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Abstract

The participation in sports for the learners effectively at school, contribute highly in the students' performance where playing for the student reduce stress with refreshing their minds that can lead to more academic success. Therefore, the main purpose of this study was to establish the relationship between sports participation and student's academic performance in Rwanda. The study, worked descriptive research design which adopted both qualitative and quantitative approaches and correlative research designs. The participants of this study, was 400 obtained by using the combination of random and purposive sampling technique and the research instrument which were questionnaire survey and guided interview. The SPSS software was used to analyze the collected data. The results showed that the participation in sports games for the students can help them to earn more grades, complete home work effectively in different subjects. it was also noted that engagement of learners in sports increase their fitness. The findings of this study, showed that the mean was 1.38 which is very high mean, and its standard deviation is 1.77 means that all sports games were developed in secondary due to that mean which is very high, different teachers and students admired the sports games as main factors encouraged in their schools for academic performance in Rwanda. The big number 80.79% of respondents accepted that the students who involves in sports games participate actively in Teaching/learning activities while the 19.21% of respondents disagreed with the statements. Sport games participation is highly positive correlated with students' academic performance in secondary schools at $r=0.879$ as correlation coefficients. This study confirmed a strong positive relationship between sports games participation and students' academic performance in Rwanda. Therefore, local leaders should create opportunities for understanding the needs, aspirations and frustrations of each staff members, parents and local leaders through mobilization to train all community about sports games towards students' academic performance by training them on the role of sports in everyday life.

The ministry of education should support the teachers, students, parents and the non-teaching staff to provide the all resources needed for sports to enhance the sports games in order to raise the academic performance in Rwanda. This is because sports have been seen to play a major role in improving students' academic performance since it boosts the morale of young children to attend secondary schools

Keywords: *Sport participation, Sport games & Playing, Academic Performance, Gatsibo District, Rwanda*

1.1 Background of the Study

Many parents, teachers, or school leaders have a high interest for their students to succeed academically. For this reason, it is very interesting for them to know which factors are really to have an influence on students' academic performance. With advancing research on the positive relationship between students' academic performance and sports involvement, there should be increasing numbers of children participating in sports games (Prasad, 2012).

Nowadays, students engage in various types of organized sports programs. These can be divided into two main classes such as team sports in which students compete as team, and individual sports in which participants compete as individuals. The most familiar known team sports among students include basketball, football, and handball, and the most familiar individual sports include cycling, athletic and swimming (Cole, 2014).

The Centers for research in USA considered the review done 2008 on sports games participation during the school day and students' academic performance. The researchers' report indicated that sports may have a positive outcome on students' academic performance. Additionally, the advisory committee on sports games reconsidered the review in 2007 on the health benefits from sports to the students, including the psychological condition advantage. Therefore, the studies concluded by showing that relationships between the fitness, grades, test scores, sports games and direct measures of students' academic performance constantly have no clear results (Erink, 2012).

As the focus on educational achievement has increased in schools, the American researcher has also taken action to close the outcomes gap that exists in academic performance between white and black students in USA. If scientific evidence verifies and supports a positive connection between sports games and educational outcomes, administrators may be more likely to increase PA opportunities during the school work. The researchers noted that, "there is insufficient evidence to conclude that additional sports time increases students' academic performance (Erink, 2012).

In November 2011, the conference hosted on sports games participation, cognitive function and students' academic performance by American researchers, educators, and policymakers presented and discussed the most current evidence, much of which has gained in the past years. In order to elaborate a research and policy advocacy agenda for the future, it is significant to consider previous researches and the contemporary state of the science. The aim of this reconsideration is to examine the review on the link between sports games and students' academic performance in students in order to show gaps for future research (Erink, 2012). Although, the studies were performed in USA, Canada and South Africa described the results of school-based intervention and was showed that relationship between sports games participation and students' academic performance are positively (Singh, 2012).

Donnelly *et al.* (2009) described that 75% of the students who involved in sports games was improved their students' academic performance scores in group experimental (Donnelly, 2009).

Tomprowski *et al.* (2011) and Fedewa *et al.* (2011) discussed on sports or fitness and several mental health outcomes, including cognitive impairment and conduct problems, and showed a positive connection with cognitive functions in randomized studies. The greatest grades were on mathematic outcomes, intelligence quotient (IQ), and reading performance and described the diverse sports interventions used to evaluate the outcomes of sports activities on students' mental functions. (Erink, 2012).

In Ireland, the current generation of young adults played two thirds more sport when they were students than their parents did when they were students. The number of individuals who are obese in Ireland is increasing and Ireland has one of the highest frequencies of overweight students in comparison to other European and developed countries (Bradley, 2013).

Sports games are also discussed as beneficial to academic achievement. Several studies have shown that increasing the time loving to PESS (Physical Educational and School Sport) did not damage academic performance and may enhance performance in some subjects despite the deduction in teaching time. Schools in Ireland give a wide range of sports, but individual schools often limit focus to a few, prioritized sports aligned with dedicated coaches/sports staff. (Bradley, 2013).

However, academic achievement might be a direct indicator of intelligence in school education. Researchers measured physical fitness level such as aerobic performance, flexibility and muscular strength and found that aerobic performance had a positive effect on reading achievement, mathematics and total academic achievement.

The parents play an influential role on their students' level of participation in sports, they often worry that playing sports will have a negative impact on their learning. However, there is no evidence that it is harmful (Prasad, 2012).

