problem**

With the increase of sedentary activities such as watching television, playing videogames, increased computer technology, automation and reduction of high school Physical Education schedules, young people are most likely to become overweight, and less fit. Based on previous review of literature, it is very understandable that there is a lack of research in Nigeria regarding Physical Education as an important subject in public schools for junior classes especially in Abuja. Lack of good health among Nigeria students in public schools is noticeable because of many reasons such as obesity, lack of self awareness of health fitness and health related issues.

**1.3 Objectives of the Study**

This study was undertaken majorly to determine the effect of physical education programmes on the well being of secondary school students in Nigeria. Specifically, the study intends to:

1. To examine whether physical education programme enhances the well being of secondary school students.

2. To find out whether physical exercises contribute to the well-being of secondary school students

3. To examine other benefits of physical activities

**1.5 Research Hypotheses**

**H01**: physical education programme does not enhance the well being of secondary school students.

**H02**: physical exercises does no contribute to the well-being of secondary school students.

**H03**: Engaging in physical activities will not improve the well-being of secondary school students.

**1.6 Significance of the Study**

This study will be of immense benefit to other researchers who intend to know more on this topic or related topics and can also be used by non-researchers to build more on their work.

**1.7 Scope/Limitations Of The Study**

This study on the problems of teaching Physical Education in Junior Secondary Schools will focus on selected schools in Otta.

**1.8 Limitations Of Study**

1. **Financial constraint**- Insufficient fund tends to impede the efficiency of the researcher in sourcing for the relevant materials, literature or information and in the process of data collection (internet, questionnaire and interview).

2. **Time constraint-** The researcher will simultaneously engage in this study with other academic work. This consequently will cut down on the time devoted for the research work.

**1.9 Definition of Terms**

**Physical Education:** Also called physical training (PT) or gym in less progressive settings, is a course in the curriculum which utilizes learning in the cognitive, affective and psycho motor domains in a play or movement exploration setting. It is the instruction in physical exercise and games, especially in schools.

**Health Education:** is any combination of learning experiences designed to help individuals and communities improve their health, by increasing their knowledge or influencing their attitudes.

**Teacher**: A teacher (also called a school teacher) is a person who provides education for students

**Student**: A student or pupil is a learner, or someone who attends an educational institution.

**CHAPTER TWO**

**LITERATURE REVIEW**

**INTRODUCTION**

Our focus in this chapter is to critically examine relevant literature that would assist in explaining the research problem and furthermore recognize the efforts of scholars who had previously contributed immensely to similar research. The chapter intends to deepen the understanding of the study and close the perceived gaps.

Precisely, the chapter will be considered in two sub-headings:

* Conceptual Framework
* Chapter Summary

**2.1 CONCEPTUAL FRAMEWORK**

**Physical Activity**

The meaning of physical activity has been conceptualized by different researchers in other to give a wider understanding of the study in focus. This might be the reason why Welford (2008) described it as any bodily movement produced by skeletal muscles that result in an expenditure of energy. Moderate-intensity activities cause a slight but noticeable increase in breathing rate. Moderate activities are those in which the intensity of the exercise can be maintained to a certain level, while vigorous intensity activities cause a noticeable increase in breathing and heart rate. Physical activity is the complex interrelationship between physiological, psychological, cognitive, social and emotional dimensions by providing opportunities for participation in exercise to enhance physical performance; improving strategic awareness in physical activity; and examining a range of factors that influence attitudes towards, and participation in, physical activity. Physical activity/exercise has become a globally acknowledgement as a potential tool for national and international development (Wikins 2003). Physical activity is any bodily movement produced by the contraction of skeletal muscle that increases energy expenditure above a resting level (Lee 2004). Physical activity can be repetitive, structured, and planned movement (e.g. a fitness class or recreational activity such as hiking); leisurely (e.g. gardening), sports-focused (e.g. basketball, volleyball); work-related (e.g. lifting and moving boxes), or transportation-related e.g. walking to school (Lee, 2004). Also, Physical Activity Guidelines Advisory Committee (2008) defined physical activity by it duration, which is the amount of time spent participating in a physical activity session, intensity, as the rate of energy expenditure and frequency, the number of physical activity sessions during a specific time period (e.g. one week). In view of the above definitions by various researchers, physical activity can be viewed or understood as many forms of movement, including activities that involve the large skeletal muscles and activities that involve the small skeletal muscles (e.g. playing games, hiking, stretching and dancing) which required efforts by the individual for substantial energy expenditure. Physical activity may also include activities that develop gross motor skills and various games played as part of an organized physical activity or physical education programme. Physical exercise is considered significant for maintaining physical fitness including healthy weight building and maintaining healthy bones, muscles, and joints; promoting physiological wellbeing; reducing surgical risks; and strengthening the immune system. Caspersen, Powell & Christenson, (2009), World Health Organization (2002) defined physical activity as any body movement produced by skeletal muscles that results in energy expenditure above resting levels. This definition is frequently cited by Health Organisations, Medical Professionals, and Exercise Specialists Worldwide Exercise training is the process by which increase cardiovascular functional capacity, and decreases myocardial oxygen demand at any level of physical activity in apparently healthy persons as well as in most subjects with cardiovascular disease (Wenger (1995). Regular physical activity is required to maintain these training effects. The potential risk of physical activity can be reduced by medical evaluation, risk stratification, supervision, and education. Exercise can help control blood lipid abnormalities, diabetes, and obesity. In addition, aerobic exercise adds an independent blood pressure–lowering effect in certain hypertensive groups with a decrease of 8 to 10 mm Hg in both systolic and diastolic blood pressure measurements. Physical activity is a bodily activity that enhances or maintains physical fitness and overall health and wellness. It is performed for various reasons including strengthening muscles and the cardiovascular system, athletic skills, weight loss or maintenance, as well as for the purpose of enjoyment (Stemfer, Hu, Manson, Rimm & Willet, (2000), and Hu, Manson, Stemfer & Graham, 2011).

**Types of Physical Activities**

Physical activities are generally grouped into three types, depending on the overall effect they have on the human body (Devos, Singh, Ross & Stavrinos 2005). They are as follows:

• Aerobic activities

• Flexibility activities

• Anaerobic activities

**Aerobic Activities**

Activities such as cycling, walking, skipping rope, rowing, running, linking or playing tennis, focus on increasing cardiovascular endurance and aerobic activities. Also, light to vigorous-intensity physical activity that requires more oxygen than sedentary behaviour and thus promotes cardiovascular fitness and other health benefits (e.g., jumping rope, biking, swimming, playing soccer, basketball, or volleyball are highly significance (Wilmore & Knuttgen 2003).

**Flexibility Activities**

Flexibility activities such as stretching, improve the range of motion of muscles and joints which enables an individual to maintain high level of agility and be able to control his/her movement ability from the start to the finished (Conor, Crowe & Spinks 2005).

**Anaerobic Activities**

Activities such as weight training, functional training, eccentric training or sprinting, any high intensity interval training, increase short term muscular strength. Intense physical activity that is short in duration and requires a breakdown of energy sources in the absence of sufficient oxygen. Energy sources are replenished as an individual recovers from the activity. Anaerobic activity (e.g., sprinting running, swimming, or biking) requires maximal performance during the brief period. As a result of all the types of physical activities mentioned above, individual should be able to improve on high levels of benefits to participation than barriers (Devos, Singh, Rose & Stavrinos 2005).

**Benefits Of Physical Activity**

Regular physical activity is a factor in healthy living. According to the Surgeon General’s report on physical activity and health, the benefits of regular physical activity for children and adolescence include: building and maintaining healthy bones, muscles and joints, reducing feelings of depression and anxiety, and promotion of psychological well-being. In addition, physical activity helps control weight, reduce fat, build lean muscle, and assists academic performance (cdc.gov/nccdphp/sgr/index.htm). Researchers and educators agree that movement is essential to learning as the brain is activated during physical activity. Therefore, by incorporating physical activity, physical education can have beneficial affects on both academic learning and physical activity patterns of students. According to several researchers, (Etnier, Salazar, Landers, Petruzzello, Han & Nowell, 1997; Hillman, Castelli, & Buck, 2005; Hollmann & Struder, 1996; Ploughman, 2008; Shephard, 1997; Trudeau & Shephard, 2010; Sibley & Etnier, 2003) when the brain is activated during physical activity, existing brain cells are rejuvenated and new ones are stimulated. Specifically, there is an increase in cerebral blood flow, enhancement of arousal level, changing hormone secretions, and enhanced nutrient intake. The next section.

**Benefits Of Participation In Physical Activity**

Participation in regular physical activity provides a large range of health benefits (physical and mental) Bauman, Bellew, Vita, Brown & Owen 2002). Physical inactivity is the second most important risk factor after tobacco use that contributes to the burden of disease, mobility and mortality. Benefits of physical activity is conceptualized in this study in line with Lewis & Rimer (2002) definition as a person’s opinion of the value or usefulness of physical activity/ exercise, as a behaviour in decreasing the risk of developing a disease ( Lewis & Rimer 2002) Physical activity is very significant to the development of any individual, young and old, men and women, boys and girls. Some importance of physical activity for the development of any individual include: enhancement of life, improvement of physical performance, improvement of psychological outlook, improvement of social interactions and as a preventive measures (Queensland government 2003).

