MANAGEMENT PRACTICES OF INJURY RISK IN SPORTS AMONG SECONDARY SCHOOLS IN HOMA-BAY COUNTY, KENYA

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H60/CE/21888/2010

A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE (PHYSICAL EDUCATION), IN THE SCHOOL OF PUBLIC HEALTH AND APPLIED HUMAN SCIENCES OF KENYATTA UNIVERSITY

MAY 2022

DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

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DEDICATION

To my family, my beloved wife Mercy Lynnette, my parents &, and brothers, for their encouragement and support during my Master's programme at Kenyatta University.

ACKNOWLEDGEMENT

The writing of this thesis would have been impossible without the involvement of a number of people and institutions. First, I am grateful to my University Supervisors, Dr. Yasmin Goodwin and Dr. Francis Mundia for their guidance, commitment and support to see me through my Master's studies. I further, thank the Kenyatta University for the opportunity to pursue the Master of Science degree in Physical and Health Education.

Third, I remain indebted to all academic and administrative staff of Kenyatta University for volunteering to provide the requisite information, which has aided the processing of data in this thesis and for their support. I wish to acknowledge the support of academic colleagues, Alex kwaji and Lillian for their positive critique of my work, advice and keeping me company through the academic journey. To all those who supported me in one way or another but have not been mentioned individually, accept my gratitude.

Finally, I thank God for Grace, care and provisions in my entire lifetime including the writing of this thesis.

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ABBREVIATIONS AND ACRONYMS

ASTM: American Society for Testing and Materials

EAP: Emergency Action Plan

EMBOK: Event Risk Management Body of Knowledge.

KSSSA: Kenya Secondary Schools Sports Association

NACSAE: National Operating Committee on Standards in Athletic Equipment

NASPE: National Association for Sport and Physical Education

PPE: Pre-Participation Physical Examination

OPERATIONAL DEFINITION OF TERMS

Administration: These are school heads or persons in charge of the schools.

Coach/Games Instructor: One who co-ordinates players in the fundamentals of a competitive sport and directs team strategy.

Injury: Any physical trauma sustained by a player during sports and games or practices.

Injury prevention practice: Methods for reducing chances of injury and/or eliminating injury

Risk: Chance of something adverse happening. It is measured in terms of likelihood and consequences.

Risk management: Assessment of injury risk and subsequent development of strategies for managing that risk

Sports: Physical activities that involve exertion and skills that are governed by rules and often undertaken competitively.

Sports injury: Physical harm that results from participation in an organized Secondary School sports practice or competition.

ABSTRACT

Sports risk management to a great extent focuses on the physical safety of all sports participants – athletes, coaches/teachers and spectators. Sports encompass a significant part of learning experiences for students in schools. Though sports bestow great health benefits on the participants, could also expose participants to risk of injury with short term or permanent consequences. For this reason, schools are duty-bound to identify potential risks within their sports concomitant with guidance to participants and coaches on how best to contain or manage the risks within an acceptable level. Sports associated risk management in school is crucial to reducing chances of injury. Responsibility for the successful completion of sporting events lies with the teachers and coaches to ensure safety for all participants– players/athletes, officials, spectators and supporting staff. Compared to the developed countries, there is paucity of empirical evidence-based information about the safety of students when participating in sport activities in Kenya, specifically in Homa Bay County. This study sought to assess risk management practices during secondary school sports in Suba. The objectives of the study were to evaluate facilities and equipment as predisposing factors for management risk during sports participation; to examine strategies employed by the coaches and captains in managing the risk of injury to students participating in sports; and to determine the risk management plans that public secondary schools have in place to protect the participants from injury during sports. The study adopted the analytical survey research design. Since the target population of 33 public secondary schools in Homabay County was very small, it used the G-power sampling technique. Data were collected using questionnaires and interview schedule. Based on the responses from the 91% (30) coaches constituting all the schools, the study revealed an evident lack of preparedness against risk of injury in schools. Most of the coaches. 91% (30) had no written injury risk management plans [70.6 % (36)] suggesting that because they lacked time to develop and implement them or there was no perceived need and insufficient budgetary allocations. All 91% (30) coaches agreed that most schools lacked adequate or appropriate sporting facilities. At the same time 69.0% (20) indicated that the sporting facilities were never inspected leaving them in very poor state. This exposed participant to several risks during training and competitions. At 65.5 % (19) majority of the schools coaches confirmed that they did not have physical barriers between spectators and players. At the same time, 58.9% (30) informed that playing fields lacked adequate care, thus exposing participants to accidents. Most playgrounds do not meet the recommended standard for sports activities. The finding of the study also revealed that sport facilities and equipment were in poor state; thus, unsuitable and exposed players to high risk of injuries during trainings and competitions. From these study findings, critical knowledge is a prerequisite in conducting a comprehensive injury risk management challenges in schools. Those involved in sports and physical education in schools, should receive comprehensive training in injury risk management and appropriate management of injuries when they occur. This calls for development of policies and guidelines due to knowledge diversity that exists amongst the coaches.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The increased participation in sporting activities has given rise to sports related risks of injuries (Kralik, 2015). Despite the identification and carrying out of procedural precautions, sports injuries still occur because of the complexity and several areas of uncertainty that are inevitable (Tee, McLaren & Jones, 2019). Sports have actions that increase the risk for injuries (Reid & Ritchie, 2011). These injuries can eventually cause permanent disabilities in students which may affect their future sporting careers (Weiler, Van Mechelen, Fuller & Verhagen, 2016). The Event Management Body of Knowledge (EMBOK) confirms that sports injury risk management is an important risk assessment measure (EMBOK, 2004). This calls for a comprehensive injury risk management procedure in response to risk or accidents should they happen (Hanstad, 2012).

A good injury risk management programme do not cost, it saves on funds and always focuses on provision of safe experiences (Alwan, Kobusingye, Mock, Nugent & Smith, 2017). Most developed nations in the world put emphasis on professionals in the field of sports to undergo basic assessment on risks to ensure compliance with legitimately required obligation of care (Bowdin, Allen, O'Toole, Harris, & McDonnell, 2011). Sports in Africa face several challenges associated with facilities, equipment and curriculum development with policy implementation being a major challenge (Sani, 2019). Appenzeller (2012), the first expert to initiate risk management in sports, defines risk management as consideration of all strategies in overcoming such risks. He, summarizes injury risk management in sports as a proactive channel that systematically identifies and evaluates all possible risks in sports. Subsequently, he strategically organizes these factors into prevention, minimization and prioritizing

responses to mitigate the identified risks. Connaughton, Spengler, & Pittman (2006) clarify injury risk management as minimizing the risk of injury and subsequent liability that comes with participating in sports programmes. It includes analyzing, appraising and gauging a situation with the sole objective of achieving success and eliminating chances of failure (Wojtys, 2017).

The concept of what entails injury risk management is of great value. This is because injuries vary in sporting activities as different sports always emphasize different body parts during activity (Wojtys, 2017). Soccer, and cross country may lead to lower extremity injuries (Ambreen, Ahmed, Farheen, Manzoor, Ishaq, & Umar, 2019). whereas, upper extremity injuries may occur in swimming, or tennis, (Chung & Lark, 2017). In the past, sports managers dealt with risk purely on common sense in either preventing accidents from occurring or reacting in an attempt to recover. Currently, a safety procedure is no longer conducted in a common sense experience, but purely on the fundamental legal concepts (Henke, Luig, Kisser, Rogmans, Kloet, & Schulz, 2010).