In South Africa study, Fredicks *et al.* (2006) found that 56.6% boys aged 6 to 7 years' old that are participate in sport activities showed that all groups of students performed better after intervention period with performing better in experimental on spatial, reading and science skills. In Kenya, the students need opportunities to participate in sports games for growing and developing effectively. There is evidence that individuals' sports are likely to be attentive in class and hence perform well academically (Vincent, 2016).

The recent study conducted on Zimbabwean populations indicated that students participated in sports at school retards them to perform better in academic subjects, yet the current theory said participating in sport games by students enhances their performance academically. Head teachers are blamed by parents for low performance at school activities by their children attributing this to spending study time playing at school. Students at school are caught in between, to engage in playing or stop sport and concentrate on school activities only. The confusion among learners is that; is it right in Zimbabwean school situations that a best engaged in sports can also perform effectively in school activities (Mugari, 2015).

A current review of the results of sports games on student's intelligence, cognition, and academic outcomes revealed beneficial results of sports on the brain. The effects of several cross-sectional studies indicated that students who have fitness perform cognitive duty more rapidly and display

patterns of neurophysiologic activity indicative of higher mobilization of brain resources than do lower fit student.

1.2 Problem Statement

The quality of education and student's performance academically are still prioritized for educators and stakeholders in different world countries where searching different things that can help them to increase and stabilize the academic performance for their learners (Farooq, 2011).

In Germany, some schools have not prioritized to participate in sports games and researcher showed that participation of young learners in sports games effectively are related positively with student's academic performance (Thomas, 2007). Participation in sports games have greater important role to enhance good health and academic performance for the students. The sports inactivity has contributed to the non- communicable diseases such as high blood pressure, different types of diabetes that are affecting the student's performance.

In Rwanda the participation in sports games are still a problem. Students' Academic performance and quality of education is serious problem to the government, the Minister of Education in Rwanda have said that the government is prioritizing sports in schools because is one way that will be used to develop skills and talents of learners and also contributes to the enhancement of quality of education with view that healthy children perform better in school (Mukaruzima, 2019).

However, the sports games have some problems said by Minister of Education in Rwanda. And his state minister said the cause of those problems, the prevailing problems towards sports games in the schools is that some schools' administrators don't value co-curricular activities. They don't allocate time to co-curricular activities as it is stipulated by the school policy. The state minister concluded that sports games are compulsory to all Rwandan schools (Mukaruzima, 2019).

Although the recognized interests of sports in student's health and the importance of the physical activities in increasing the sport activity levels, in several countries sport time allocation has been diminishing (UNESCO, 2014). Many parents, students and school administrators have the perception on participating in non-academic subjects like sports affect negatively the students' academic outcomes. Therefore, the time allocations for sport games in school settings are being exchanged with other school activities in an effort to increase the student's academic achievement (Adilson, 2017).

Therefore, the researchers found that sports games are one of the subjects that are ignored in most of the school programs in Rwanda. Schools that include and take sports seriously are very few and those schools shown better academic performance comparing to those which ignored sport games (Winters, 2018, MINISPOC, 2012, Kristi, 2018 & Atieno, 2019).

1.3 General Objectives of the Study

The general objective of the study was to investigate the relationship between the sports games' participation and students' academic performance in Rwanda.

1.4 Objectives of the Study

To establish the relationship between sport games participation and students' academic performance in Rwanda.

1.5 Research Question

What is the relationship between sport games participation and students' performance in Rwanda?

1.6 Significance of the Study

The title of this study was sport games participation and students' academic performance in Rwanda especially in Gatsibo district and the findings may be significance to Ministry of education in setting up the policy guiding the sports games in line with students' academic performance in secondary schools and also in secondary school management for understanding the role of sports games participation to the students' academic success in national examinations in Rwanda. Thus, the findings may have motivated to be highly engaged in the sports games' participation.

2.0 Literature Review

2.1 Theoretical Literature Review

Section on theoretical literature reviews provide a deep description of key concepts that will be used in this research study. The study reviewed the existing scientific literature in order to be familiar with the body of knowledge obtained by previous researchers and scholars. The review based on sports games participation and students' academic performance in secondary school from international to local perspectives.

2.1.1 Student academic performance

Academic performance or academic achievement is the outcome of education the extent to which a student, teacher or institution has achieved their educational goal. Therefore, it is commonly measured by examinations or continuous assessment but there is no agreement on how it is best evaluated or which aspects is most significant procedural knowledge such as skills or declarative knowledge such as facts (Rind, 2008).

2.1.2 Sport games in Europe

The oldest recorded forms of sports were maximum wandering in the Greek island of Crete, where slaves jumped over the horns of a bull. The ancient Greeks were sports fan and taught it to their students at school. Sports competitions took place regularly as one part of religious festivals. The Olympic game was also started in Greece in 776 BC and was related to religious ceremony. Each athlete had to take one part in all the events. Many of the different sports were related to the training given to soldiers, and many such as consider and lance are still in the modern Olympic Games (Van der Merwe, 2007). A greater number of studies have been carried out around the world to look into the consequence of participation in sports games. A review of these studies will be debated with the majority meaning that sports participation does not negatively affect academic performance (Prasad, 2012).

Trudeau and Shephard (2008) viewed studies that analyzed the results of increasing sports games inside a school week, by reducing teaching time from academic subjects. The researcher found that the students who engage in aerobic sport are getting more fitness and perform better in the science subject. And concluded that the sports games are positively related to academic performance (Sarah, 2007).