**Physical Activity Enhances Life**

Individuals, young and old who partake in exercise stance the chance of living longer in life than the sedentary who do not consider physical activity important for their life. This is because for the systems of the body to effectively function, it requires some work-out that will enable the body act accordingly. Also, frequent and regular physical activity boosts the immune system and helps prevent the “diseases of affluent” such as heart disease, cardiovascular disease, type 2 diabetes and obesity. It also improves mental health; helps prevent depression, help to promote or maintain positive self-esteem and can even argument on individual appeal or body image, which is also found to be linked with higher levels of self-esteem. American Association of Kidney Patients, (2006) stressed that physical activity may help decrease some of the effects of childhood and adult obesity, also, health care providers often call exercise the “miracle” or “wonder” drug-alluding to the wide variety of proven benefits that it provides in promoting health behaviour.

**Physical Activity Improve Performance**When individual is involved in exercise, it makes him/her perform most of his/her daily need effectively, especially if it has to do with moving the body from one destination to the other, example of such are; exercise improves my flexibility; exercise help me sleep better in the night; exercise improves overall body functioning for me; exercise increases my muscles strength etc (Vanpraaq, Campermann, & Gaye, 1990). Despite the positive physical and mental health benefits of exercise, Lee (1994) stated that long-term adherence to exercise programs remains problematic. It is estimated that only 50% of all persons who initiate an exercise program will continue the habit for more than 6 months (Hambrecht 1995). The issue of non-adherence is particularly important because exercise is only beneficial if it is maintained for extended periods of time. Thus, it is important to develop strategies to improve exercise initiation and adherence, especially for persons who are among the least active-some African-American women, the less educated, the obese, and the elderly whose perceptions toward exercise is attainable. Healthy persons as well as many persons with cardiovascular disease, including those with heart failure, can improve exercise performance with training. This improvement is the result of increased ability to use oxygen to derive energy for work. Exercise training increases maximum ventilator oxygen uptake by increasing both maximum cardiac output (the volume of blood ejected by the heart per minute, which determines the amount of blood delivered to the exercising muscles) and the ability of muscles to extract and use oxygen from blood. Beneficial changes in hemodynamic, hormonal, metabolic, neurological, and respiratory function also occur with increased exercise capacity. These changes can also benefit persons with impaired left ventricular function, in whom most adaptations to exercise training appear to be peripheral and may occur with low-intensity exercise (Kavanagh, Yacoub, Mertens, Kennedy, Campbell & Sawyesr 1998).

**Physical Activity Enhances Psychological Outlook**

This has to do with the way in which individual’s senses, thinks and arrive at a logical conclusion over issues or conditions. Physical activity enables him/her to make rational decision over certain conditions, examples of such are exercise increases my mental alertness; exercise increases my acceptance by others; exercising decreases feelings of tension for me etc. (Gleeson, 2007). Longitudinal studies have also documented significant improvement in psychological functioning which also showed that exercise training reduces depression in healthy older men and in persons with cardiac disease or major depression. Exercise also improves self-confidence and self-esteem attenuates cardiovascular and neurohumoral responses to mental stress, and reduce some type of behaviours. Although exercise training generally has not been found to improve cognitive performance of exercise which may have short-term facilitative effects (Kavanagh et al.,1998).

**Physical Activity Improves Social Interactions**

People interacts mostly in sports, individuals eg sports men/women, boys/girls make friends and develop themselves mostly through this medium. Competitions both at the local, national and international levels enables individuals to interact and come together under same objectives, examples of such are exercise is good entertainment for me; exercising lets me have contact with friends and i enjoy exercise (Connor, Crowe & Spinks 2005).

**Physical Activity Is Preventive Health**

Various studies indicate that inactivity is a serious disease that causes thousands of lives every day. This is because most of the diseases especially coronary heart disease, diabetes, hypertension, low back pain, obesity and osteoporosis etc., can be prevented if individuals indulge themselves into physical exercises on schedules basis, examples of such are; I will prevent heart attack by exercising; exercising will keep me from having high blood pressure; i have improved feeling of wellbeing from exercise. (Wilmore & Knuttgen 2003). Gleeson, (2007) also revealed that a 2008 review of cognitive enrichment therapies (strategies to slow or reverse cognitive decline) concluded that “physical activity and aerobic exercise in particular, enhance older adults cognitive function (Hertzoa, Kramer, Wilson & Lindemberger 2008). There are several possibilities for why physical activity is beneficial for the brain, examples are as follows; increasing the blood and oxygen flow to the brain; increasing growth factors that help create new nerve cells, Vanpraaq, Campermann, and Gaye (1990) and promote synoptic plasticity increasing chemicals in the brain that help cognition, such as dopamine, glutamate, no epinephrine and serotonin. There is a direct relation between physical inactivity and cardiovascular mortality, and physical inactivity is an independent risk factor for the development of coronary artery disease (Braith, Pollock, Lowenthal, Graves & Limacher 1994). There is a dose-response relation between the amount of exercise performed from approximately 700 to 2000 kcal of energy expenditure per week and all-cause mortality and cardiovascular disease mortality in middle-aged and elderly populations. The greatest potential for reduced mortality is in the sedentary who become moderately active (Blair et al., 1995). Most beneficial effects of physical activity on cardiovascular disease mortality can be attained through moderate intensity activity (40% to 60% of maximal oxygen uptake, depending on age) Lee, Hsieh and Paffenbarger, 1995). The activity can be accrued through formal training programs or leisure-time physical activities. Although most of the supporting data are based on studies in men, more recent findings show similar results for women (Pate, 1995). Results of pooled studies reveal that persons who modify their behaviour after myocardial infarction to include regular exercise have improved rates of survival (Wenger 1995). With regard to desirable levels of physical activity, and in order to avoid sedentary lifestyles, World Health Organization (2010) recommends at least 30 minutes of daily moderate intensity activity. The use of moderate is deliberate to distinguish appropriate levels of activity from more intensive activities such as competitive sports or marathon running. Moderate intensity activities is a broader category which includes work related activities such as taking the stairs rather than the lift, and house related activities, such as house work or walking children to school. In such situation, the individual will develop the habit of training his respiratory system gradually in other to maintain high level of resistance against any barrier that may hinder participation in physical activity.

**Physical Education Resources**

Resources according to Hornby (2004) are what can be used to help achieve an aim such as equipment and facilities which provide information for the teachers and students. Proper applications of classroom resources in teaching learning are useful and advantageous on the following grounds. (Asogwa, 2007). Stimulation of interest: The uses of instructional resources bring life in the process of teaching learning. They provide cognitive ‘bridge’ between abstraction and reality to the students. Classroom resources create impressions that are so vivid and powerful that learners hardly forget. Their use make the task of teaching quite easy, interesting methodical and scientific as the teacher becomes quite capable of attaining the teaching objectives with greater efficiency and effectiveness. Erickson and Curl, 1972; Onyejemezi, 1998; Singh, Sharma and Upadhya, (2008), noted that instructional materials generate and maintain students interest and provide the teacher with interest-compelling spring-boards which can launch students into a variety of learning activities. Making learning highly individual and self-dependent: Educational resources can help the individual learner to proceed on his learning path with his own pace according to his own needs, interests and abilities. Gradually, they make him rely on his abilities and pursue his studies independently with or without the presence of the teacher. Nikky (2010) referred to teaching resources as the different equipment available in the classroom, adding that the process of teaching-learning depends upon the different types of equipment available in the teaching environment or classroom. Teaching resources are therefore all the facilities, equipment and supplies utilized by the teacher in teaching the subject. Nikky (2010) summarized the following as some of the importance of teaching resources in teaching. Teaching resources help the teacher present concepts in a way that the learners can retain more concept permanently. They help the teacher to motivate the students, by making the environment more interesting to the students. Teaching resources facilitates proper understanding by the students and discourage the act of cramming, it also makes the classroom or learning environment live and active. Osakunih (2002) defined physical education resources as facilities, equipment, supplies and personnel utilized in teaching physical education in schools. Also National Teachers Institute (2002) defines physical education resources as human, material and finance available in teaching of physical education in schools. They are therefore all those facilities, equipment, supplies, fund as well as personnel used in implementing the physical education programme in schools. The place of physical education personnel, facilities, equipment and supplies as well as fund in the effective implementation of the school physical education programme is a prominent one. They are the hub on which the school physical education revolves. The human resources are the personnel involved in teaching of physical education in the schools. Mgbor (2002) indicated that poor staffing in terms of number of physical education teachers, their level of preparation and motivation constitute major constraint to effective learning. In other words, for the programme to be successful there is need for adequate number of teachers that are professionally trained and motivated. According to Mgbodile, Ogbonnaya, Enyi, Oboegulem and Onwura (2004) no country can move forward politically, socially and economically without adequate human and material resources. They added that abundant human resources represent potential for educational development, but education development of people is necessary to translate such potential into per capita income. Longe, Uwadia and Longe (2005) opined that it is the responsibility of our educational system to provide graduates with the background and skills necessary to be successful in their chosen fields of endavour. Longe et al (2005) noted that the decline of staff quality is a consequence of obsolete and inadequate teaching and learning facilities in schools. Omorruan (1996) pointed out that it appears as if the physical education teachers are not being adequately prepared for the well-prepared physical education curriculum in our schools.