Sports has exponential grown in the past decade, this has been intentional with the wild technology advancement this has led to more people today actively participating in sports in all its various forms than ever before (Roy-Davis, Wadey & Evans, 2017). Whereas the increase in participation has benefits for participants, at the same time, the risk could impede actual achievement (Henke et al., 2010). Games instructors should take heed of their legal responsibilities and be knowledgeable about the risks of not adhering to their legal obligations (Singh, 2005). This, therefore, calls for the establishment of injury risk management procedures to be put in place to ensure that policies and plans are made clear to participants (Özbay, 2017). The injury risk

management procedure should be developed to assist in reducing any possible risk of accidents that might occur on the playground or during sporting activities.

Risk factors predisposing participants to injury are classified as either extrinsic or intrinsic. Extrinsic factors rise from sources external to the participant or out of control to the participant; while intrinsic risk factors or person dependent factors include such aspects as age, body mass, and muscle strength, which rarely cause injuries but significantly increase the risk of injury (Appenzeller, 2012). Intrinsic risk factors arise from the player's psychological, physiological, physical, technical, and tactical makeup. Michael Owens' injury in 2006 World Cup is an example of improper technique that led to injury. Environmental factors such as playing surfaces, sport equipment, playing attire, and the weather, all pose serious extrinsic risk of injury to the participant (Kerr, Roos, Schmidt & Marshall, 2012). The legal requirements that comes with injury risk scenarios has therefore, required sports organizers to have in place injury risk management guidelines and procedures (Kerr, Roos, Schmidt & Marshall, 2012).

As a country, Kenya has provided organized sports in secondary schools for several years. The wide spread competition structure starts from grass root level all the way to national school championships (Wasonga 1995). This calls for well-planned and organized injury risk management structure. The Kenya Secondary Schools Sports Association (KSSSA) is the body that governs sports in secondary schools. The first national championship was held in August 1966 that involved just athletics. Football, Volleyball and Netball games were included in 1972. Basketball and Hockey were introduced in 1980. Subsequently, Handball and Rugby were introduced in 1992; and Soccer for girls in 1998. It is evident that participation in sports is on the rise and schools need to have substantial injury risk management plans (Akpata & Gitonga 2002). This

warranties the current study to establish management practices of injury risk in sports among secondary schools in Homabay County Kenya.

1.2 Statement of the Problem

We can broadly say sports is more susceptible to risk of injury. Even the safest sporting activities are not immune to injuries and accidents. The varied types and causes of sports injuries make it very difficult to have an entirely risk-free environment (Van de Smissen, 2003). This demands the establishment of risk management policies, procedures and practices that ensure implementation on the part of the organizing institutions and games masters. The gap of frequent risks in sports can be addressed and resolved in this study. The paucity of information about the implementation of risk management in sports in the local scene. The premise of the current study location is because of the nature of good performance in sports among Secondary Schools and the injuries experienced during the games seasons. This is supposed to determine the risk management practices in secondary school's sports in Homa-Bay County, Kenya.

1.3 Purpose of the Study

The study sought to determine the risk management practices of injury in sports among secondary school sports in Homa-Bay County.

1.4 Objectives of the Study

The objectives of the study were to determine:

(i) Status of facilities and equipment as predisposing factors to risk of injury in sport participation in public secondary schools in Homa-Bay County in Kenya.

(ii) Strategies/measures used by coaches/games instructors to enhance safety and avoidance of injuries among their participants in public secondary school sports in Homa-Bay County in Kenya.

(iii) Injury risk management plans that public secondary schools have in place to protect the participants from harm, injury or even death in Homa-Bay County in Kenya.

1.5 Research Questions

The study was guided by the following research questions:

(i) What are the conditions of sport facilities and equipment in public secondary schools in Suba Sub-County, in Homa-Bay, Kenya with regard to safety?

(ii) What are the strategies used by coaches/games instructors to influence their participants' behavior for enhancing safety and avoiding injury in public secondary schools sports in Suba Sub-County, in Homa-Bay, Kenya?

(iii) What injury risk management plans do public secondary schools in Suba Sub-County of Homa-Bay County in Kenya have in place to protect their students from harm?

1.6 Significance of the Study

The greatest concern in sports is safety (Appenzeller, 2012). The management of injury in sports is not a magic formula for eliminating accidents. It is therefore helpful to reduce the severity of sports accidents. The study provides information and guidance for assisting in formulating appropriate policies for minimizing risk of sports injuries and resulting law suits from the same. In addition, the study provides the basis for future policies regarding injury risk management. This study allows stake-holders to make informed-based decisions on whether to change or maintain current practices. Finally,

the study makes a contribution towards enriching literature in the area of injury risk management in sports and knowledge concerning the management of sports injuries in secondary school sports in Kenya.

1.7 Delimitation of the Study

This study is delimited to;

Homabay County because of the nature of good performance in sports among Secondary Schools and the injuries experienced during the games seasons.

Sports related activities in public secondary schools as opposed to general security and administrative issues.

Only games instructors and selected games captains in public secondary schools.

1.8 Limitation of the Study

This study was limited to Suba-Sub County of Homa-Bay County in Kenya because of the nature of good performance in sports among Secondary Schools and the injuries experienced during the games seasons. Hence, the findings of the study may not be generalized to the broader community or nationwide. Some respondents felt insecure and feared being victimized by their schools. This was alleviated by assuring respondents of total privacy and confidentiality.

1.9 Assumptions of the Study

The study assumed that all the games teachers/coaches/instructors were conversant with the injury risk management practices at their respective schools, and the respondents understood the directions and provided adequate and honest responses.