Furthermore, Lindner (2002) and Tomporowski *et al.* (2008) stated that sports games have meaning decreased over the past years; therefore, students' academic performance may not have connected with playing. The current amount of sports games in schools is not efficient for improve grades. Therefore, with increasing pressure on school leaders and policy makers, it is significant to analyze how sports games are connected with students' academic performance (Tomporowski *et al.*, 2008).

Lindner (2002) also reviewed that results suggesting a positive connection between students' academic performance and sports could be due to two reasons named the selection hypothesis and situational hypothesis. The selection hypothesis states that certain people naturally are talent in sports and academic achievement.

Current research by Mustelin *et al* (in press) conform this idea as their effects indicate that genetic factors are an important contributor towards sporting exercises levels for students. Therefore, biological factors direct some people towards a sporting lifestyle and others towards a more resting lifestyle (Prasad, 2012). These researchers therefore ended that, schools should not decrease time of sports and physical education to increase academic time but instead they should do just the opposite (Ahamed *et al*, 2007; chomitz *et al*, 2009; Coe *et al*, 2006; Trudreau & Shaphard, 2008). Researchers have also evaluated exactly how much sport is adequately to significantly improve students' academic performance. The findings of Coe *et al*'s 2006 indicated that few sports participation has no significant effect on performance academically but higher grades were related only with increased time on sports.

On the other hand, the situational hypothesis indicates that parents of students that well performed academically are usually motivated towards allowing their children to participate in sports where as parents of students that perform less academically are more minded to disallow their children to participate in sports (Lindner, 2002).

Cheung and chow (2010) review the evidence that parents play a significant role in their students' participation or non- participation in sports. Parents have a direct impact on their student's participation in sports and how their student beholds playing. Therefore, the parents of a poorer performance child may be discouraging towards an honest lifestyle (Cheung, 2010).

Bradley J, (2013) described that Sport games is an integral part of the school curriculum in Ireland. Historically the "fit Body, Healthy Mind" philosophy has promoted the inclusion of sports games alongside more cognitive school subjects. Research indicates these sports can improve cognitive function and provide educational interests. Although, there is small research on how the choice of school sports games affects student's academic performance.

The positive impact of sports on health is well recognized. In Ireland, the recent generation of young adults played two thirds more sport when they were student than their parents did when they were children. (Bradley, 2013). Additionally, the studies performed in France and Australia showed that increased time in Playing was associated with physical profits and either improvements or no change in academic performance (Bradley, 2013).

The number of individuals who are overweight in Ireland is increasing and has the highest percentage of student obese in comparison to other European and developed countries, student in Ireland were either, obese, not fit or having high blood pressure. However, the consequences for obese student include psychosocial issues: (social stigma and discrimination) (Bradley, 2013).

Several studies have shown that increasing the time devoted to sports did not harm academic performance and may improve achievement in some subjects despite the deduction in teaching time. There are many aspects of Playing that can be included in sport and many sports games can be used. Schools in Ireland offer a wide range of sports, but individual schools often limit focus to a few, prioritized physical activities aligned with devoted coaches/sports staff. Thus, weekly playing levels in primary are highest compared to the secondary students, 76% of adult sport is individual sport, with the most popular sports being aerobics/keep fit, swimming, and golf, jogging, and cycling (Bradley, 2013).

Researchers measured physical fitness level such as aerobic performance, flexibility and muscular strength and found that aerobic performance had a positive effect on reading achievement, mathematics and total academic achievement (Han, 2018).

Psychological and cognitive profits from the playing

The researcher indicates that sports games decrease stress, anxiety, depression and enhances learning and memory; all factors which foremost to higher grades (Prasad, 2012). Hillman *et al.* (2008), discuss research on the positive connection that was happened between sports games and cognitive measures including emotional, verbal, IQ and academic fitness. Researcher found that sport is affected positively to the health cognitive, social and development of students (Colucci, 2013).

Additionally, researchers indicated physiological benefits; regular participation in sport games may enhance student's behavior at school, increasing the odds of better concentration on the academic setting of these lessons. Although schools are able to give unique chances for structured sports for students, there is a tendency to cut back sports lessons.

Furthermore, Eitle *et al* (1997) and Vail (2006), discussed results that stress the significant role of sports activity on students' academic performance. It is noted that the exercise gained from sports help children concentrate better in class which in turn would contribute towards increased grades. Therefore, the comparison between the findings of short- term exercise with long-term exercise programs was indicated that the long-term programs were much high beneficial to cognitive functioning. These outcomes show that playing may need to be long-term in order to be a positive influence on the cognitive and psychological aspects connected with academic outcomes (Prasad, 2012).

Neurological outcomes from sports participation

Researchers have debated the neurological outcomes of sports participation and how it increases the blood flow to the brain thus increasing ones' mental alertness and attention span, improving ones' self-esteem and decreasing the opportunity of boredom. All of these factors are known to have a positive results on academic achievement(Bailey, 2006). One particular study by Etnier *et al* (1997) and Singh (2102) noted that physical exercises to high intensity was advantageous not only for increasing the food supply to the brain through blood and oxygen flow to the brain, increased levels of norepinephrine and endorphins resulting in decrease of stress and an enhancement of mood and increased growth factors that aid to create new nerve cells and support synaptic plasticity that facilitate the movement of neurotransmitters which is important for memory (shannonhouse,2012).