This could be better and easier achieved if there is availability of adequate facilities and equipment for teaching the subject right from the secondary school level, more so in physical education where some of the skills are practical oriented. Akin-Taylor and Abayomi (2008) asserted that the Physical Education teacher needs to be professionally trained to enable him posses the necessary skills required in performing the job effectively. Physical education facilities are immovable permanent structure which is utilized in teaching physical education. Physical education supplies are expendable materials that may last from one to two years which are also used in teaching physical education. Ugwu (2008) defined physical and health education facilities as non-movable built structures for imparting knowledge in physical and health education. Orunaboka and Nwachukwu (2012) posited that physical education supplies are those materials that are expendable and have to be replaced at frequent intervals such as shuttle cocks, tennis balls, whistle etc. Physical education equipment refers to those items that are not considered expendable, but are used for a period of years, such as parallel bars, volleyball standards, soccer goals, strength training equipment and others. Okonkwo (2011) asserts that the current trends in education sector makes physical education a compulsory subject for every student in junior secondary school. There is therefore the need for provision of basic facilities, equipment, supplies for teaching the subject in the schools so that sports skills could be transmitted to younger generations through teaching. Nigeria secondary schools physical education requires a variety of physical education facilities, equipment, supplies as well as fund. Supplies and equipment need to vary according to a wide range of factors, including the level of programme or participants, age of the user group, type of activities being offered, number of participants and available finance in the school (Arnhein & Prentice, 2000). National Teachers Institute (2002) defined supplies to reflect their difference. According to the institute, physical education facilities are immovable permanent structures which are utilized in teaching physical education. Similarly, Ugwu (2008) defined physical education facilities as non-movable built structures for imparting knowledge in physical education in schools. The principles guiding wise planning for physical education facilities include programme needs and objectives as well as educational and recreational needs of the school. Recognizing the vital role of equipment and facilities to the successful implementation of any school physical education programme, Eleso, (2005) outlined some guidelines and principles for planning for facilities in order to ensure that those needs that informed the decision to plan for facilities are properly addressed. These guidelines and principles as outlined by Eleso, (2005) are outline as follows:

• Professionals in various sports as well as other specialized personnel must be involved in planning and administration of physical education facilities.

• Technical information can be procured in the form of standards and guide from various sources such as professional literatures and manuals.

• Facilities should be planned with an eye to the future to prevent what happens often when facilities become too small due to the increase in the number of people using the facilities.

• Only proven professionals should be employed in planning, building, administering and maintaining the school physical education and sports facilities.

Ugwu (2008) asserts that the importance of facilities and equipment in the teaching and learning environment for the attainment of the stated desired objectives cannot be overemphasized. The author added that facilities and other teaching aids are regarded as resource materials because they provide information and feelings in the teaching and learning processes. Physical education facilities constitute very important factor in a school’s physical education programme. In their words, Arnhein and Prentice (2000) opined that in order to catch them young, Nigeria secondary school physical education requires a variety of physical education facilities both indoors and outdoors. According to them the relative needs of the students should be recognized in the planning of the facilities and scheduling for their use. Writing on the role of facilities in teaching; Balogun (2002) submitted that no effective science education programme can exist without facilities for teaching. When facilities are provided to meet relative needs of the students, they will have access to reference materials mentioned by the teacher. National Teacher Institute (2002) defined physical education equipment as less permanent apparatus that can last from five to twenty years which are used in teaching physical education. According to Umar (2010) human and material resources are required for the successful execution of any education programme and should be given adequate attention by the government and policy makers. Ornaboka and Nwachukwu (2012) asserts that physical education equipment are those items that are not considered expendable, but are used for a period of years, such as parallel bars, volleyball court, soccer goals and strength training equipment among others. Physical education equipment lasts longer than the supplies.

According to National Teachers Institute (2002) physical education supplies are expendable materials that may last from one to two years which are also used in teaching physical education in schools. Ugwu (2008) noted that other teaching aids in physical education apart from facilities include equipment and supplies, adding that equipment and supplies refer to manipulative and movable articles, instruments or materials for teaching and learning in the subjects. According Orunaboka and Nwachukwu (2012) supplies are those materials that are expendable and have to be replaced at frequent intervals such as shuttle cocks, tennis balls, among others. Facilities, equipment and supplies provision are important aspect of physical education programme management. Excellent programme is the key word in physical education and this requires well equipped good play-ground for training. Standard facilities and equipment are essential prerequisites to good and impressive performance. Lack of adequate and standard facilities and equipment hampers physical education programme in many ways. Adedeji (2000) pointed out that there must be sufficient motivation in the form of attractiveness of facilities, supplies and equipment to captivate athlete’s interest to participate in sports or games. He further stated that the facilities and equipment in secondary schools in this country are simply not good enough and are hindrance to physical education and sports development in the schools. Commenting on the state of facilities, equipment and supplies in secondary schools in Nigeria, Orunaboka and Nwachukwu (2012) noted that in Nigeria today it is well understood that the major cog in secondary schools success in physical education are sub-standard facilities and lack of sophisticated equipment. They added that Nigerians also lack maintenance culture. Effective physical education in schools requires organizational and administrative variables such as personnel, facilities, equipment, supplies and finance. The effective performance of physical education programme in secondary schools involves the determination, allocation and development of funds for the achievement of the objectives of the programme. The programme requires a large amount of money every year. This is because facilities such as courts and pitches are constructed and maintained for the use of the students. Equipment and supplies such as balls, nets, javelin, rackets, hockey sticks, bats, gymnastic and athletic (track and field) materials require either purchasing, replacement or repairs. Bucher and Krote (2002) opined that facilities should be planned and constructed with an eye to the future. They added that too often, facilities are constructed and out-grow their use within a very short time. Most facilities constructed in our secondary schools are very difficult to expand or exchange. It is noticed in today’s schools, the increased population, rising school enrolments, city life, limited space and skyrocketing labour and material costs, are all altering physical education facilities, equipment and supplies availability and adequacy in schools.

**Availability of Physical Education Resources in schools**

The relevance of the presence of facilities, equipment and supplies to the smooth running of school physical education programme has been severally emphasized in the literature (Akinsami, 1995; Mgbor; 2005). The level of success of most physical education programmes is greatly dependent on the degree of availability and adequacy of up-to-date equipment and facilities as these form the hub around which such programmes revolve. Longman (2003) explains available as something that is able to be used or can easily be found and used. In other words they are those resources that are committable or usable upon demand to perform their designated or required function. According to Okoro (1991) facilities, equipment and supplies are very vital in teaching and learning in schools. Similarly Awosika (1992) asserts that facilities and equipment are programme related in any teaching programme and should be provided in sufficient quantity to meet the needs of the school physical education programmes. National Association for Sports and Physical Education (NASPE: 1995) advocates that sufficient physical education resources are needed to meet the standard for secondary school physical education programme. Ogbu (1997) also observed that school physical education resources (facilities, equipment supplies and the personnel) are very important to the successful implementation of the school physical education programme. Writing on availability of school facilities and academic achievement Owoeye and Olatunde (2011) opined that availability of school facilities is a potent factor to quantitative education. According to them the importance of provision of instructional facilities for teaching and learning in the education sector cannot be over-emphasized. The authors added; “teaching is inseperable from learning but learning is not seperable from teaching”. According to them this means that teachers do the teaching to make the students learn, but students can learn without the teachers. They added that learning can occur through one’s interaction with one’s environment. Environment here refers to facilities that are available to facilitate students learning outcome. Commenting on factors affecting availability and adequacy of physical education facilities, equipment and supplies in Schools Verela (1996) lamented the political influence in sports and Physical Education environment in relation to availability of resources. He maintained that corruption among other factors is militating against effective management of sports facilities and equipment. According to him money which are meant for development of infrastructural facilities in our school may be channeled in private pockets. Similarly, Ugwu (2002) regretted the attitude of some school heads that show great apathy to Physical activities and sports. He added that such situations found in schools are not healthy development since many sports stars could be left behind. National Teacher Institute (2002) outlined the following as the major factors affecting the availability of Physical Education facilities, equipment and supplies in schools.

• Careless planning of programme by the games teacher or games master.

• Employment of unqualified teachers to handle Physical Education.

• Lack of funds, and

• Poor maintenance of existing facilities and equipment.

According to Ojoade (2011) inadequacy of fund to the schools as provided by the government is the main problem of secondary schools in Nigeria. Correspondingly, this situation affects the extent of availability of resources for the Physical Education programme in the schools.