1.10 Conceptual Framework

The conceptual framework for this study was as shown in Figure 1.1

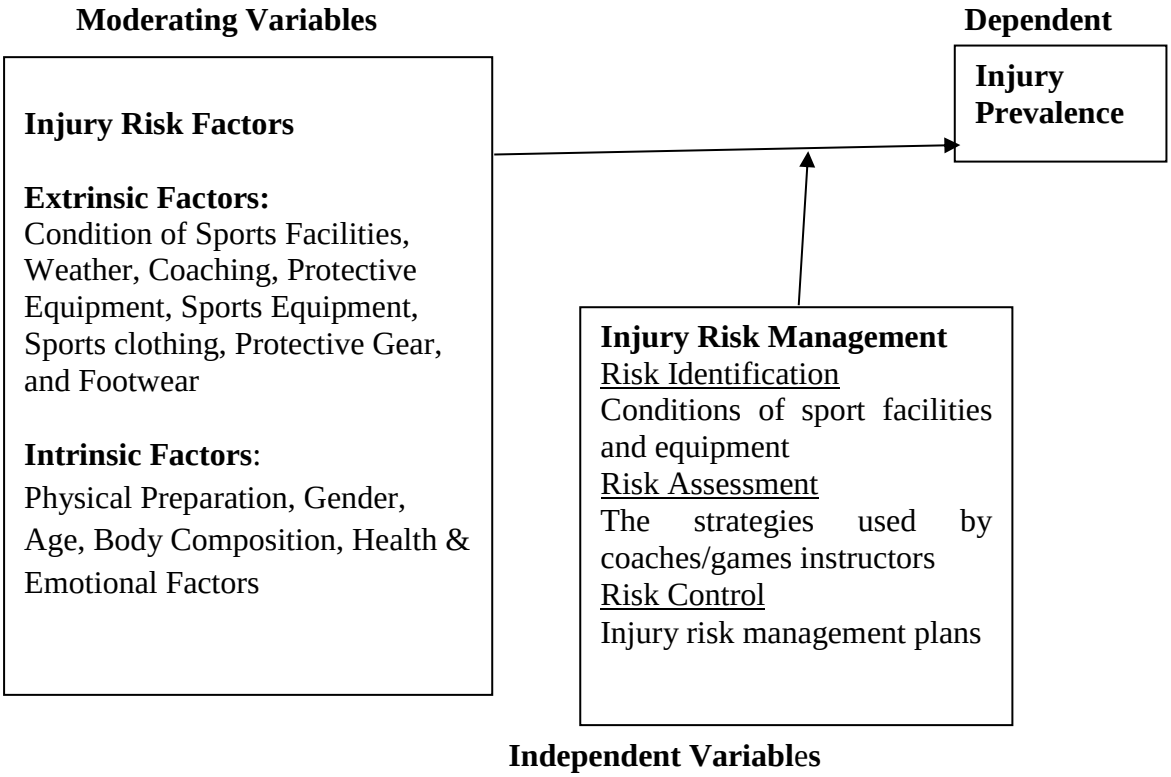

Figure 1.1 Conceptual Framework Model for Injury Risk Management in Sports. The model is researcher's position on the factors involved in injury risk management, derived from literature by Wiese-Bjornstal (2010) and Silvers (2008). Participant's risk of injury is very dynamic and can change frequently. The etiology of injury involves a complex interplay between environmental and human factors. Wiese-Bjornstal (2010) asserted that sports injuries are a consequence of physical, physiological, anatomical and environmental factors. Intrinsic injuries are much harder to monitor. Extrinsic risks occur regardless of the sport level or amount of sports participation. In this study, injury risk management was the dependent variable consisting activities, actions, procedures or steps taken by games instructors to minimize or reduce accidents. The moderating variables included: (i) Risk Identification starting from contextual environment,

identifying all the potential hazards and selecting appropriate actions. It was measured by the extent to which plans were implemented; safety campaigns, instructions given and maintenance carried out by the games instructors, (ii) Risk Assessment was based on identification and determination of the likelihood of potential dangers happening. It called for periodic check-up on the physical structures in the school and (iii) Risk Control was determined by the extent to which safety procedures were implemented in the school such as posting of safety signs. The independent variables included the intrinsic and extrinsic risk factors which were the presumed to be the causes of injury and which have a logical effect on the dependent variable of injury risk management

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction on the Injury Risk Management Concept and its importance

Injury risks always increases with time. The risk of injury over seven games could be substantially higher than the risk of injury over one game. Risk of injury is a function of likelihood and impact (Silvers, 2008). Several activities are performed in sports that call for assessment of risks of injuries (Reid & Ritchie, 2011). This calls for assessing, planning and management of future activities with the objective of handling risks and achieving favorable outcomes (Ammon, 2001). There is an increasing demand for management of risk in sports organizers (O'Toole, 2002). Agrawal (2009) described injury risk management as an act of determining and controlling likelihoods which can be propagated by high negative impact chances for the organization. This includes operations of the organization and decision making processes on taking appropriate actions. Bowdin, et.al (2011) noted that risk management was initially accepted as an informal tool. However, currently it is becoming standard practice as an increasing number of sports planners, especially in the United Kingdom and Australia, formalize and document the processes (Porsanger & Magnussen, 2021).

Injury in sports has always been recognized as a neutral risk associated with participation in any sport. With proper training, supervision and preparation most injuries are preventable (Hanstad, 2012). In developing nations like Kenya, injuries sustained may present greater challenges and consequences than for those encountered in the western world (Porsanger & Magnussen, 2021). Hence injury risk management is important at both, primary and secondary levels (Onywera, Njororai, Mwisukha, 2003). The proposed study sought to establish the current risk management plans that are available in secondary schools in Suba-Sub County.

2.2 Sports Facilities and Equipment as Predisposing Factors to Injuries

Sports facilities and equipment are the indispensable hardware in sports. Their contribution towards risk of injury manifests themselves in two ways – the risk arising from damaged sports equipment and facilities; and the potential danger to people caused by poor design and unreasonable operations. Availability of enough facilities, equipment and maintenance can help in influencing attitudes and facilitating programmes success (Goldblatt, 2004)

Good construction of sports facilities and having appropriate equipment and routine maintenance of the play grounds can help prevent many of the injuries and accidents (Kent & Turner, 2002). Goldblatt (2004) advocated availability of good facilities and equipment, especially indoor facilities during wet seasons and protective equipment during high risk activities to enhance the safety and protection of participants. by highlighting the legal requirement for cyclists to wear helmets in many countries, Grayson (2001) underscores the significance of protective and safety equipment.

The right equipment not only minimizes the risk of injury, but also enhances a more enjoyable experience (Dwyer & Fredline, 2008). The equipment should meet acceptable standards throughout their useable lifetime. This could be made possible by implementing appropriate inspection and maintenance procedures (Fuller & Drawer, 2005). Lack of sufficient facilities and equipment escalates the decline in sports participation and raises chances of injury to participants (Pule, 2007). Highly populated schools with higher enrolment tend to over use the school sports structures (Grayson, 2001)**.** Schools should have in place safe play grounds areas (Haddock, 2003).

In places where land is scarce or terrain is poor, alternatives should be explored to gain access to play grounds. A gentle sloping football pitch is considered less risky as

compared to a sharply sloping playground (Appenzeller, 2012). A study in Rwanda indicated that some schools play grounds were muddy and uneven; hence, exposed participants to several risks of injury which, in turn, discouraged them from participation in sports (Grafwegi, 2010).

Dragoo and Braun (2010) concluded that factors such as surface type and condition play a very important role in player's being exposed to injuries. School infrastructure also plays a significant role in the strategic injury risk management practice in sports. Inadequate playgrounds lead to limited infrastructures. Thus, elevating the risk of sports injuries. Playing fields that are open to the public should be regularly inspected for dangerous objects prior to use. (Condanin, Luisot & Naim, 2006).

Mellor &Veno, (2002), the array of danger varies widely across sports, like the effects of chemicals used to purify water in a swimming pool to dents in the soccer field and consequently, some risks will only exist at certain events. Should injury arise, medical facilities, first aid, treatment and access to hospital become significant factors in minimizing the extent of injury (Grayson, 2001). Any sporting activity has the potential to realize its meaning and objective when it is developed in a safe environment with the required equipment and facilities. (Pule, 2007). In the context of predisposing factors in sports injuries, the study sought to assess the status of facilities and equipment in the secondary schools in Suba Sub County of Homa Bay county Kenya.

2.3 Causes of Risks and Injuries in Sports

Injury to any part of the body can occur during sports (Hanstad, 2012). The causes can be divided into two categories - either intrinsic that arises from an athlete (personal actions, inactions and personal makeup) or extrinsic that arises from outside the control

of athlete (risk factor external to the body). Examples of intrinsic risk factors inadequate or improper physical conditioning, lack of adherence to principles of training, poor execution of skills, inadequate rehabilitation of previous injury and lack of proper sleep (Sattler, 2011). Extrinsic risk factors include coaching mistakes, environmental factors of heat, cold, altitude and air pollution, safety hazards arising from poorly maintained facilities, poor state of equipment and ill-fitting or improper playing kit and footwear. The cause of an injury in sports varies according to the activity. Rules of the game do help to control accidents and injuries. In most cases, a sports injury is either the result of contact with another player, or contact with the ground. (Brown 2003).

It is important to plan for unforeseen occurrences (Kerr, Roos, Schmidt & Marshall, 2012). Thus, injury risk management may be enmeshed within a broader suite of strategies aimed at optimizing sports (Peters, & Pikkemaat, 2005). Organizing sports for participants with varied differences poses an enormous burden for instructors in trying to avoid injury. Hence, the need and justification for injury risk management strategies. Without these, the safety of participants is at risk (Kerr, Roos, Schmidt & Marshall, 2012). Most sports injuries are preventable; they are not "accidents." This calls for recognition of injury patterns and understanding the risks of injury associated with each sport. Hence, improving equipment and preparing the player better are of great value in preventing injuries (Henke, Luig, Kisser, Rogmans, Kloet, & Schulz, 2010). Lack of proper supervision increases the chances of injury in sports (Beach, 2003).