Additionally, vail (2006), clarifies how certain physical exercises motivates both parts of brain to work collaboratively thus encouraging the brain to function completely. These effects therefore

give support towards the common belief that fitness leads to a healthful. There is also study performed by Singh (2012) indicating that sports have beneficial results on several mental health achievements, including health-related quality of life and better mood states. The neurological benefits existed in these studies also give an effective basis for the variables of study as it supports the idea that a positive connection happens between sport participation and the components that contribute towards highly performance (Prasad, 2012). Therefore, researcher also showed that sport games are related with a subsequent reduce in mental problems, including stress and insanity. Thus, higher level of physical exercises is effective for increasing meditation that is contributed to the academic success of students (Sumaire, 2018).

Gender and sports games

The records from Lindner's study (2002) indicated that a positive connection did indeed happen between students' academic achievement and sport games as students from higher group were more inclined to spend time engaging in playing compared to those in lower groups. However, the result was only interested for males. Another study was performed in Germany by Corneliben and Pfieffer (2007), indicated that the probability of obtaining higher school degrees increased when students were participated in sport where the highest level of school degree increased by 6.1% for males and 5.6% for females.

Fox *et al.* (2010), Stephens and schaben (2006), have reported that there is positive impact of sport games with academic outcomes for boys only, whereas Body Mass Index (BMI) related with academic performance negatively for girls. Therefore, the results from the study performed by Akira (2018), on physical fitness and academic achievement for boys and girls showed that positive effect of physical fitness on academic success are existed in boys only.

Materials and Team Sports

Team sports compete each team is usually grouped as a club lived in a city with its own playing field and received match home and away against other teams that are in the same league. Robert (2003) indicated that there are many teams like Football, Volleyball, Basketball, Swimming and Cycling where the players interact directly and simultaneously between them to attain a goal.

Keaton *et al.* (2014), Sozen (2012), Ramsey (2015) and Mohammad *et al* (2012) indicated that football was talented in Brazil, cricket in Australia, hockey in Canada. Moreover, Athletes engagement has a significant role girls who achieve better academic results through a longer athletes participation. The students who were engaged in athletes had significant higher grade during their sport season compared to their grade when the students were not in sport season. Thus, the outcomes of these sport games affect positively the performance of learners who engaged in and those who are invested their time, money and self into sport teams. Furthermore, Kapstein *et al* (2010) showed that sport equipment is also called sporting goods and has various categories depending on the game. The equipment is balls, clothes, shoes, nets and protective gear like gloves and helmets. Over time, sport equipment has evolved because sports have started to require more protection to prevent injuries.

2.1.3 Sport games in America

Researcher noted that none of the studies examined the outcomes of sports games on cognitive functions, and concluded that many studies used low methodology. An experiment study conducted by Nelson *et al* (2006) in USA showed that, the research done on the both sexes

adolescent students that are participated highly in different sports five time per week were more likely to get high grades in their lessons (Nelson , 2006).

Basketball and Ethnicity in USA

Keaton et al (2014) and Eitle (2002) indicated that basketball is talented in USA and China; they found that playing sports like basketball associated with highest academic grades for white students but lower grades for black students. Such results indicate that differences may happen between different ethnic group (Prasad, 2012).

Socio-economic status (SES) and sports

The study conducted by Eitle (2002), in two different groups white and black student from different socio-economic backgrounds in U SA. Their findings indicated that both sports participants and non- sports participants that had a poorer SES did lower academically than students with a higher SES. Chomitz et al (2009) results were also consistent with this as students with poorer SES were less likely to pass Mathematics and English exam than students from rich family. The California Department of Education (2005) showed that consistent with other research a stronger positive correlation existed for students have higher SES. It is further described that the higher grades and fitness levels connected with high SES children could be an outcome of better health and living conditions and also discuss study showing that decreasing the poverty and the factors that enhance health: conducts to better grades (Prasad, 2012).

Impact of sports games on different subjects

Chomitz *et al* (2009), had done a cross- sectional correlation study on the association between fitness and student's academic performance. Their findings indicated that there was a strong correlation between mathematics grades and fitness tests scores with the mathematics passing rate assessed to increase by 38% as the number of fitness tests passed increased by a unit. The same results were evident for English grades with an estimated 24% increase.

Additional, Stephens *et al.* (2002) and Schlessner (2004), found that participation in sport games had higher cumulative GPAs than those that did not participate, which was fact for girls' and boys' student. Furthermore, the same results were obtained for mathematics grades with sports-participants obtaining a higher percentage score (64%) than non- sport participants

Castelli et al (2007), both looked at the association between physical activities and students' academic attainment in core subjects. Prasad,(2012) described that students who were fitter and had a lower body mass index (BMI) achieved better in reading and mathematics. Furthermore, the findings indicated that physical activities were strongly related with higher grades in English, Mathematics, History and Sciences (Prasad,2012).

Time spent in sports games

Corneliben and pfiefer's (2007) results demonstrated that participating in sports competitions did not have the same beneficial results as regular physical activities. The probability of obtaining higher degrees did not increase with participation in competition; on the other hand, it did not reduce either. the American study by fox et al (2010), looked at how the time spent on sports influenced student's academic achievement. Their findings demonstrated that increased time spent

on sports games were showed to be related with higher academic grades, which was very important for both sexes' American school students (Prasad, 2012).

2.1.4 Sport games in Africa

The study performed in east African countries especially in Kenya have announced that there is evidence that physically active individuals are likely to be attentive in class and hence do well academically. Participation in sports has been communicated in many developing countries particularly among urban populations (Vincent, 2016).