**Adequacy Of Physical Education Teaching Resources In Schools.**

Longman (2000) explained adequacy as a situation in which there is enough resources for a particular purpose. Mapaderum (2002) asserts that adequacy is a satisfactory condition of resources in an organization. Faronbi (1998) opined that the wealth of a nation or society could determine the quality of education since it determines the possibility of the provision of adequate resources for education. The author further noted that a society that is wealthy will establish good schools with quality teachers and adequate learning infrastructures. He added that when these conditions are on ground students may learn with ease thus bringing about good academic achievements. Commenting on importance of adequate resources in teaching Ajayi and Ogunyemi (1990) reiterated that when facilities are provided in adequate quantity to meet relative needs of a school system, students will not only have access to the reference materials mentioned by the teacher but individual students will also learn at their own pace. The net effect of this is increased overall academic performance of the entire students. On the contrary inadequate facilities and equipment in teaching is the origin of failure (Ahmed, 1999). According to him a close look at the public schools in Nigeria and what goes on there shows that nothing good can come out of most schools as they do not have adequate facilities, and appropriate human resources to prepare candidates for the West African School Certificate Examination (WASCE). Similarly Okwor (2003) blames the failure of Curriculum Reforms in Nigeria (CRN) on the inability of the initiators of the programme to mobilize adequate resources (human, material and financial) to prosecute it and transform the plan into reality. National Teachers Institute (2002) asserts that the issue of facilities and materials as well as equipment for use in teaching of physical education in schools and colleges has for long constituted a problem in Nigerian schools that the number of facilities equipment and materials for physical education respectively has been generally inadequate in our schools and colleges. The learners themselves are resources to a resourceful teacher. The teacher can utilize their innate skills and ingenuity in producing certain local materials to be used as teaching aids. However Umeoduagu, (2000) asserts that resources should be provided in quality and quantity for effective teaching in schools. Mapaderum (2002) emphasized that the availability and adequacy of learning facilities and equipment promote effective teaching and learning activities in schools while their inadequacy affects the academic performance negatively. Also Alor (2006) stressed that besides having sound instructional programme on ground, the number and qualification of the teacher is yet another important factor to be considered in teaching of physical education in secondary schools. According to the author, equally important apart from availability of adequate facilities and equipment is the teacher’s experience on the Job. Salami (1999) in Akin-Taylor and Aboyomi (2008) noted that availability of adequate facilities and equipment is of vital importance in physical education. The author added that funding or financing is equally an important factor affecting the implementation of the school physical education programme.

**Utilization Of Physical Education Resources In Schools.**

Utilization of resources according to Chakraborty, Islam, Chowdhury, Bari and Akhter (2011) is a complex behavioral phenomenon, however it is always related to the availability and quality of such resources or services as the case may be. Horny (2004) explain utilization as to make use of available services at the individual’s disposal. Obi (2006) asserts that from the National Policy on Education (NPE; 2004) it could be observed that one of the objectives of education is to make learning permanent. According to him the utilization of instructional materials in teaching is a sure way of achieving this objective. When real objects or their representatives are used in teaching, students see, touch and interact with these materials. Interaction with learning materials will help the students not to forget what they learnt easily. Olagunju and Abiona (2008) explained that the process of managing and organizing resources is resource utilization. They added that in a school, the available resources should be utilized in such a way that enables According to Offorma (1990) one of the reasons why available materials are not used by many teachers in schools and colleges is that they lack the necessary skills to operate them. He emphasized that the usefulness of resource materials depends on what the teacher makes out of them. Literature reveal that there are physical education teachers who are not interested in physical activities (Ebo, Nwajei and Akara; 2004). According to them such situation has worsened the teaching and production of physically educated Nigerians. The authors added that the modern technological age with its accompanying explosion of knowledge calls for teachers who are ready to keep abreast with the constant changing needs of individuals being taught, as well as that of the society.

One of the factors contributing to none utilization of physical education facilities, equipment and supplies in secondary schools in Nigeria is lack of maintenance culture of facilities, equipment and supplies. According to Orunaboka and Nwachukwu (2012) maintenance of most public properties which belong to nobody is less concern of some citizen of Nigeria. They suggested that for such facility, equipment and supplies to be readily available for utilization in teaching, maintenance culture should be established by the school physical education teacher. Writing on maintenance culture of physical education facilities, equipment and supplies, Bucher and Krotee (2002) opined that equipment and facilities should always be maintained in a serviceable condition. Procedures for caring for facilities, equipment, and supplies should be routine so that repairs are provided as needed. All used equipment and supplies should be checked and then repaired, replaced or serviced as the need arises.

**Physical Activity And Students Well-Being**

**Psychological Well-being**

Psychological well-being has been variously conceptualized. Ryff and Keyes (1995) viewed psychological well-being as a condition of positive functioning and a high level of personal satisfaction in the spheres of autonomy, environmental mastery, personal growth, and positive relations with other people. Similarly, Burns (2017) viewed “psychological well-being as the inter- and intra-individual levels of positive functioning that can include one’s relatedness with others and self-referent attitudes that include one’s sense of mastery and personal growth. Subjective well-being reflects dimensions of affect judgments of life satisfaction.” Literature suggests that PWB comprises two main dimensions such as the hedonic perspective-the subjective experience of happiness (affect) and life satisfaction feeling good; and eudaimonic perspective, which covers positive psychological functioning, good relationships with others and self-realization (Ryan & Deci, 2001; Stewart-Brown, 2015). In the present study, both the hedonic and eudaimonic aspects of mental health were explored.

Based on the Ryff’s multidimensional model of psychological well-being, the broad elements of eudaimonia has been used extensively in the literature (Ryff, 2014). The six dimensions of well-being include self-acceptance (SA), positive relations with others (PR), autonomy (AU), environmental mastery (EM), purpose in life (PL), and personal growth (PG). Self-acceptance implies the ability to have a positive attitude and feelings of satisfaction, and acceptance of self despite inherent limitations or deficiencies. PR exemplifies the subject’s empathy and capacity to establish intimate, meaningful, and trusting relationships with others. AU implies a person’s ability to control his/her behavior, resist social pressure, make independent decisions even if they at variance with other people’s views. EM connotes the ability to create and manage situations conducive for mental conditions and daily activities; PL measures subject’s intentionality and ability to set goals in life; PG represents the ability to develop one’s potentials and readiness for new experiences and the feelings of improving over time (Gómez-López et al., 2019; Ryff, 1989; Ryff & Singer, 2008).

**Physical Activity and the Brain**

Physical activity effects on the brain have been extensively researched (Etnier, et al., 1997; Ploughman, 2008; Trudeau & Shephard, 2010; Sibley & Etnier, 2003). Physical activity benefits for the brain have included: increase in cerebral blood flow (moderate to high intensities of exercise have shown large increases), changes in neurotransmitters (acute bouts of exercise cause changes), increases in norepinephrine and serotonin (after an acute bout of exercise and chronic exercise influences more long-term increases in neurotransmitters), and permanent structural changes in the brain. The increases in cerebral blood flow benefit cognitive functioning due to the increased nutrient and oxygen supply to the brain. Additionally, the increases in norepinephrine found in humans are significant due to the fact that studies on rats have shown high levels of norepinephrine associated with improved memory. For example, Isaacs, Anderson, Alcantara, Black, and Greenough, (1992) conducted an experiment where rats were assigned to one of four conditions. The first group was a motor skill learning group that trained for 30 days on a obstacle course that was periodically increased in difficulty. The second group was also trained for 30 days to walk rapidly and then jog one hour each day. The third group was housed individually with a running wheel, and the activity was voluntary. The fourth group was an inactive group with identical cages as the other groups. Their results found that both the motor skill learning group and the repetitive physical activity group had permanent changes in the brain which demonstrated that physical activity and motor skill learning stimulated angiogenesis (a physiological process in the body that involves the growth of new blood vessels).

More recently a review conducted by Trudeau and Shephard (2010) highlighted the relationship of physical activity to brain health and academic performance of schoolchildren. The experimental studies on physical activity and cognition on rats and humans focused on the hippocampus which is related to memory. The focus of these investigations was on long-term hippocampal potentiation (LTP). This is a necessary process in the consolidation of memory and is characterized by an increase in synaptic efficacy. The LTP appears to be facilitated by physical activity through the following mechanisms: improved synaptic transmission, increased concentrations of neurotrophins, protection against the adverse effects of free radicals, and increased neurogenesis (development of neurons). Similar to the Isaac et al. (1992) study, Trudeau and Shephard (2010) reviewed several experimental studies showing improved synaptic transmission after running, and faster learning of maze pathways for rats. Additionally, several adult animal studies have demonstrated increases in brain-derived neurotrophic factor (BDNF) and other growth factors in response to physical activity (Ploughman,2008; Trudeau & Shephard, 2010). For young human adults the BDNF increases have been observed with acute bouts of physical activity. BDNF promotes neural growth and protects neurons from oxidative damage. The increase of antioxidants in the brain of trained animals has been observed, and this increase further protects the hippocampal cells from damage (Shephard & Trudeau, 2010; Ploughman, 2008; Etnier, 1997). Also, studies in elderly humans have demonstrated that endurance physical activity is protective against cognitive decline, and the previously mentioned increase in antioxidants from the physical activity could protect the brain against functional loss (Ploughman, 2008; Shephard & Trudeau, 2010).

The next three studies discuss functional magnetic resonance imaging (fMRI) techniques to assess the effects of physical activity on brain functions. fMRI is a neuroimaging technique used to study brain activity to determine which structures are active during specific mental functions. The first study (Colcombe, Kramer, Erickson, Scalf, McAuley, and Cohen (2004 a,b) examined adults using the magnetic imagining techniques (fMRI) to assess brain functions prior and following a 6-month aerobic walking program for 29 sedentary older men. The men in the program were able to perform complex decision tasks more rapidly than those who did not participate. The (fMRI) detected that physical activity had modified brain function in the prefrontal cortical area of the brain that regulates and controls behavior.