Among the primary objectives of the Ministry of Education in Kenya is bring about full participation of school children in sports both, at primary and secondary level. In effect, sports have been made an integral component of the school's curricula across the

country. However, the downside of increased student participation in sports has always been the risk of increased injuries.

2.4 Safety and Avoidance of Injury Risk Management Plans in Sports

Sports officials and games instructors should have a wide knowledge commensurate with the injury risks involved in sports. (Hanstad, 2012). In view of greater participation in sports than ever before, this becomes imperative (O'Toole, 2002)., It is required that a qualified sports health care administrative system be established in schools to develop a comprehensive injury risk management plan. This enhances coordination and efficiency in the way coaches and administrators ensure the provision of appropriate medical care to all participants (Kent, & Turner, 2002). A certified team physician should ultimately be included in the team to be solely responsible for medical decisions (Van Deventer, 2005).

It is important to assess the player's readiness for participation through the pre-participation physical examination (PPE). This is a vital procedure because players who are not physically or mentally prepared to play are usually vulnerable to injuries. In addition to PPE, it is also important to develop a comprehensive emergency action plan (EAP) to ensure that appropriate action is taken immediately in the event of a sports accident (Bowdin et al, 2011). This can be done through the input from the health-care team, administrators, and coaches. The EAP should factor in responses to medical emergencies involving players and coaches (Leopkey and Parent, 2009). Emergency action plan is significant in ensuring prompt and appropriate response to any actual injury so as to prevent condition from getting worse and to promote full recovery thus, reducing the chances of re-injury. Hanstad, (2012). Advocate prior establishment of procedures and protocols to ensure protection of initial injury, prevention from further injury and timely decision-making with regard to return-to-play. There should be

immediate treatment of injury and appropriate referrals. Leopkey & Parent, (2009) observed that immediate response and treatment can mean the difference between life and death.

It is crucial to fully understand the issue of coaches' legal duties. It is important to know what duties coaches are expected to perform in sports since they have direct control over the participants and are always present at the time of injury. In cases of unfortunate accident on fields of play, the coach is likely to be blamed (Guskiewic and Pachman, 2010). Since injury in sports can never be fully eliminated, coaches must put greater effort in reducing risks (Tee, McLaren & Jones, 2019). They must be equipped with vast knowledge on how to prevent and manage these situations (Kralik, 2015). It is the responsibility of the coach to supervise, and provide proper instruction, plan for the activity and enforce rules and regulations.

The proper execution of these duties could reduce the severity of the injury and cases of legal liability (Tee, McLaren & Jones, 2019). Coaches should be conversant with their legal duties towards athletes and should continually up-date their knowledge. The process of preventing risk of sports injuries requires knowledge so as to give insight in the formulation of plans for their prevention. This study sought to assess practices carried out by coaches/games masters/mistress in avoiding injury or harm in secondary school sports in the county

2.4 Summary of Literature Review

Sports injuries represent the most direct adverse consequence of sports activities. Assessing the risk factors contributing to injury in sports is critical in the enhancement of effective injury prevention strategies. Risk of injury in sports therefore, results from complex interactions among multiple risk factors. Available literature has put in place

the perspectives of sports managers and other stakeholders. However, to a large extent, the participants in sports have been overlooked. In view of the glaring paucity of documented information in Kenya, anecdotal observation suggests that this is particularly the situation among participants in Kenyan secondary school sports.

In conclusion, causes of sports injuries vary greatly. Poor training practices or improper outfit can cause injuries. Injuries occur at all levels of sports from beginners to elite levels. Sports injuries are unique hence the need for on-going accurate information to target specific interventions relevant to the type of risk. It is important for coaches to understand basic concepts and determine how best to plan for handling these risks. The strategies of injury risk management should serve as a means of minimizing injuries in sports without changing the fundamental nature of the activity itself. This is imperative in today's sports to protect participants from sustaining injuries. Therefore,zx the current study assessed injury risk management practices in secondary schools in Suba in the first step towards building appropriate injury risk management policies.

CHAPTER THREE: METHODOLOGY

3.1 Research Design

This study used a descriptive and analytical survey research design. The descriptive survey research design helps in collecting information about peoples' opinions, attitudes habits or any other social issues or to establish the current state of affair. Koul (2004) advices that this design should be chosen when one wants to study issues or variables that the researcher cannot control.

3.2 Measurement of Variables

The study's independent variable was injury risk management. It included risk identification, risk assessment and risk control, the moderating variables were injury risk factors (extrinsic and intrinsic factors). Dependent variable was injury prevalence.

3.3 Study Location

This study was conducted in public secondary schools in Suba District of Homa Bay County, Kenya. The study location was ideal because of the continued high sports performance among the Kenya Private and Public Secondary Schools Sports. Suba district lies on the latitude of -1.17^0 and longitude of 34.73^0. According to the Suba-Sub county student enrolment data 2014-2015, (Suba-Sub County Director of Education, 2014) the student population was 5,963 in public secondary schools.

3.4 Target population

The population for this study consisted of games masters/mistresses, Physical Education teachers and games captains from all public secondary schools in Suba Sub County of Homa Bay County in Kenya. There are 33 public secondary schools in Suba Sub County, with a total of 33 games masters/ mistresses/ teachers in charge of games and sports in these schools, and a total of 59 games captains from the schools

(PesaCheck), 2019). The instructors in charge of games and sports, and all games captains constituted the population of this study. Games instructors were chosen because they are in charge of sports and games in the school and are also implementers of sports policies at school level. The games captains were chosen because they are representatives of the student population.

Table 3.1: Schools' Population

School Type	Number of Schools	Games Masters	Games captains		Totals
			Boys	Girls	
Boys Sec, Schools	3	3	3	-	06
Girls Sec, Schools	4	4	-	4	08
Mixed Gender Sec, Sch	26	26	26	26	78
TOTALS	33	33	29	30	92

Source: Suba Sub-County Education Office, 2020

3.5.1: Inclusion Criteria

The respondents for this study was drawn from all public secondary schools. All the schools have games instructors/tutors and games captains who needed to have had at least 6-month of existence in service delivery in the same capacity of either a games teacher/tutor or games captain were included in the study.

3.5.2: Exclusion Criteria

Any games teacher/instructors/tutor and games captains with less than 6 months of existence in service delivery in the same capacity of either a games teacher/tutor or games captain were excluded in the study.

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3.6 Sample Size and Sampling Techniques

The study used the Cochran (1977) formula was used in determining the sample size for this study.

$$n0 = \frac{z^2 pq}{e^2}$$

this is where n0 is the sample size, Z-value is 1.96 per the Z table as the confidence level for the study was 95 %, e is the margin of error (5%), p is the (approximation) proportion of the population (50%) and q is 1 – p (1 - 0.5)

Therefore, we can say using the above guidance;

(n0) = ((1.96)2 (0.5) (0.5)) / (0.05)2 = 384. the Cochran Formula for sample size calculation was used to adjust the sample size below.

$$n = \frac{n0}{1 + \frac{(n0 - 1)}{N}}$$

The target population for the study was 92 where n0 is Cochran's sample size, N is the population and n is the new adjusted sample size. Therefore;

Adjusted sample size (n) = 384/ (1+(384/92)) =73 respondents. The researcher added 19 more questionnaires to cater for the withdrawals and fulfill the entire target population thus having a final sample size of 92 respondents

3.7 Research Instruments

The data was collected using questionnaires which are widely accepted tool for data collection. According to Mugenda & Mugenda (2009), questionnaires are used as data

collection instruments because though they are cheap, they gather a large amount of wide ranging data that can be well designed and organized. Orodho (2003) adds that questionnaires are simple, clear and self-administering and can be made anonymous and since they are tabulated in a format with minimal chances for interviewer bias. Questionnaires were used since they can aid in gathering data about observable phenomena such as inner opinions, values, and interest (Koul, 2004).