The Kenya is a country having reached considerable success in athletics and rugby, only about half of schools studied given prepared sports that allow student's participation. Provision of sufficient sports facilities both in school and at the community level is key as facilities normally attract student and youth to participate in sports (Vincent, 2016).

Researcher stated that there are different factors that encourage Kenyans to participate in prepared games and physically active learners have better academic grades, like body image, leadership motivation and working together than those who do not involve in sports. Participation in sports also promotes the spirit of fair play (Vincent, 2016).

Hetherington (1910) noted that sports can contribute to student's academic performance. The disagreement by most parents might be of substantial truth concerning the declining pass rates among secondary students, especially in Zimbabwe. Therefore, the study has performed among Zimbabwean secondary students' sport non-participants, told that their negative perception towards playing is related with worrying to fail in academic subjects. These cases, substantiate the evidence that sport participation enhances academic grades in schools (Mugari, 2015).

The Opportunities and Challenges Facing to Learners on sports games

Student needs chances to be physically fit to grow and develop (vincent , 2016). The benefits that physically active learners enjoy appear to be that they become too close to their teachers who exist to be their coaches in different sport disciplines. Moreover, in Africa a sports student is always happening at school. This makes the students attend most lessons as they worry to lose training sessions. Mugari (2015), stated that self-identification as a school athlete is related with a lower rate of announced misbehavior at school. A student who is disciplined enjoys respect and extra favors from teachers.

The Challenges of sports games participants faced at school level

In Zimbabwe, the research indicated that balancing the requests of school work, like home- work, and group work versus training burden can become boring for the student in sport, leaving either the school requests unattended to. Another disadvantage is aggravated by the reality that sport is not examined in most African's schools. Consequently, there is much attention to academic achievement than to sports learning. The researcher postulates that players with disabilities are given to inequity at school level for sport games. The girl student in African countries is not given the same sport chances as the boy student does due to some irregular cultural considerations (Mugari, 2015).

Girls who are active in sports are more given to various annoying situations that rise from hegemonic virility to sport equipment. For example, most African cultures anticipate a girl student to be at home before evening to help parents with duty and are worried to be misused by boys if

they go home tardy. Someone does not observe this is supposed to be unruly and disobedient, different boys who can remain at school at sport practice sessions up to any time. Most schools have no facilitative sport clothes for girls who worry to expose their body parts like thighs, backside and breasts during physical exercises. These challenges eliminate the girl student who has the sport talents (Mugari, 2015).

Furthermore, Vincent (2016), stated that most student underweight stays one of Sub-Saharan African countries because of fundamental problems for enhanced human development, and further, that it is African cultural to perceive that when one is obese (round) that is a sign of wealth and prestige. Though, a sport and nutrition transition, which is governed effectively, is giving to healthy lifestyles and students' academic achievement (Vincent, 2016).

Proposed Remedies to improve sport games at school level

The researcher has proposed solutions from other leaders. Desires schools to demonstrate Youth play, supported by financing partners to expand resources and programs which are established in demonstrating positive effect on young student and varying lives. Indicate schools to use gender responsive pedagogy approaches to hold the needs of both sexes during teaching and learning activities especially in sports. Parents and teachers should be involving to support sport talented students so as to stabilize their studies. Schools should offer priority to sports budgets so that they buy proper sport clothes and equipment and educate more coaches who are also teachers (Mugari, 2015).

2.2 Empirical Literature Review

Carry out this study, different documents from various relevant authors done like dissertation, books, journals, websites and reports written by others on sports games participation and performance of the students were acknowledged in this study to examine the level of student performance in secondary schools at Gatsibo District and to establish the relationship between Sports games participation and students' academic performance in Rwanda.

The study performed in Thailand showed that the levels of concentration in learning activities have increased as a result of participation in sport and play. The students in participating schools' activities were actively was 77% as compared to students in non- participating schools' activities was 48%. The results from the research performed in Liberia, Ghana, Benin and Mali confirmed that participation in sports games has increased school attendance, cognitive, attitudinal, positive behavior and tests performance (Colucci, 2013).

According to UNESCO Final report (2013) the sports games are compulsory of 93% in schools of African's countries, 98% in European's schools, 100% in Oceania, 100% in North America and 91% in Middle East schools. UNESCO Final report also noted that sport games are required at 98.7% in primary schools and 88.4% in secondary schools for overall the countries. UNESCO clarified the situation of sports implementation at global level that was 71% globally, 84% in Europe, 30% in North America, 62% in Africa, 89% in Latin America, 85% in Asia and 75% in Oceania. This implementation differs from school to school in the majority of countries. And also showed that if the sport games are implemented and participated effectively at schools is more related with academic performance. There is a gap between official policy and regulations and actual practice caused by geographical extensive (UNESCO, 2014).

The prevalent factors contributing to the gap are seen in deteriorate of responsibilities for curriculum execution, and choice of schools or districts, loss of time allocation to other competitive selected subjects, lower consequence of school sports games in general and non- examinable status, lack of official assessment, financial problems, deviation of resources out, lack of or insufficient provision of facilities, equipment and teaching materials, deficits in numbers of qualified teaching personnel, non- committed physical activities teachers, negative attitudes towards sports games, important individual such as headmaster mentality, adverse climatic conditions. These factors seen above are barriers to Europe, Africa, Asia, America, Middle East and Oceania schools to implement physical education effectively (UNESCO, 2014).

2.3 Critical Review and Gaps Identification

This section review critically the existing theoretical and empirical literature on sports games participation and the performance of students in secondary schools in Rwanda and divided into critical analysis and the identification of research gap found in existing literature.