Most recently, two recent studies are the first to explore changes in the preadolescent brain by use of (fMRI) techniques. Chaddock, Erickson, Prakash, VanPatter, et al. (2010) explored the association between childhood aerobic fitness and basal ganglia structure and function. The researchers used the MRI technique to detect changes in the basal ganglia that is involved in attentional control. Their results demonstrated that higher-fit children (aged nine and 10) showed superior performance on an attention and inhibition task, and greater volumes in the basal ganglia area of the brain were observed, compared to similar aged lower fit children. The conclusion of the research was that aerobic fitness in children is connected to the increased volumes in the brain which is related to enhanced cognitive control. The second study conducted by Chaddock, Erickson, Prakash, Kim, et al. (2010), was also performed on nine- and 10- yearold children, and extended the previous research on animals and elderly adults that have demonstrated aerobic physical activity’s connection to increased memory. The structure of the brain studied through the MRI was the hippocampus. Researchers compared the hippocampus volume of high versus low- fit children, and whether the differences were related to performance on an item and relational memory task. The results were consistent with previous research on animals and elderly adults in that higher-fit children demonstrated greater bilateral hippocampus volumes and superior relational memory task performance compared to the lower fit children. These findings are the first to demonstrate the positive effects of aerobic fitness on the structure and function of preadolescent brains. Overall, the above mentioned mechanisms of increased cerebral blood flow, changes in neurotransmitters and permanent structural changes in the brain have shown a potential for enhancing learning and memory in adult rats, and in adults there is evidence that regular physical activity increases the protection for the brain against functional loss. In young animals this evidence for the benefits of physical activity on the brain have not yet been demonstrated, but it is possible that the evidence to date on adult animals may have a greater influence on the more plastic brains of young children (Trudeau & Shephard, 2010).

In the very young children (infancy (one month to one year) through early childhood (one year to six years), research demonstrates that daily movement is crucial in brain development as sensory pathways in the brain are developing (Blakemore, 2003;Leppo, Davis, & Crim, 2000; Sibley & Etnier, 2003). Developing control of muscles and movement is important for the infant and child’s ability to interact with her environment (Leppo et.al., 2000; Sibley & Etnier, 2003). Movement contributes to the organization of neural circuits that develop through the process of synaptogenesis, which permits children to learn to develop control over their sensory abilities and motor functions. Cognitive functioning is also facilitated by the process of myelinization stimulated by movement. In addition, the cerebellum is affected by children’s movement especially in the first few years of life as cells are forming functional circuits in the cerebellum which in turn affect spatial perception, memory, selective attention, language, handling of information, and decision making (Blakemore, 2003; Leppo et,al. 2000; Sibley & Etnier, 2003). The importance of physical activity for the very young and the older adults is well supported. John Ratey, (2008) integrates hundreds of scientific studies and research papers to demonstrate physical activity improves brain function at every age level. Ratey emphasizes that physical activity enables the cells in the brain to be optimal, which maintains and improves brain functioning, and therefore gives us the ability to learn and focus.

**Physical Activity And Cognitive Well-being**

A significant positive relationship has been observed in the research on the relationship between cognition and physical activity. For example, Sibley and Etnier (2003) conducted a metaanalysis of 44 studies that showed a positive correlation with a significant overall effect size of 0.32 between physical activity and seven categories of cognitive performance (perceptual skills, intelligence quotient, achievement, verbal tests, mathematics tests, developmental level and academic readiness) among school-aged children. Additionally, the review demonstrated that all design types and different types of physical activity produced cognitive function benefits.

Examining children with and without clinical disorders, a review by Tomporowski, (2003) demonstrated positive acute exercise effects on children’s behavior and cognitive performance. Cognitive performance was measured in several ways depending on the study. The variety of measures used was: letter-cancellation speed, mathematics computation, WoodcockJohnson Test, WISC-R: Digit Span coding, memory, abbreviated symptom questionnaire, selfstimulation, attention, stereotyped behaviors, classroom behavior, class disruptions, and aggression and hyperactivitiy.

More recently Tomporowski, et al. (2008) reviewed research studies that examined physical activity effects on children’s intelligence, cognition, and academic achievement. The studies were evaluated in light of the executive function hypothesis. Executive function involves scheduling, response inhibition, planning, and working memory. In the studies physical activity effects on executive function in adults have experienced the most significant results out of the four types of cognition’s mental processing: executive function, controlled processing, visuospational processing, and speeded processing. When the executive and non-executive cognitive processes in older adults were assessed following an aerobic training and non-aerobic toning program, there were post-training differences. The aerobic training group performed tests that required executive function more efficiently and rapidly than the non-physical activity group.

Adult research on the executive function hypothesis can be extended to predict the physical activity related improvements in children’s cognitive function. The cross-sectional studies (Tomporowski, et al., 2008) reviewed by the researchers indicated that the children who were physically fit performed cognitive tasks more rapidly and displayed greater mobilization of brain resources than less fit children.

For the experimental studies reviewed by Tomporowski, et al. (2008), academic achievement was the common outcome measure with the most evidence for chronic physical activity having positive effects on academic achievement. Due to variation in methods with few randomized studies, the overall conclusion from these studies was that the children’s academic progress was not hindered due to the time spent in physical education. Overall, the evidence so far indicates gains in children’s mental functioning from the physical activity interventions on tasks that involve executive functions. There are many unanswered questions, for instance, if the cognitive benefits decline when the physical activity is terminated, and if there is a relationship to the type, duration, or intensity of the programs. (Tomporowski, Davis, Miller, & Naglieri, 2008).

With the many physiological benefits of physical activity to the positive effects on brain development and cognition, it is evident that physical activity enhances learning. The next section addresses elementary school physical activity interventions.

**Physical Activity and Depression**

Depression is commonly described in terms of hopelessness, difficulty concentrating, lack of energy, agitation, restlessness, feelings of worthlessness or pessimism, and suicidal ideation [25]. However, there are a few studies on the relation between depression and physical activity on university students as most of the studies have been conducted on children and adolescents from different age groups linking their academic improvements with increasing physical activity [4]. The literature revealed that physical activity and exercise have constructive effects on depression [26]. It has been observed that people who do exercise and physical activity have less chances of exhibiting signs of anxiety and depression as compared to those who do not practice physical exercise. De Mello et al., and his colleagues and Paluska and Schwenk found that less active people tend to be more depressed than more active people and anxiety symptoms are improved with regular exercise and physical activity [27,28]. De Moor and others also found proper physical activity is effective for reducing depression in Brazil [29]. Surprisingly, though the advantages of routine physical activity on mental health are evident [30], it is not practiced by most of the people [27]. Various studies with cross-sectional design consistently reported a negative relation between physical activity and depression [31]. Additionally, recent studies have found that physical activity has an important influence on the mood for clinical, as well as non-clinical, samples [32]. Moreover, there is negative association between depression and physical activity in the case of adolescents as well as adults [33]. Importantly, a few time series studies have been conducted to determine the relation between depression and physical activity [34]. Jerstad observed bi-directional relation between physical activity and depression in that increase in physical activity reduces the risk of depression and in turn depression decreases physical activity [34]. One of the limitations the literature is that most of the studies have been performed on adolescents covering a short period of time [34].

**Physical Activity and Self Esteem**

The concept of self-esteem is associated with positive feelings about oneself [35]. Physical activity is considered to be important for physical as well as mental health. High self-esteem is positively associated with greater wellbeing [36]. Consistent exercise and activity leads to psychological well-being [37]. Physical activity has a positive significant relation with self-esteem in children [38] as well as in older adults [39]. Sonstreom and Morgan’s model shows that physical activity is linked to self-esteem [13]. On the basis of this model, Sonstreom and Alfermann [13,40] found that physical activity is associated with a greater level of self-esteem while using a sample of adults and middle age people. Noordstar and his colleagues [41] found that variation in self-esteem is linked with sportsman abilities and physical activities ranging from moderate to extreme using a sample of children. Guinn et al. [42] found a significant positive change in self-esteem after doing exercise. Guinn and Jorgensen [43] also found self-esteem and physical activity to be related directly among children and adolescents. Gruber reviewed 27 studies and found that physical activity has a moderate relation with self-esteem in the case of pre-adolescents [44]. However, Walters and Martins [45] found an insignificant relation between self-esteem and physical activity.