The adapted Questionnaire for this study was in two parts. Part A of the questionnaire gathered background information about the respondents with respect to gender and school. Part B was used to identify injury risk management strategies in public secondary schools.

3.8 Pre-Testing

The researcher pre-tested the questionnaire by administering it to teachers and students from three schools which had not been selected as participants in the study. This was done to analyze clarity of question wording, to remove ambiguity and to ascertain the validity and reliability of the research tool. The pre-test also helped train the research assistants on the questionnaire and the way data needed to be collected.

3.9 Validity of the Instruments

It is basically the ability of the instruments to ascertain what they are intended to measure (Creswell, 2014). Orodho (2009) describes validity as the accuracy to which several measures of a concept can accurately gauge that concept. For the purpose of this study, Lecturers from the Departments the Physical Education and Exercise Science and Recreation Management and Leisure Studies at Kenyatta University were used to ascertain face and content validity of the questionnaire. They individually assessed the questionnaires and provided feedback to the researcher who made

amendment on format of the questionnaires and content in general. Their suggestions were factored in the final questionnaires, prior to the onset of data collection. Validity in the quantitative data was ensured by organizing the items in the interview schedule from simple to complex, as suggested by Creswell (2014).

3.10 Reliability of Instrument

Orodho (2009) explains reliability as capability of an instrument to produce very similar results over a number of several repeated trials. The instruments reliability was tested by assessing the scale's internal consistency by using Cronbach's alpha. According to (Kothari, 2004), a good questionnaire has internal consistency if the Cronbach alpha coefficient of a scale is above 0.7. The rule of thumb for explaining internal consistency using Cronbach's alpha as explained by Donald, Kombo, Delno and Tromp (2006) who gauge Cronbach's Coefficient Alpha of $< .50$ as not ideal reliability, $.50 \leq \alpha < .60$ as poor reliability, $0.51 \leq \alpha < .60$ as acceptable reliability, $0.7 \leq \alpha < 0.9$ as very good reliability, $\alpha \geq 0.90$ as excellent reliability. Hence, reliability of .733 implied that the questionnaire had very good reliability. On the hand, reliability for interview schedule documents was ascertained by ensuring that question items in the interview schedule were not ambiguous and were clear enough, the steps for interview never varied and were standardized hence participants were not nervous, or even guessed the response which was ensured by probing (Creswell, 2014; Orodho,2009).

3.11 Data Collection Techniques and Procedures

This study was conducted after obtaining an introductory letter from the Board of Post Graduate Studies, of Kenyatta University (Appendix I). This was followed by permission to conduct research granted from the National Council for Science,

Technology and Innovation (NACOSTI) (Appendix H) The tool for collecting information was a combined questionnaire (open and closed) that was tabulated by the researcher. Familiarization visits were made to the schools to introduce the purpose and nature of study and seek permission from the principals (Appendix E) as well as the sports teachers. The visits were necessary because they gave the researcher an opportunity to know the school's schedules. The Principal from each targeted school was contacted in person or by phone to seek permission to access the respective games captains and games instructors and to arrange schedules for data collection visits. The researcher administered questionnaires to games instructors and games captains in person. The questionnaires were then immediately collected after completion by the participants. The observation guide/schedule was completed during the visit to each school.

3.12 Data Analysis & Presentation

The data gathered for the study were analyzed using Statistical Package for the Social Sciences (SPSS version 20.0) it was summarized using the descriptive statistics of percentages and frequency responses.

Table 3.2: Data Analysis Matrix

Objective	Dependent Variable	Independent Variable	Statistics
1. Facilities and equipment as predisposing factors to risk of injury in sport participation in public secondary schools in Suba	Nature and state of facilities and equipment	Risk of injury in sports participation	Frequencies

2. The strategies/measures used by coaches/games instructors to enhance safety and avoidance of injuries among their participants	Strategies/measures	Risk of injury in sports participation	Frequencies /
3. The injury risk management plans that public secondary schools have in place to protect the	Injury risk management plans	Risk of injury in sports participation	Frequencies /

The best risk management decisions will depend on each sport circumstances and the management is an ongoing process. There are no fixed rules, concepts and approaches. The fundamental stage in injury risk management do not change but the sports organization circumstances change.

3.13 Logistical and Ethical Consideration

An introductory letter was sought from the Graduate School of Kenyatta University (Appendix I). Another introductory letter from the researcher was sent to all secondary schools in the Sub County of Suba. (Appendix A). The Sub-County Education Officer was informed in writing of the study before proceeding to the field to collect data. The target schools were contacted for permission to collect data (Appendix B). The informed consent was sought respondents. (Appendix D). The research permit was obtained from National Commission for Science and Technology and Innovation (NACOSTI). (Appendix H) Carrying out observation of sports facilities and equipment was a sensitive venture that could reveal inadequacies in secondary schools under study and the researcher intentions could have been be misconstrued for "inspection". In order to avoid any suspicion and to establish the true reason for the study, the participants were appraised fully about the study. They were fully briefed of the nature, purpose and

objectives of data collection of the research. Confidentiality and anonymity were respondents identified with coded names only. No names of the participants were written while those who were interviewed were protected as they were masked, pseudonyms names were used. Respondents were assured that the information given would be used only for the study and would be destroyed upon completion of the study.

CHAPTER FOUR: RESULTS AND FINDINGS

4.1 Introduction

This chapter presents the results and interpretation of the study findings. The chapter has been sub-divided into sections and subsections in line with study objectives. The demographic information is also presented.

4.2 Objectives of the Study and Research Questions

The following objectives of the study were used to guide the data analysis and their interpretation:

1. Determination of facilities and equipment as predisposing factors to risk of injury in sports participation in public secondary schools in Suba Sub-County of Homa-Bay County in Kenya.
2. Determination of the strategies/measures used by coaches/games instructors to enhance safety and avoidance of injuries among their participants in public secondary school sports in Suba-sub County.
3. Determination of the injury risk management plans put in place by public secondary schools in Suba Sub-County of Homa-County in Kenya to protect their students from injury

Thus, the study sought to answer the following research questions to address the objectives of the study:

1. What is the condition of sport facilities and equipment in public secondary schools in Suba Sub-County, in Homa-Bay Kenya with regard to safety?
2. What are the strategies used by coaches/games instructors influencing their participants' behavior for enhancing safety and for avoiding injury or harm in public secondary schools sports in Suba Sub-County, in Homa-Bay, Kenya?

3. What injury risk management plans do public secondary schools in Suba Sub-County of Homa-Bay County in Kenya have in place to protect their students from harm?

4.2.1 Questionnaire Return Rate

Table 4.1 shows the summary of return rate of questionnaires from the respondents. The information indicates that the questionnaires return rate was high (Games instructor/coaches 87%; Sports Captains 89%) and thus, adequate number of cases for the study.

Table 4.1: Questionnaire return rate

Respondents	Questionnaires administered	Questionnaires returned	Return rate (%)
Games Instructor/Coach	33	29	87.9
Sports Captains	59	51	89.8
Total	92	80	87.0

As shown in Table 4.1, out of 33 questionnaires administered to the games instructors/coaches, 29 of them were returned for data analysis thus translating to 87.9% response rate. On the same note, of the 59 captains who received the questionnaires, 89.8 % (51) of the school sports captains' questionnaires were returned. Overall, 87.0 % (80) of all the questionnaires were returned for analysis. According to Oso *et al* (2009), the acceptable response rate for survey questionnaire administered personally by the researcher is achieved when the questionnaire return rate is above 80%. Hence; the 80 87.0% (80) return rate for questionnaires personally administered by the

investigator was considered adequate though 13% of both groups returned the questionnaire blank.