2.3.1 Critical review

Many researchers such as Haroona, Q et al. (2018); Erink (2012); and Prasad,V(2012) have been conducted on relationship between sports games and students 'academic performance in schools.

The research gap on this study is absence of relationship between the sport games and students' academic performance in secondary school. Mohammed, Y (2012) stated that sports games deflect time away from the classroom, sports diverted talent from academic study and learners who participated effectively in sports games are more likely to fail academically. And said that also is not easy for the learners to succeed in sports games and in education at the same time. On another hand, showed that other studies supported that participation in sports games enhances learners 'outcomes, motivation, grades and increase their school aspirations. There is encouragement for the further researchers because different findings on this topic were not clear. Haroona, Q et al (2018) showed that school environment, social influence like parents are the factors associated with youth participation in sports games and academic success. And concluded that there is no direct relationship between sports games participation and student performance academically (Haroona, 2018).

2.3.2 Identification of Research gap

Different studies have been undertaken on the direct relationship between sports participation and academic performance of students in secondary schools in Rwanda did not show how the absence of the sport games in teaching/learning activities and how this can influence students 'academic performance in secondary school in Rwanda. Students participation in sports at secondary school, academic performance relation level was analyzed in order to fill this gap in literature.

2.4 Conceptual Framework

This research was conducted in the context of the following conceptual framework. However, the conceptual framework provides explanation in schematic, the relationship between two variables. These are independent variable which is sports games participation and dependent variable which is student academic performance and the intervening variables were suggested to view the MINEDUC guidelines for sports and REB & WDAs' sports programme.

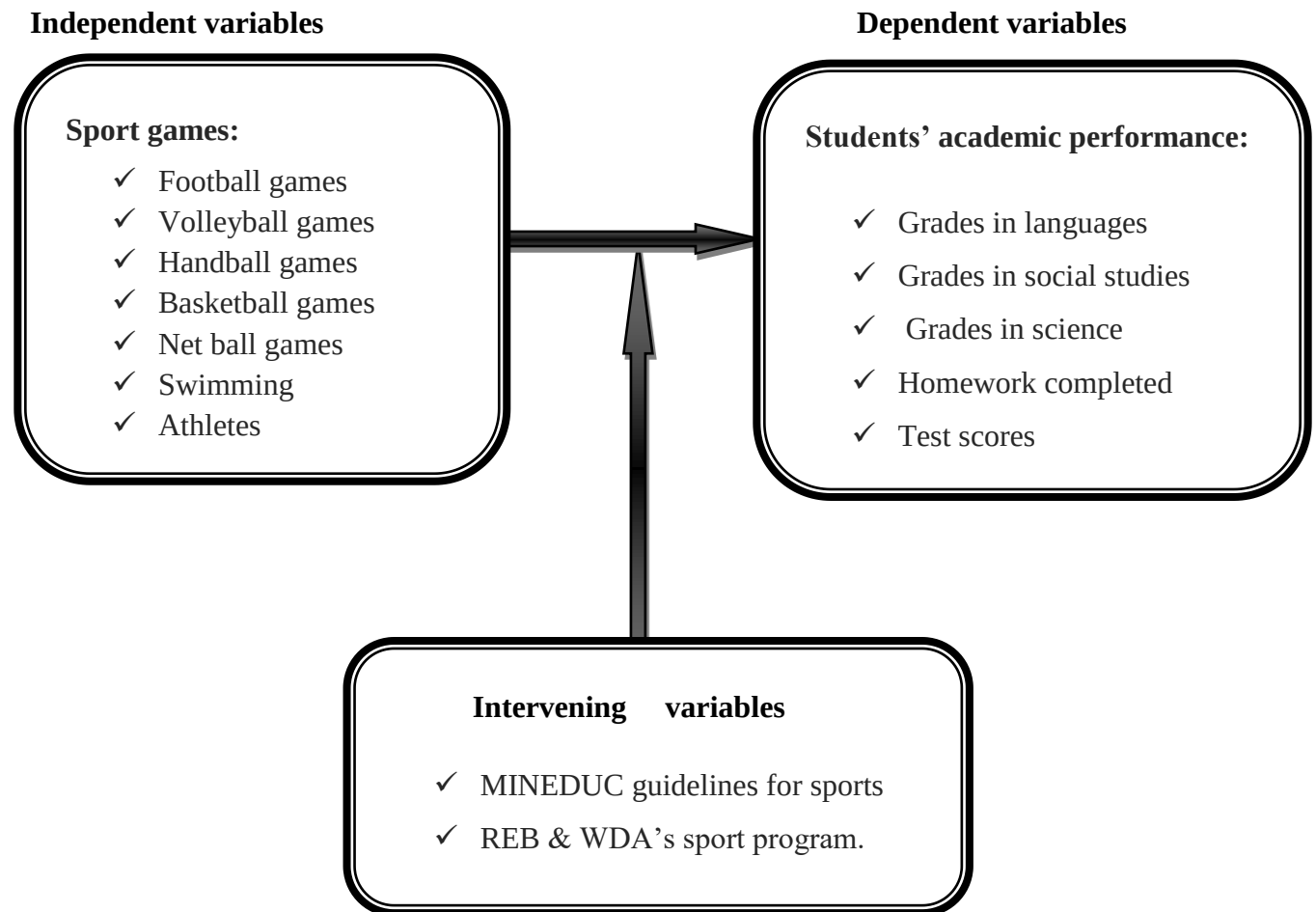


Figure 1: Conceptual framework

The figure 1. Shows the linkage between different sport games participation (cause) and students' performance in secondary school (effect). Accordingly, this research strives to establish the sports games and students' academic performance. This research examined the independent variables which concerns sports games such as: football games, volleyball games, handball games, and basketball games, net ball games, swimming and athletic. The research viewed the dependent variables which are students' academic performance in sciences, languages, social studies, test scores and homework completed. At the end the intervening variables were checked to view the MINEDUC guidelines for sports and REB & WDAs' sports programme.