**Physical Activity, Physical Fitness, And Academic Achievement**

There has been less research on the relationship of physical fitness and academic achievement, and most of these studies have used cross-sectional and correlational designs. A weakness in these designs is that causality cannot be inferred from the data that physical fitness increased or improved academic achievement. Also, there has been little research in this area due to the fact that it is difficult to obtain a large sample of students, and valid and reliable measures for both physical fitness and academic achievement on the same subjects. However, the following studies included in this review have found correlations between physical activity, physical fitness and improved academic performance along with other cognitive performance measures. The following studies include longitudinal, cross-sectional, and correlational. The California Department of Education (2002), as reported by Grissom (2005), confirmed a strong relationship between physical fitness and academic performance. The study used the Fitnessgram (six-faceted measure of fitness), and student mathematics and reading scores from the Stanford Achievement test (9th edition), a standardized norm-referenced test. The Fitnessgram measures aerobic capacity, body composition, abdominal strength and endurance, trunk strength and flexibility, upper body strength and endurance, and overall flexibility. Performance for the fitnessgram is classified as: 1) in the healthy fitness zone (HFZ) or 2) needs improvement. Students must meet all of the fitness standards to be considered fit, and the possible test scores range from: zero (none of the test scores were met) or 6 (all of the test scores were met or exceeded). The academic scores were matched with fitness scores of 884,715 students in grades five, seven, and nine of the California public school system in 2002. In the spring of 2001 the California Department of Education (CDE) began reporting the Physical Fitness Test (PFT) results each year for students in grades five, seven, and nine. This longitudinal study used data from the Spring 2001 and 2002 tests, and sample sizes for 2001 and 2002 were 634,112 and 884, 715 students. The sample size increased in 2002 because of increased PFT participation, and therefore because of the increase in sample sizes this study reports the 2002 results.

The results demonstrated that as the overall PFT score improved, the mean SAT/9 reading and mathematics normal curve equivalent (NCE) scores also improved consistently. In addition, the analysis revealed a statistically significant positive linear relationship between fitness and achievement. A statistically significant interaction between fitness and achievement was greater for females than males. Also, the relationship between fitness and achievement was stronger for higher socioeconomic status (SES) students than low SES students. Researchers acknowledge that the results should be examined with caution as this data did not infer that physical fitness causes academic achievement to improve. Also, another limitation is that higher SES is generally associated with better health and higher academic achievement. In addition, the researchers viewed this as a preliminary study, the influence that physical and mental processes have on one another is ongoing (Grissom, 2005). A follow-up study conducted in 2005 found similar results from over one million children’s scores gathered in 2004 on the California Standards Test and physical fitness tests that measured aerobic capacity, body composition, strength, and flexibility. The fitness scores of children in grades fifth, seventh, and ninth were very strongly correlated with academic achievement, and the girls had a stronger relationship than the boys. The limitations were the same as for the previous study discussed (California Department of Education, April, 2005).A more recent cross-sectional study with a large number of subjects (N=1,841) examining physical fitness related to academic achievement was conducted in a racially and economically diverse urban public school district in Massachusetts (Chomitz et al., 2009). School record data of standardized test scores, fitness, and BMI information for students enrolled in grades fourth, sixth, seventh, and eighth during the 2004-2005 academic years were included. Academic achievement was measured with the Massachusetts Comprehensive Assessment System (MCAS) which includes Math and English components. Fitness was measured by the number of physical fitness tests (endurance cardiovascular test, abdominal strength test, flexibility test, upper body strength test, and an agility test) passed out of five from the Amateur Athletic Union (AAU) and Fitnessgram. Body Mass Index was measured between March and April of 2005. Gender and SES was provided by the school administration records. The overall results showed a significant positive relationship between fitness and Math and English academic scores, with a stronger correlation with Math achievement. The limitations of the study include the cross-sectional design means the results do not indicate causality, and the fitness data was collected for curricular reasons, so the reliability of the data is unknown. Also, although known confounders were accounted for in relation to physical fitness and academic achievement, it is possible that unmeasured confounding factors explain the results. These results are similar to the previous studies mentioned above and encourage support for increased opportunities for physical activity throughout the school day (Chomitz et al., 2009). A correlational cross-sectional study with smaller numbers of children found positive relationships between fitness and academic achievement. Castelli, Hillman, Buck, and Erwin, (2007) replicated the California 2002 findings. The researchers analyzed the relationship between components of physical fitness (aerobic capacity, muscle fitness, and body composition), with academic achievement (mathematics and reading) on the Illinois Standards Achievement Test (ISAT), during a single school year. Four schools were selected out of 11 in a single school district with an effort to balance socioeconomic and academic performance in the sample. Of the four schools selected two schools had 76.3% of the students meet or exceed the standard in mathematics and 86.4% in reading. The researchers considered these two schools to be academically effective, whereas the other two schools had only 46.2% of the students meet or exceed the standard in mathematics and 40.4% in reading. The two academically effective schools had 24.3% of students that received free/reduced lunches/breakfast. The other two schools students that received free/reduced meals were 66%. Overall, 50% of the study sample received free/reduced lunches. Addtionally, despite socio-cultural variables, each student received the same amount of physical activity within the school day. For the study’s subjects and physical fitness test included were 259 third and fifth graders (mean age 9.5), that completed five components of the Fitnessgram physical fitness test and two content areas of the ISAT. The ethnic distribution was 78% Caucasian, 12% African American, 5% Asian, 3% Hispanic, and 2% other. The results demonstrated that several of the fitness tests, particularly aerobic capacity, were positively related with academic achievement in reading and mathematics throughout the four schools. In addition, BMI was positively related to achievement in reading and math, while muscle strength and flexibility fitness were unrelated to achievement test performance. For all the schools, whether considered academically effective or not, a low BMI and higher aerobic fitness level positively related to mathematics and reading achievement. Overall, even with the variables such as age, sex, school characteristics and poverty index, the children with higher levels of physical fitness were more likely to have higher standardized test scores in reading and mathematics. This notion of physically fit students performing better on standardized academic tests is in support of the study conducted by the California Department of Education in 2001 and 2004. The limitations of the study discussed included first, that student motivation may have accounted for some of the variance between physical fitness and academic performance. Also, the field tests used for physical fitness measures have restrictions on the evaluation of fitness in children, and the sample was not random which prohibits generalization to other populations (Castelli et al., 2007). The next two cross-sectional studies to be reviewed were small samples of pre-adolescent children who were assessed on the Fitnessgram and different cognitive measures. First, Buck Hillman, and Castelli, (2008) examined the correlation between physical fitness (Fitnessgram) and cognition (IQ and Stroop Color word tests) for children between seven- to 12-years of age. There were 74 children (mean age 9.3, sd 1.4, 41 males, 33 females) recruited from the Champaign County, Illinois community. The socioeconomic status of the children was determined by Trichotomous Index (based on the highest level of education obtained by mother and father, participation in free or reduced-price lunch program, and the number of parents who worked full-time). A composite Intelligence Quotient (IQ) score measuring vocabulary and fluid thinking was obtained through the Kaufman Brief Intelligence Test (K-BIT). The entire Fitnessgram was used to assess physical fitness and included the Progressive Aerobic Cardiovascular Endurance Run (PACER), push-ups, curl-ups, sit and reach, and BMI. The Stroop Color and Word Test had three conditions (word, color, in-congruent color-word pairs), and participants read aloud as many items as possible in 45 seconds. The results found those who have increased levels of aerobic fitness performed better on the Stroop task performance. During each of the three conditions on the Stroop color-word task, the children that performed more laps on the PACER test read more stimuli correctly than those that ran fewer laps. It was also found that older children and the younger children with higher IQ performed better on the Stroop task. Limitations of the study include the cross-sectional design which indicates the differences between the high- and low-fit children may be due to other factors. Additionally, selection bias, non-randomized interventions, use of field tests rather than objective measures, and the possibility that reading ability impacted the stroop task performance were discussed as possible limitations. The researchers concluded that increased levels of fitness may be beneficial to cognition during brain development, and therefore fitness may provide cognitive benefits during preadolescence (Buck et al., 2008).

Second, Hillman, Castelli, and Buck, (2005) attempted to determine whether a high level of fitness was associated with better cognitive performance. Both children (n=24; mean age=9.6 yr) and adults (n=27; mean age=19.3) were assessed. The participants were put into one of four groups based on Fitnessgram scores: high-fit children, low-fit children, high-fit adults, and lowfit adults. The Fitnessgram was used to assess fitness, and the cognitive task was a neuroelectric (electrodes placed above and below the right orbit and at the outer canthus of each eye to record bipolar eye movements) and behavioral responses to a stimulus discrimination task. The electrode sites were (Fz,Cz,Pz,Oz) and the waveforms for each group were measured to target and nontarget stimuli. P3 amplitude indicates larger population of neurons being recruited for a task, and P3 latency indicates the time point of the maximum amplitude. If the P3 amplitude is increased, and the P3 latency decreases during a visual discrimination task, this indicates a superior neuroelectric profile. The measures of fitness in the Fitnessgram included aerobic capacity (PACER), muscle fitness (push-ups and curl-ups), flexibility fitness (sit and reach test), and body composition through BMI score. The discrimination task involved a visual odd-ball task that required the participants to press a button with their right thumb as quickly as possible to an infrequently presented target stimulus. The target stimulus was a black and white line drawing of a cat, and the nontarget stimulus was a black and white line drawing of a dog. The children were required to press the button with their right thumb when they saw the target stimulus, the drawing of the cat. No response was required for the nontarget stimulus, the drawing of a dog. The stimulus was presented in random order for 200 milliseconds (ms) in three minute blocks of 150 trials with a two- minute rest period in between blocks. Intelligence quotient (IQ) through the K-BIT, and SES were also collected.