4.2.2 Respondents' Characteristics

As shown in Table 4.2, 79.3% (23) of the respondents were males and only 60.7% (6) of them were females. This reveals remarkable gender disparity among the Instructors. The findings show that majority 58.6% (17) of the instructors/coaches who participated in the study were above forty years of age, with 44.8% (13) of them in the 41- 50 age group and 13.8% (4) were in the above 50 age group. Only 17.2% (15) of them were under 31 years of age, while 24.1% (7) of them were in the 31-40 year's age bracket.

Table 4.2: Games Instructors' Bio-Data (n=29)

Respondents	**N**	**%**
Gender		
Male	23	79.3
Female	6	20.7
Total	29	100.0
Age (Years)		
Below 31 Years	5	17.2
31- 40	7	24.1
41- 50	13	44.8
Above 50	4	13.8
Total	29	100.0
Academic qualification		
Masters	5	17.2
Bachelors	20	69.0
Diploma	4	13.8
Total	29	100
Work experience (Years)		
1-5	5	17.2
6-10	11	37.9
Above 10 Years	13	44.8

Total	29	100.0

One potential source of knowledge for a coach is his/her educational background. It was established that although most 69.0% (12) instructors had only a bachelors level of education, a respectable proportion of 17.2% (5) were qualified up to master's level. Diploma holders were in the minority 13.8% (4) in public secondary schools within Suba Sub County.

On the aspect of experience, it was established that, 44.8% (13) had more than 10 years' experience as sports/games instructors, 17.2% (5) had between 1 to 5 years' experience as coach/instructor; and 37.9% (11) had between 6 to 10 years' experience as secondary school's instructors/coaches in Suba sub-county.

As regards games captains' characteristics exploratory data analysis presented in Table 4.3, revealed that more than half 52.9% (27) of the games captains in the study were males as opposed to the 47.1% (24) women.

Table 4.3: School games captain's characteristics (n=51)

Respondents	**N**	**%**
Gender		
Female	24	47.1
Male	27	52.9
Total	51	100.0
Age (Years)		
Below 16 years	9	17.6
16- 21 years	37	72.5
Above21 years	5	9.8
Total	51	100.0
Class		
Form 1	6	11.8

Form 2	14	27.5
Form 3	21	41.2
Form 4	11	21.6
Total	51	100
Type of School		
Boys school	12	23.5
Girls school	11	21.7
Mixed school	28	54.9
Total	51	100

Distribution of the participating games captains based on the type of school revealed that 54.9% (28) were from mixed secondary schools, 21.7% (11) were from girls' only schools and 23.5% (12) were from boys' only schools. The age distribution of the captains showed that 72.5% (37) of them were in the 16-21 years' group, 17.6% (9) were aged below 16 years and 9.8% (5) were above 21 years. The breakdown of the captains by class level revealed that 41.2% (21) were in form three and 11.8% (6) were in form one. Exploring the ages of the school games captains, the study revealed that 72.5% (37), of them were in the age group of 16-21 years, 17.6% (9) were aged below 16 years and only 9.8% (5) were above 21 years. At the same time, it was established that while the majority of the games captains 41.2% (21) were form three students, those in form one were the least 11.8% (6) in terms of representation as games captains in the public secondary schools within Suba sub-county.

4.3 Facilities and Equipment as Predisposing Injury Risk Factors

The first objective of the study was to determine facilities and equipment as predisposing injury risk factors during sports participation in public secondary schools in Suba Sub-County of Homa-Bay County in Kenya. Both the views of the school games captains and games instructors/coaches were sought through questionnaires to

determine whether the facilities and the equipment constituted predisposition to risk of injury.

4.3.1 Games Captains' Views on Predisposing Injury Risk Factors

As indicated in Table 4.4, the findings of the study show that most 70.6% (36) schools do not have adequate and appropriate sports grounds/fields which expose the student players/athletes in sports to risk of injuries. More than a third 37.3% (19) of the games captains who took part in the study strongly agreed that equipment was often inappropriately used in their schools.

Table 4.4 Games Captains' Perception on Status of Predisposing Injury Risk Factors

tem (n=51)	SA	A	J	D	SD
The playing ground is very ragged and uneven, usually results into falling down of the players.	17(33.3%)	19(37.3%)	5(9.8%)	4(7.8%)	7(13.7%)
The players in our school do not have appropriate shoes and other attires for sports.	18(35.3%)	16(31.4%)	4(7.8%)	6(11.8%)	7(13.7%)
The playground is not accurately measured and lacks legible marks.	17(33.3%)	10(19.6%)	8(15.7%)	11(21.6%)	6(11.8%)
Weather conditions make our pitch to be more dangerous resulting into frequent accidents and injuries.	19(37.3)	11(21.6%)	3(5.9%)	9(17.6%)	9(17.6%)
Inadequate training and lack of sufficient practice expose many sports persons to serious danger of injuries.	13(25.%)	15(29.4%)	7(13.7%)	9(17.6%)	5 (9.8%)

The first aid kit and other safety precautionary appliances are never in place during a sporting event.	11(21.6%)	13(25.5%	7(13.7%	11(21.6%)	10(19.6%)
There are trained medical personnel always on standby during a sporting event in the school.	21(41.2%	7 (13.7%)	8(15.7%)	12(23.5%)	3 (5.9%)
Use of inappropriate equipment in sport is always the order of the day.	19(37.3%)	17(33.3%)	9(17.6%)	6(11.8%)	0 (0.0%)
The pitch and running track in our school are well fenced keeping the players safe distance from the spectators.	8(15.7%)	10(19.6%)	7(13.7%)	12(23.5%)	4(27.5%)
Most sporting equipment is well maintained and serviced regularly.	19(37.3%)	11(21.6%)	5 (9.8%)	8(15.7%)	8(15.7%)

Key: SA-strongly agree, A-agree, N-neutral, and D-disagree and SD-strongly disagree.

Some games captains 33.3% (17) revealed that their playgrounds were ragged and uneven exposing players to risk of frequent falls. Only 13.7% (7) of the games captains felt that their playgrounds were leveled and suitable for sports. It was revealed by 58.9 % (30) games captains that rainy conditions made their sports' pitches dangerous for play. Only 35.2% (18) of the games captains felt that their pitches were not affected by weather. The finding also shows that 58.9% (30) of the schools playgrounds are muddy and rough not only increasing risk of injury and harm to sports participants, but also discouraging players from participation in sports. At the same time, 51.0% (26) of the captains reported that their playing fields were not adequately fenced off to provide safe distance from the spectators

In addition, 42.9% (24) of the captains revealed that their playgrounds were not suitably measured and lacked visible markings to show their boundaries. It was also evident

from captains' report that the sports facilities, apparatus and equipment were grossly inadequate in most of the schools within the sub-county. As reported by two thirds 66.7% (34) of the games captains, many of their football players participated in athletics in bare-feet and sometimes topless. At 70.6% (36), the majority of the games captains indicated that inappropriate use of sports equipment in their schools was the normal practice during training or competitions; with 58.9% (30) of them strongly asserting that sports equipment in public secondary schools in Suba sub-County was not maintained or serviced regularly.

Although 42% (21) of the schools had first aid kit, at 47.1% (24), a majority of them did not have first aid kit and other safety apparatus put in place during sporting events; nor were there any trained personnel for dealing with emergencies. As a result, 54.9% (28) of the games captain refuted the study assertion that there was a trained medical person always on standby during most of the sporting events in the schools. However, 29.4% (15) of the games captains agreed that their schools organized for trained a medical person to be on the standby during sport competitions, but 15.7% (8) of the respondents were non-committal or not conversant about this matter. It was noted that apart from sports facilities and equipment, insufficient trainings also contributed to the risks of harm during sports training or competitions with a 54.4%. Only 27.4 % (14) captains felt that their schools provided appropriate and adequate training for their teams before competitions.

4.3.2: Sports' Instructors'/Coaches' Views on Sports Facilities and Equipment in their Schools.