3.0 Research Methodology

Descriptive research design was used in this study where both qualitative and quantitative approaches were used and also correlation research design was used. The sample was 400 respondents including school head teachers, teachers and students selected by Stratified random and purposive sampling. Structured questionnaire and guided interview were used as research instruments for data collection. The collected data were analyzed by SPSS software and test and re-test was established to indicated the consistence of the research tools and found, the tools were

consistent and the reliability were high averagely 90%. The study results were presented and interpreted in forms of tables.

4.0 Findings

4.1 Introduction

The general objective of this study is to investigate the relationship between the sports games and students' academic performance in selected public secondary school in Gatsibo District- Rwanda.

4.2 Sports games in selected public secondary schools in Rwanda

The study indicated the discretion of sport games participation in selected public secondary schools in Rwanda. To achieve this objective, the researcher required the respondents to indicate the extent to which they agreed with the statements given as; SA (5) for Strongly Agree, A (4) for Agree, N (3) for Neutral, D (2) for Disagree and SD (1) for Strongly Disagree. Several items in the questionnaire were presented to the respondents to rate their availability and the findings are shown in Table 4.1

Table 4. 1Perception on sport game participation

Statement	SD		D		A		N		SA		Mean	Std. Deviation
	F	%	F	%	F	%	F	%	F	%		
Your school have sports infrastructure ,to impact the students' academic performance	4	1.26	7	2.22	99	31.5	9	2.86	196	62.16	4.5117	.79857
Your school have sports equipment's to motivate sports games for academic purpose	11	3.49	25	7.93	79	25.1	3	0.96	197	62.52	4.7526	.73399
You prefer to participate in sports games after class	2	0.63	2	0.63	8	2.53	0	0	303	96.21	4.7247	.75646
Your school administration motivate students to participate in sports games to enhance the students' academic performance	31	9.84	23	7.31	85	26.9	24	7.61	152	48.34	4.8518	.79387
Sports games have positive influence on students' academic performance in your school	24	7.61	11	3.49	76	24.3	9	2.85	195	61.75	.7618	.87959
I get good results in class after participating in sports games	7	2.22	13	4.12	97	30.8	17	5.39	181	57.47	4.9024	.78157
your school participate in different competition to impact students' academic performance	4	1.26	29	9.20	66	20.9	10	3.17	206	65.47	4.7768	.87096

The finding shown in table 4.1 revealed that the majority 93.66% of respondents agreed that the school have sports infrastructure where they said that the most of the schools in Gatsibo district have the infrastructure like play grounds and small number 6.34% of respondents refused that their schools do not have infrastructure for sports games. The results also shown in table 4.1 indicated that schools have sports equipment's to motivate sports games for academic purpose the 87.62% of respondents agreed with the statement saying that schools motivate students through sports games equipment's and the small number 12.38% of respondents show that the school do not

motivate the students through sports games equipment. The third statement were based on participation in sports games where 98.74% of respondents show that the students participate actively in sports games and 1.26 % of respondents indicated that there are no needs of participating in sports games. The findings also shown in the table 4.1 the majority 75.24% of respondents said that the school administration motivate students to participate in sports games to enhance the students' academic performance and the 24.76% of respondents said that the school administration do not motivate the students to participate in sports games to impact students' academic performance.

The findings of the study indicated that Sports games participation have positive influence on students' academic performance in your school the majority 86.05% of respondents show that the sports games participation have the positive impact on students' academic performance in secondary schools in Gatsibo district and 13.95% of respondents said that there is no influence of the sports games participation on students' academic performance. The last points discussion done with the students were how the school involved in the competitions. The majority 86.37% of respondents indicated their views where they agreed to the statement and they accepted that school participate in different competition to impact students' academic performance in Rwanda and the 13.63 % disagreed with the statement.

Table 4.2 Results from the teachers on academic performance

Statements	SD		D		A		N		SA		Mean	Std. D
	F	%	F	%	F	%	F	%	F	%		
The students who involves in sports games participate actively in T/learning activities	2	2.56	4	5.12	15	19.3	9	11.53	48	61.49	4.8021	.78857
The students of secondary schools who participate in sports games perform better than others	3	3.84	5	6.41	8	10.3	1	1.28	61	78.17	4.8525	.79398
The students who participate mostly in sports games are more physically fit compared with others	7	8.97	6	7.69	20	25.7	10	12.82	35	44.82	4.7623	.79641
The students who engage in sports games are getting the best grade in exam compared with other	6	7.69	3	3.84	10	12.8	8	10.25	51	65.42	4.5556	.79384
The students who engage mostly in sports games have also the best grade in language skills	5	6.41	5	6.41	5	26.4	26	33.33	37	47.43	.7414	.87957
The students who engage mostly in sports games are best in performance in science subject	8	10.3	2	2.56	5	6.41	21	26.92	42	53.84	4.8024	.79151
Sports games create a positive attitude towards schooling among the students	5	6.41	4	5.12	6	7.69	20	25.64	43	55.13	4.7767	.88096