Results showed that high-fit children had greater P3 amplitude compared with low-fit children and high- and low-fit adults. This increase in amplitude for higher fit children suggests a greater portion of attention and working memory resources related to the stimulus processing. Also, the high-fit adults and children had faster P3 latency compared with low-fit participants at the Oz site. This faster latency means they had faster neurocognitive processing and therefore, faster reaction times. Even though the adults had faster reaction times than the children, the high-fit children had faster reaction time than low-fit children. Limitations of the study were the cross-sectional design, small sample size, and a field test of aerobic fitness was used instead of an objective measure of fitness (Hillman, et al., 2005). The last cross-sectional study to be reviewed assessed fitness measures and physical activity using a fitness test and questionnaire with academic achievement (five-point scale) in students aged seven-15 years. Dwyer, Sallis, Blizzard, Lazarus, and Dean, (2001) examined the sample of 7,961 school children from the Australian Schools Health and Fitness Survey conducted in 1985. There were 500 students placed in each age/sex stratum drawn from 109 schools (i.e. 10 girls and 10 boys per school). The principal scholastically rated students with a five-point scale (excellent, above average, average, below average). The physical fitness tests included indoor measurements of height and body mass, standing long jump, sit-ups, push-ups, sit and reach, dynamomety, skin folds and lung function. Outdoor measurements of fitness included a 50-meter sprint, 1.6 kilometer run, and Monark cycle ergometer with three ascending power outputs each of three-minute duration. An exercise and sport questionnaire which included an activity grid with physical activities in the past week and demographic factors was also administered.

Results demonstrated that academic ratings were significantly correlated with fitness levels. Specifically, children of higher scholastic ability were more active, and sit-ups and standing long jump were most consistent in association with scholastic ratings (rated by principal). A significant association was also observed between academic achievement and physical activity (combination of lunchtime physical activity and minutes of physical activity the preceding week). Limitations of the study included cross-sectional design, measurement bias, confounding, motivation of subjects, only one objective fitness test, genetic factors or fetal nutrition, and non-randomized trial with short duration. Researchers concluded that since several measures of fitness were related to scholastic ability and not just one, this enhances the fitness and physical activity relationship with academic performance (Dwyer, et. al, 2001). In summary, despite the fact that by the nature of cross-sectional and correlational designs we cannot conclude that physical fitness causes improvements in academic achievement, there are consistencies in these studies that support a strong correlation between fitness and academic achievement. In reviewing the above 16 studies it is clear that quality physical activity through physical education/physical fitness is vital to cognitive and academic outcomes in our schools. It is apparent that higher academic performance is predicted by physical activity, but physical education needs sufficient levels of activity to make a difference. Overall, the research demonstrates that increased time in daily physical activity and in quantity and quality of physical education has been associated with physical benefits. Additionally, when daily physical activity is increased, improvements or no change in academic performance has occurred. It is important for this relationship between physical activity, physical fitness, and physical education on academic achievement to be further explored.

**2.2 THEORETICAL FRAMEWORK**

The self-determination theory (SDT) (Ryan & Deci, 2000) posits that people have three basic psychological needs, such as competence, autonomy, and relatedness. This emphasizes that the attainment of these needs is crucial for psychological growth. The three basic needs underscore Ryff’s six factors of psychological well-being. Specifically, other dimensions of PWB such as environmental mastery, purpose in life, and personal growth appear to accentuate need of competence which implies “feeling effective in one’s ongoing interactions with the social environment and experiencing opportunities to exercise and express one’s capacities” (Ryan & Deci, 2000). The desire to fulfill these basic psychological needs can serve as the impetus for individuals to engage in PA as well as promote their psychological well-being (B Owen et al, 2014). However, the appreciation of the basic needs varied among individuals. This could explain why there are different levels of PA and PMH among individuals, including young university men. Nevertheless, the promotion of the basic psychological needs in the individuals could be a viable channel for encouraging young men to engage in PA. Consequently, regular, and adequate engagement in moderate to high PA could improve PMH in young university men.

**Progressive Utilization Theory**

Progressive Utilization Theory or PROUT is a socio-economic theory first mentioned in 1959 and fully outlined in 1962 by Indian philosopher and spiritual leader Prabhat Ranjan Sarkar (1921-1990). According to Craig (1998) PROUT is a social system that overcomes the limitations of both capitalism and communism. Among other things, “progressive utilization” would optimize the use of natural industrial and human resources, based on cooperative coordination on a wide basis, ranging from local communities to larger regions and nations and between the people of diverse geographical areas (Gista: 2004). PROUT seeks the welfare and happiness of all and is also concerned with physical education. The relevance of the progressive utilization theory (PROUT) in this study is its encouragement to optimize the use of available natural resources as well as other resources that belong to agencies in the community where the school is located. This theory encourages the physical education teacher to use all available resources (within and outside) the school to teach physical education.



*Diagrammatic representation of the progressive utilization theory in physical education.*

The diagram in figure I indicates that available natural resources in the community maintains, hills, Forests, Rivers, Streams etc can be utilized as physical education facilities and equipment schools. Also other facilities and equipment belonging to agencies in the community can be of help to the school in teaching of physical education. Utilization of these additional resources in teaching by the physical education teacher can help to improve on availability and adequacy of P.E. resources in the school.

**Theory Of Physical Education Programme.**

A theoretical framework advanced by Haag and Nixon (1981). This theoretical framework has four Phases according to the authors; preconditions, planning, implementing and evaluating. Related to the four Phases are six factors identified as sociocultural preconditions, anthropological preconditions, aims and objectives, content, instructional methods and organizations and finally media. The premise for examining the urban and rural school location implication on the availability, adequacy and utilization of physical education resources is anchored on this theory. The diagram in figure I indicates that the availability of adequate physical education resources in schools will influence the preconditions, planning, implementation as well as evaluation of the school physical education programme. The proper usage of these phases of school physical education programme brings about effective teaching of the subject in schools. The diagram shows that physical education facilities, equipment, and supplies, should be available. Their availability provides opportunity for precondition, planning, implementation and evaluation. These processes are undertaken by the community involving the agencies and secondary schools. To optimize the use of natural industrial and human resources there should be cooperation among the agencies and schools. This will lead to effective teaching of physical education in schools.

**2.3 CHAPTER SUMMARY**

In this review the researcher has sampled the opinions and views of several authors and scholars on the concept of physical activities, the types of physical activities, the benefits of physical activities etc. The works of scholars who conducted empirical studies have been reviewed also. The chapter has made clear the relevant literature.

**CHAPTER THREE**

**RESEARCH METHODOLOGY**

**3.1 INTRODUCTION**

In this chapter, we described the research procedure for this study. A research methodology is a research process adopted or employed to systematically and scientifically present the results of a study to the research audience viz. a vis, the study beneficiaries.

**3.2 RESEARCH DESIGN**

Research designs are perceived to be an overall strategy adopted by the researcher whereby different components of the study are integrated in a logical manner to effectively address a research problem. In this study, the researcher employed the survey research design. This is due to the nature of the study whereby the opinion and views of people are sampled. According to Singleton & Straits, (2009), Survey research can use quantitative research strategies (e.g., using questionnaires with numerically rated items), qualitative research strategies (e.g., using open-ended questions), or both strategies (i.e., mixed methods). As it is often used to describe and explore human behaviour, surveys are therefore frequently used in social and psychological research.

**3.3 POPULATION OF THE STUDY**

According to Udoyen (2019), a study population is a group of elements or individuals as the case may be, who share similar characteristics. These similar features can include location, gender, age, sex or specific interest. The emphasis on study population is that it constitute of individuals or elements that are homogeneous in description.

This study was carried out to examines the effect of physical education programmes on the well-being of secondary school students in Nigeria using secondary school students in Otta Local Government Area of Ogun State as case study. At the course of this study, the researcher selected 4 secondary schools in the study. Hence, the entire students of the selected secondary schools form the population of the study.

**3.4 SAMPLE SIZE DETERMINATION**

A study sample is simply a systematic selected part of a population that infers its result on the population. In essence, it is that part of a whole that represents the whole and its members share characteristics in like similitude (Udoyen, 2019). In this study, the researcher adopted the convenient sampling method to determine the sample size.

**3.5 SAMPLE SIZE SELECTION TECHNIQUE AND PROCEDURE**

According to Nwana (2005), sampling techniques are procedures adopted to systematically select the chosen sample in a specified away under controls. This research work adopted the convenience sampling technique in selecting the respondents from the total population.

In this study, the researcher adopted the convenient sampling method to determine the sample size. Out of all the entire population of staff of Union Bank of Nigeria Plc. Marina, the researcher conveniently selected 200 students from the selected secondary schools as the sample size for this study. According to Torty (2021), a sample of convenience is the terminology used to describe a sample in which elements have been selected from the target population on the basis of their accessibility or convenience to the researcher.

**3.6 RESEARCH INSTRUMENT AND ADMINISTRATION**

The research instrument used in this study is the questionnaire. A survey containing series of questions were administered to the enrolled participants. The questionnaire was divided into two sections, the first section enquired about the responses demographic or personal data while the second sections were in line with the study objectives, aimed at providing answers to the research questions. Participants were required to respond by placing a tick at the appropriate column. The questionnaire was personally administered by the researcher.