Table 4.5 shows the Instructors' views on factors predisposing players/athletes to risk of injury. Like the students, the sports instructors agreed that the sports facilities and equipment in schools do not meet the minimum standard requirements for sporting activities.

Table 4.5: Instructors 'Perception on Status of Predisposing Injury Risk Factors (n = 29)

Item	SA	A	U	D	SD
All participants wear appropriate personal protective equipment during sports.	5 (17.2%)	3(10.3%)	2(6.9%)	6(20.7%)	13(44.8%)
Emergency procedures are in place during sports	7 (24.1%)	4(13.8%)	0 (0.0%)	8(27.6%)	10(34.5%)
The First/Aid kit is present and accessible before each game/ practices.	11(37.9%)	7(24.1%)	3 (10.3%)	5(17.2%)	3 (10.3%)
Sports grounds and facilities are inspected and maintained regularly.	5 (17.2%)	6(20.7%)	4 (13.8%)	8(27.6%)	6 (20.7%)
The sports equipment provided by the school is in good condition and safe to use.	3 (10.3%)	4(13.8%)	2(6.9%)	8(27.6%)	12(41.4%)
There are physical barriers between spectators and sport activities.	5 (17.2%)	3(10.3%)	2(6.9%)	6(20.7%)	13(44.8%)
Steps are always taken to ensure spectators do not put participants at risk.	8 (27.6%)	4(13.8%)	3 (10.3%)	4(13.8%)	10(34.5%)
There is no appropriate first aid equipment on hand during sports practice or competition activities.	7 (24.1%)	5(17.2%)	2 (6.9%)	7(24.1%)	8 (27.6%)

Key: SA-strongly agree, A-agree, N-neutral, and D-disagree and SD-strongly disagree.

Whereas only 24.1% (7) of the instructors agreed that the sports equipment provided by the schools is in good condition and safe to use, at 69% (20) a significant majority responded that schools do not provide sports facilities that are in good condition and risk free.

On the other hand, it was established that about 20.7% (6) of the instructors who were surveyed strongly asserted that their playground was regularly inspected and maintained.

Although 62.1% (18) of the instructors asserted that emergency procedures are in place during sports competitions in their schools, at 37.9% (11) a considerable proportion felt that there were no emergency measures put in place during sports training or competitions.

As revealed by 65.5% (19) of the instructors, many schools do not have physical barriers between spectators and sport persons at their playgrounds during competitions, further exposing the participants to risk of being injured or hurt by the spectators. Nonetheless, 41.4% (12) of the instructors or coaches stated that steps are always taken in schools during sports competitions to ensure that spectators do not put participants at risk. In fact, 17.2% (5) of the instructors strongly asserted that their schools had appropriate barriers on playgrounds to reduce the risk of injury or harm of sports persons during the event.

At 51.7% (15) a majority of instructors suggested that their schools have appropriate first aid equipment, and another group comprising 41.3% (9) insisted that their schools lacked first aid kits. It was also established that most of the schools in Suba sub-county do not provide their students with appropriate sports attire. It was confirmed by 65.5% (19) of the instructors/coaches that most sports participants in their schools do not wear

appropriate personal protective equipment when in training nor during sports competition because the school did not have the sports gear.

4.4 Injury Risk Management Strategies Used by the Coaches/Instructors to Avoid Injury in Public Secondary Schools.

The next objective of the study was to determine the strategies used by coaches or instructors in preventing injury or harm to participants during sports competitions in public secondary school in Suba Sub-County.

Table 4.6: Games Captains' Views on the Strategies put in Place by Instructors Against Risk for Injury

Item	Always	Often	Sometime	Rarely	Never
The players are given the appropriate physical fitness training including warm-up and cool down.	20(39.2%)	10(19.6%)	12 (23.5%)	5 (9.8%)	4(7.8%)
Players are taught the rules and regulations of the game.	22 (43.1%)	11(21.6%)	3(5.9%)	9(17.6%)	6 (11.8%)
Players are taught the need for respecting and playing within the rules.	23 (45.1%)	15(29.4%)	7 (13.7%)	9(17.6%)	5 (9.8%)
All equipment is checked for damage, wear and tear before use.	13 (25.5%)	13(25.5%)	5 (9.8%)	11(21.6%	10 (19.6%)
Are the playing surface always in good condition	3(5.9%)	7 (13.7%)	8 (15.7%)	12(23.5%	21 (41.2%)
Protective equipment is provided by the school.	6 (11.8%)	9 (17.6%)	0 (0.0%)	17(33.3%	19 (37.3%)
A qualified, competent first-aider is always available during Training or competitions	8 (15.7%)	10(19.6%)	7 (13.7%)	12(23.5%	14 (27.5%)

Medical personnel are accessible to participants during training and competitions whether at school or away from school.	8 (15.7%	5(9.8%)	11 (21.6%)	8(15.7%)	19(37.3%))
'Equipment that are out of season are removed from playing fields.	8 (15.7%)	10(19.6%)	17 (33.3%)	11(21.6%	6 (11.8%)
Safety zones demarcated between field boundary lines and spectators.	19 (37.3%)	11(21.6%)	3 (5.9%)	9(17.6%)	9 (17.6%)

Key: SA-strongly agree, A-agree, N-neutral, and D-disagree and SD-strongly disagree.

In the opinion of the Captains most instructors/coaches endeavor to avert risk of injury during training and competitions. It was reported by 39.2% (20) of the games captains that their instructors always gave appropriate physical fitness preparation including warm-up and cool down before the players went into competitions.

It was revealed by 43.1% (22) of games' captains that their instructors trained the players to follow the rules of the sport in which they participated. In addition, 74.5% (38) of the games' captain confirmed that as a strategy for reducing injuries, players are taught the need for respecting and playing within the set rules. In the opinion of , 43.1% (22) games captains sports coaches/instructors of secondary schools in Suba Sub-County were emphatic about observation discipline during games to avert injury when playing. The findings of the study showed that 35.3% (18) of instructors had organized for at least one qualified, competent first-aider to be present by the side of the pitch whenever players are engaged in training or competing. It was revealed by 25.5% (13) of the games captains that arrangements have been made for participants to have access to medical personnel during training and competitions, whether they are at school or away from school.

With regard to averting or reducing the risk of injuries caused as a result of faulty or poor state of the facilities, the results show that more than half the instructors 51.0% (26), made an effort to inspect the sports facilities for damage, wear and tear in their schools before they were used. In addition, 19.6% (10) of the games captains declared that their instructors frequently made an effort to have their playing surfaces maintained to at least a fair condition. A significant majority of 64.7% (33) of the instructors indicated that their playgrounds were ragged, unkempt and rarely maintained.

Majority of 58.9% (30), the captains agreed that their instructors have boundaries between players and spectators in place to reduce risk of injuries to the players. However, 35.2% (18) games captains refuted the notion about instructors keeping appropriate safety zones between field boundary lines and spectators As revealed by 15.7% (8) participants, some instructors made an effort to remove 'out of season' equipment from playing fields to reduce the risk of players getting hurt from such equipment.

4.5 Sports Risk Management Plans in Public Secondary Schools in Suba Sub County

Table 4.8. Gives a summary of the instructors' views concerning availability and use of written injury risk Management plans. The results of the study show that none of the schools in Suba sub-county had a written injury risk management plan. However, at 72.4% (21) the significant majority of the instructors indicated that having a written risk management plan made conditions safer for players and the department. The study showed that instructors are quite aware of the risks they face in the absence of formally written injury risk management plans. It was revealed by 86.2% (25) of instructors that they had at some point in their careers witnessed an injury server enough to warrant

medical attention for the player. However, because of lack adequate injury risk management plans, they had not resolved the issue to their expectations.