The findings shown in table 4.2 indicated the views of respondents' teachers with regard of objective related to academic performance. First question from teachers were how the students who involves in sports games participate actively in T/learning activities, the big number 80.79% of teachers accepted that the students who involves in sports games participate actively in T/learning activities while the 19.21% of respondents disagreed with the statements. Other opinion was on how the students of secondary schools who participate in sports games perform better than others. The 88.47% of respondent's teachers agreed that students who participate in sports games perform better than others while 11.53% of respondent's teachers do not accept that students who participate in sports games perform better than others they said that there are many factor that affect students' academic performance. The findings also revealed that the students who engage in sports games are getting the best grade in exam compared with others and results showed that the majority 70.52% of respondents accepted that the students who engage in sports games are getting the best grade in exam compared with others while the 29.48% of respondent's teachers refused the statements. Last ideas were how Sports games create a positive attitude towards schooling among the students where the 62.82% of respondent's teachers agreed with the statement about Sports games create a positive attitude towards schooling among the students while the 37.18% of respondents did not agree the statement.

4.3 Correlation between sports games participation and students' academic performance

The respondents were asked to give their views on the correlation between sport games participation and students' academic performance in secondary schools in Rwanda.

Table 4. 3 Correlations of Variables

			Sport games participation	students' academic performance
Pearson's coefficient	sports games participation	Correlation Coefficient	1.000	.879*
		Sig. (2-tailed)	.	.000
		N	393	393
	students' academic performance	Correlation Coefficient	.879**	1.000
		Sig. (2-tailed)	.000	.
		N	393	393

The findings in table 4.3 between sport games participation and students' academic performance were correlative with the sports games practice in the secondary schools. The correlation coefficients' $r=0.879$ was produced with p-value of .000 of a two-tailed. Findings in this study showed that positive impact of sports games participation on students' academic performance in secondary schools of Gatsibo District means that findings showed a highly positive relationship

between two variables that sport games participation and students' academic performance in secondary schools in Rwanda.

5.0 Summary of the findings

From the data analysis on the how sports games influence students' academic performance in public secondary school in Gatsibo District-Rwanda.

The finding shown in table 4.5 revealed that the majority 93.66% of respondents agreed that the school have sports infrastructure to impact the students' academic performance where they said that the most of the schools in Gatsibo district have the infrastructure like play grounds.

The results also shown in table 4.4 indicated that schools have sports equipment to motivate sports games for academic purpose the 87.62% of respondents agreed with the statement saying that schools motivate students through sports equipment. The third statement were based on participation in sports games where 98.74% of respondents show that the students participate actively in sports games. The findings also shown in the table 4.4 the majority 75.24% of respondents said that the school administration motivate students to participate in sports to enhance the students' academic performance. The findings shown in table 4.5 indicated the views of respondents' teachers with regard of objectives three where there is a relationship of sports games and students' academic performance. First question from teachers were how the students who involves in sports games participate actively in T/learning activities, the big number 80.79% of teachers accepted that The students who involves in sports games participate actively in T/learning activities. The 88.47% of respondent teachers said that students who participate in sports games perform better than others. Lastly, the findings in table 4.3 between sport games and students' academic performance were correlative with the sports games practice in the secondary schools. The correlation coefficients' $r=0.879$ was produced with p-value of .000 of a two-tailed. Findings in this study showed that positive relationship between sports games and students' academic performance in secondary schools of Gatsibo District.

6.0 Conclusion

The study established the relationship between sports games participation and students' academic performance in secondary school in Rwanda. The correlation analysis between sports participation and student academic performance based on the data of the previous five years since 2013. Results show the correlation between the sports games and students' academic performance in Rwanda. Therefore, there is a strong positive relationship between sports games and students' academic performance in Gatsibo District-Rwanda.

7.0 Recommendations and suggestion for further study

Based on the research findings, the following recommendations and suggestion for further study, were also established. From the discussion of the results, the following recommendations were made:

- i. Local leaders should create opportunities for understanding the needs, aspirations and frustrations of each staff members, parents, and local leaders through mobilization to train all community about sports games towards students' academic performance by training them on the role of sports in everyday life.

- ii. The MINEDUC should support the teachers, students, parents and the non-teaching staff to provide the all resources needed for sports games to enhance the sports games in order to raise the academic performance in Rwanda. This is because sports have been seen to play a major role in improving students' academic performance since it boasts the morale of young children to attend secondary schools
- iii. Head teachers should start being team players instead of being managers by improving their sports skills. This will ensure that there is free flow of information in the schools hence better students' academic performance.
- iv. District should support schools by giving students and teacher's motivation financing as reward in competitions has been seen to play a major role in better students' academic performance.
- v. The ministry of education should organize in service courses for head teachers, parents, teachers on sports enhancements that can lead to improved academic performance in their respective schools.

7.1 Recommendations for Further Research

This study was specifically carried out in Gatsibo District-Rwanda. However, there are many other districts in Rwanda where the same research can be carried out focusing on the impact of sports games and secondary students' academic performance in the country for comparative analysis. This study has exposed many things that could not all be covered. The researcher thus recommends the following possible research areas.

- i. The link between sports games and teaching strategies in secondary schools
- ii. teachers' perception of sports games as channel of learning and teaching to raise the quality and equity of education in Rwanda
- iii. Further studies could examine the relationship between high school sports participation graduation rate in the secondary schools
- iv. Further studies could examine the impact of sports participation on the academic achievement of girls in both private and public school settings.

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