**3.7 METHOD OF DATA COLLECTION**

Two methods of data collection which are primary source and secondary source were used to collect data. The primary sources was the use of questionnaires, while the secondary sources include textbooks, internet, journals, published and unpublished articles and government publications.

**3.8 METHOD OF DATA ANALYSIS**

The responses were analyzed using the frequency tables, which provided answers to the research questions. While the hypotheses were tested using Chi-square Statistical tool SPSS v23.

**3.9 VALIDITY OF THE STUDY**

Validity referred here is the degree or extent to which an instrument actually measures what is intended to measure. An instrument is valid to the extent that is tailored to achieve the research objectives. The researcher constructed the questionnaire for the study and submitted to the project supervisor who used his intellectual knowledge to critically, analytically and logically examine the instruments relevance of the contents and statements and then made the instrument valid for the study.

**3.10 RELIABILITY OF THE STUDY**

The reliability of the research instrument was determined. The Pearson Correlation Coefficient was used to determine the reliability of the instrument. A co-efficient value of 0.68 indicated that the research instrument was relatively reliable. According to (Taber, 2017) the range of a reasonable reliability is between 0.67 and 0.87.

**3.11 ETHICAL CONSIDERATION**

he study was approved by the Project Committee of the Department. Informed consent was obtained from all study participants before they were enrolled in the study. Permission was sought from the relevant authorities to carry out the study. Date to visit the place of study for questionnaire distribution was put in place in advance.

**CHAPTER FOUR**

**DATA PRESENTATION AND ANALYSIS**

1. **INTRODUCTION**

This chapter presents the analysis of data derived through the questionnaire and key informant interview administered on the respondents in the study area. The analysis and interpretation were derived from the findings of the study. The data analysis depicts the simple frequency and percentage of the respondents as well as interpretation of the information gathered. A total of two hundred (200) questionnaires were administered to respondents of which one hundred and forty one (141) were returned and validated. This was due to irregular, incomplete and inappropriate responses to some questionnaire. For this study a total of 141 was validated for the analysis.

**4.2 DATA PRESENTATION**

The table below shows the summary of the survey. A sample of 200 was calculated for this study. A total of 141 responses were received and validated. For this study a total of 141 was used for the analysis.

**Table 4.1: Distribution of Questionnaire**

|  |  |  |
| --- | --- | --- |
| **Questionnaire**  | **Frequency** | **Percentage**  |
| Sample size | 200 | 100 |
| Received  | 141 | 71 |
| Validated | 141 | 71 |

**Source: Field Survey, 2021**

**Table 4.2: Demographic data of respondents**

|  |  |  |
| --- | --- | --- |
| **Demographic information** | **Frequency** | **percent** |
| **Gender**Male |  |  |
| 72 | 51% |
| Female | 69 | 49% |
| Age |  |  |
| 14-17 | 110 | 78% |
| 18+ | 31 | 22% |
| **Class** |  |  |
| Junior Secondary | 60 | 43% |
| Senior Secondary | 81 | 57% |

**Source: Field Survey, 2021**

**TEST OF HYPOTHESIS**

**H01**: Physical education programme does not enhance the well being of secondary school students.

**H02**: Physical exercises does no contribute to the well-being of secondary school students.

**H03**: Engaging in physical activities will not improve the well-being of secondary school students.

**Hypothesis One**

**Table 4.3: Physical education programme does not enhance the well being of secondary school students.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Options** | **Fo** | **Fe** | **Fo - Fe** | **(Fo - Fe)2** | **(Fo˗-Fe)2/Fe** |
| Yes | 70 | 47 | 23 | 529 | 11.3 |
| No | 36 | 47 | -11 | 121 | 2.6 |
| Undecided | 35 | 47 | -12 | 144 | 3.1 |
| **Total** | **141** | **141** |  |  | **17.0** |

**Source: Extract from Contingency Table**

 Degree of freedom = (r-1) (c-1)

 (3-1) (2-1)

 (2) (1)

 = 2

At 0.05 significant level and at a calculated degree of freedom, the critical table value is 5.991.

**Findings**

The calculated X2 = 17.0 and is greater than the table value of X2 at 0.05 significant level which is 5.991.

**Decision**

Since the X2 calculated value is greater than the critical table value that is 17.0 is greater than 5.991, the Null hypothesis is rejected and the alternative hypothesis which states that physical education programme enhances the well being of secondary school students is accepted.

**Hypothesis Two**

**Table 4.4: Physical exercises does no contribute to the well-being of secondary school students.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Options** | **Fo** | **Fe** | **Fo - Fe** | **(Fo - Fe)2** | **(Fo˗-Fe)2/Fe** |
| Yes | 75 | 47 | 28 | 784 | 16.68 |
| No | 26 | 47 | -21 | 441 | 9.4 |
| Undecided | 40 | 47 | -7 | 49 | 1.0 |
| **Total** | **141** | **141** |  |  | **27.08** |

**Source: Extract from Contingency Table**

 Degree of freedom = (r-1) (c-1)

 (3-1) (2-1)

 (2) (1)

 = 2

At 0.05 significant level and at a calculated degree of freedom, the critical table value is 5.991.

**Findings**

The calculated X2 = 27.08 and is greater than the table value of X2 at 0.05 significant level which is 5.991.

**Decision**

Since the X2 calculated value is greater than the critical table value that is 27.08 is greater than 5.991, the Null hypothesis is rejected and the alternative hypothesis which states that physical exercises does contribute to the well-being of secondary school students is accepted.

**Hypothesis Three**

**Table 4.5: Engaging in physical activities will not improve the well-being of secondary school students.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Options** | **Fo** | **Fe** | **Fo - Fe** | **(Fo - Fe)2** | **(Fo˗-Fe)2/Fe** |
| Yes | 66 | 47 | 19 | 361 | 7.68 |
| No | 37 | 47 | -10 | 100 | 2.0 |
| Undecided | 38 | 47 | -9 | 81 | 1.7 |
| **Total** | **141** | **141** |  |  | **11.28** |

**Source: Extract from Contingency Table**

 Degree of freedom = (r-1) (c-1)

 (3-1) (2-1)

 (2) (1)

 = 2

At 0.05 significant level and at a calculated degree of freedom, the critical table value is 5.991.

**Findings**

The calculated X2 = 11.28 and is greater than the table value of X2 at 0.05 significant level which is 5.991.

**Decision**

Since the X2 calculated value is greater than the critical table value that is 11.28 is greater than 5.991, the Null hypothesis is rejected and the alternative hypothesis which states that engaging in physical activities will improve the well-being of secondary school students is accepted.

**CHAPTER FIVE**

**SUMMARY, CONCLUSIONS AND RECOMMENDATIONS:**

**5.1 Introduction**

This chapter summarizes the findings on the effect of physical education programmes on the well-being of secondary school students in Nigeria using secondary school students in Otta Local Government Area of Ogun State as case study. The chapter consists of summary of the study, conclusions, and recommendations.

**5.2 Summary of the Study**

In this study, our focus was to examine the effect of physical education programmes on the wellbeing of secondary school students in Nigeria using secondary school students in Otta Local Government Area of Ogun State as case study. The study is was specifically focused on examining whether physical education programme enhances the well being of secondary school students, finding out whether physical exercises contribute to the well-being of secondary school students and examining other benefits of physical activities.

The study adopted the survey research design and randomly enrolled participants in the study. A total of 141responses were validated from the enrolled participants where all respondent are students of selected secondary schools in Otta Local Government Area of Ogun State.

**5.3 Conclusions**

With regard to the findings of the study, the following conclusions emerged.

1. Physical education programme does enhance the well being of secondary school students.
2. Physical exercises does contribute to the well-being of secondary school students.
3. Engaging in physical activities will improve the well-being of secondary school students.

**5.4 Recommendation**

Based on the findings the researcher recommends that;

1. Adequate and standard facilities and equipment for physical education/physical activities should be provided for all public schools (primary and secondary schools) in each of the states. 
2. Trained physical education teachers and sports coaches should be employed to all the primary and secondary schools in Nigeria to ensure adequate physical activities in schools. 
3. Maintenance culture should be established by the physical education administrator, with proper repairs of physical education facilities and equipment.

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**APPENDIXE**

**QUESTIONNAIRE**

**PLEASE TICK [√] YOUR MOST PREFERRED CHOICE(S) ON A QUESTION.**

**SECTION A**

**PERSONAL INFORMATION**

**Gender**

Male [ ] Female [ ]

**Age**

14-17 [ ]

18 and above [ ]

**Class**

Junior Secondary [ ]

Senior Secondary [ ]

**SECTION B**

**Question 1:** Does physical education programme enhance the well-being of secondary school students?

|  |  |
| --- | --- |
| **Options** | **Please Tick** |
| Yes |  |
| No |  |
| Undecided |  |

**Question 2:** Does physical exercises contribute to the well-being of secondary school students?

|  |  |
| --- | --- |
| **Options** | **Please Tick** |
| Yes |  |
| No |  |
| Undecided |  |

**Question 3:** Will engaging in physical activities improve the well-being of secondary school students?

|  |  |
| --- | --- |
| **Options** | **Please Tick** |
| Yes |  |
| No |  |
| Undecided |  |