Table 4.7: Instructors' Views Concerning Availability of Written Injury Risk Management Plan

Item	Yes	No
Do you have a written injury risk management plan?	0 (0.0%)	29 (100.0%)
Do you think that having a written risk management plan makes conditions safer for players, and the department?	21 (72.4%)	8 (27.6%)
Has the games department at your school ever been involved in litigation due to an injury to a student while you have been in your present position?	9 (31.0%)	20 (69.0%)
While at your present place of employment, has any player been injured severely enough to require medical attention?	25 (86.2%)	4 (13.8%)
Do you think having in place a risk management plan decrease the likelihood of litigation?	19 (65.5%)	10 (34.5%)

In addition, 31% (9) of the instructors revealed that the games departments of the schools had been involved in litigation over an injury to a student during a sporting event. The issue could have been effectively handled with a clearly written injury risk management plan. Interestingly, 34.5% (10) of the instructors indicated that they were

not aware of the risks of not having written injury management plan. On the other hand, 65.5% (19) noted that they were aware that application and implementation of plans involving management of risk decreases the likelihood of litigation in sport injury matters.

As revealed in Table 4.7,

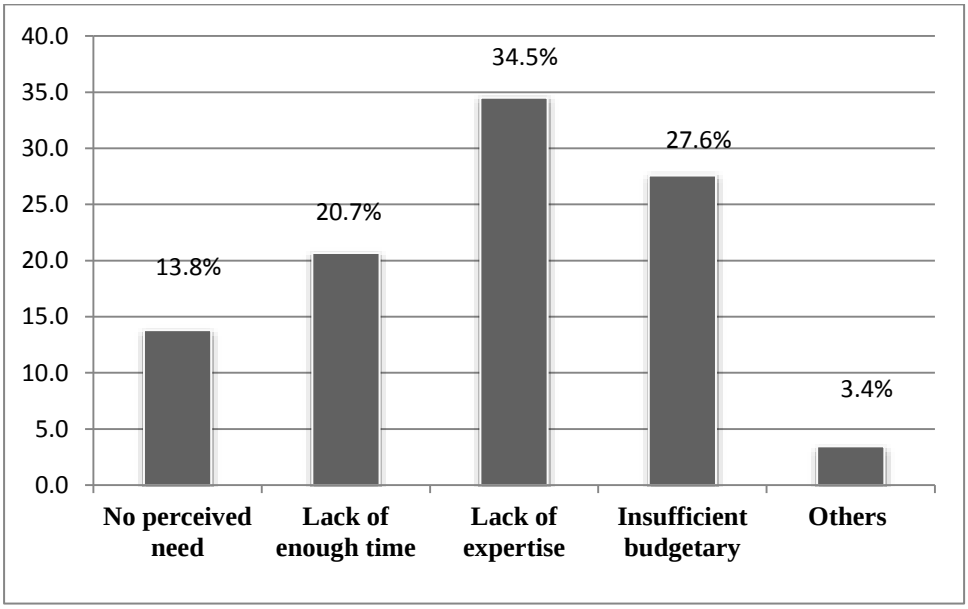

Figure 4.1: Reasons for lack of written injury risk management plans in schools

As revealed by 27.4% (10) of the instructors, insufficient budgetary resources and the lack of a perceived need accounted for absence of written injury risk management plans in a quarter of the schools 13.8% (15).at the same time, 20.7% (6) indicated that plans were not available because of inadequate time to develop a plan: while 34.5% (10) advanced the same reasons for lack of implementation.

However, the finding of the study shows that, in as much as all the schools did not have a written risk management plan, a good number 20.7% (6) had some procedures and policies aimed at increasing the safety of players and reducing chances of injury, as summarized in Table 4.9.

Table 4.8: Instructors' view on Injury Risk Management Procedures and Policies (*n* = 29)

Item	SA	A	U	D	SD
The school has an inclusive sports health care administrative system and efficient way of ensuring provision of appropriate medical care to all injured participants.	4 (13.8%)	3 (10.3%)	2(6.9%)	7 (24.1%)	13(44.8%)
The school has procedures for immediate treatment of injury and appropriate referrals.	8 (27.6%)	4 (13.8%)	1 (3.4%)	7 (24.1%)	9 (31.0%)
Coaches' know their legal duties and roles they are expected to perform in sports.	10(34.5%)	7 (24.1%)	3 (10.3%)	5 (17.2%)	4 (13.8%)
Always student individual's readiness to participate is checked through the pre-participation physical examination.	7 (24.1%)	6 (20.7%)	4 (13.8%)	7 (24.1%)	5 (17.2%)
A comprehensive emergency action plan is in place to ensure that appropriate action is taken in a timely manner in the event of sports accidents.	6 (20.7%)	4 (13.8%)	2(6.9%)	8 (27.6%)	9 (31.0%)
Procedures and rules to ensure protection of initial injury, prevention	13(44.8%)	3 (10.3%)	2 (6.9%)	5 (17.2%)	6 (20.7%)

from further injury and timely decision-making with regard to return-to-play is in place.					
The school instructors have the knowledge of the sports and coach, they are aware of training techniques required by that sport.	8 (27.6%)	4 (13.8%)	3 (10.3%)	10(34.5%)	4(13.8%)
School games instructors have appropriate knowledge and experience that is commensurate with the injury risks involved in sports.	9 (31.0%)	3 (10.3%)	2 (6.9%)	7 (24.1%)	8 (27.6%)
The students are instructed about the consequences of not adhering to established safety rules.	10(34.5%)	8 (27.6%)	2 (6.9%)	4(13.8%)	5 (17.2%)

The findings of the study revealed that 27.6% (8) of the instructors indicated having procedures for emergency care of injury and appropriate referrals at their schools although the majority of 58.6% (17) of the instructors revealed that their schools did not have good emergency procedures in place to ensure appropriate and timely actions in the event of sports accidents. On the other hand, as seen in Table 4.9, slightly more than a third [34.5% (10)] of them said they had comprehensive emergency action plan to handle emergencies occasioned by sports injuries., As revealed by 55.1% (17) of the instructors, some schools had procedures and rules to ensure protection of initial injury, prevention from further injury and timely decision-making with regard to return-to

play. As opposed by 44.8% (33) of the instructors who strongly indicated that their schools do not have an inclusive sports health-care administrative system and efficient way of ensuring provision of appropriate medical care to all injured participants, that could help in quick recovery and avoid re-injury.

The findings of the study established that 58.6% (17) of the coaches/instructors knew their legal duties and roles in sports. Only a small percentage (27.6% [8]) of the school instructors were of the opinion that many instructors in schools within the Suba sub-county are knowledgeable about the technical aspect of the sports they coach. The results of the survey show that 31.0% (9) of the instructors also believe that many games instructors have appropriate knowledge commensurate with the injury risks involved in sport., However, this point of view is not supported by the majority [51.7% (15)] of the respondents. As a way of averting injury, the study confirmed that in many schools (58.6% [17]), student individual readiness is regularly checked through the pre-participation physical examination before being allowed to participate in sports training or competitions. On the same note, it was discovered that majority [52.1% (18)] of the instructors take it upon themselves to educate students about the consequences of not adhering to established safety rules while in a sporting event.

4.6 Risks for and Types of Injuries in Sports within the Secondary Schools in Suba sub-county.

The dependent variable in the study is Risk and Injuries in sports. Therefore, the study sought to investigate the types of sports played and the concomitant risks and types of injuries associated with the different sports. This was explored through the use a questionnaire with items predesigned to seek the views of the games instructors about

injury risk and the actual types of injuries seen in secondary school's sports in Suba sub-county.

4.6.1: Types of Sports Played in Schools

To shed more light on the risk and injuries in sports within the Schools in Suba sub-county, the study sought to establish the most commonly played sports in secondary schools within Suba sub-county. Figure 4.1 shows the type of sports participated in by students

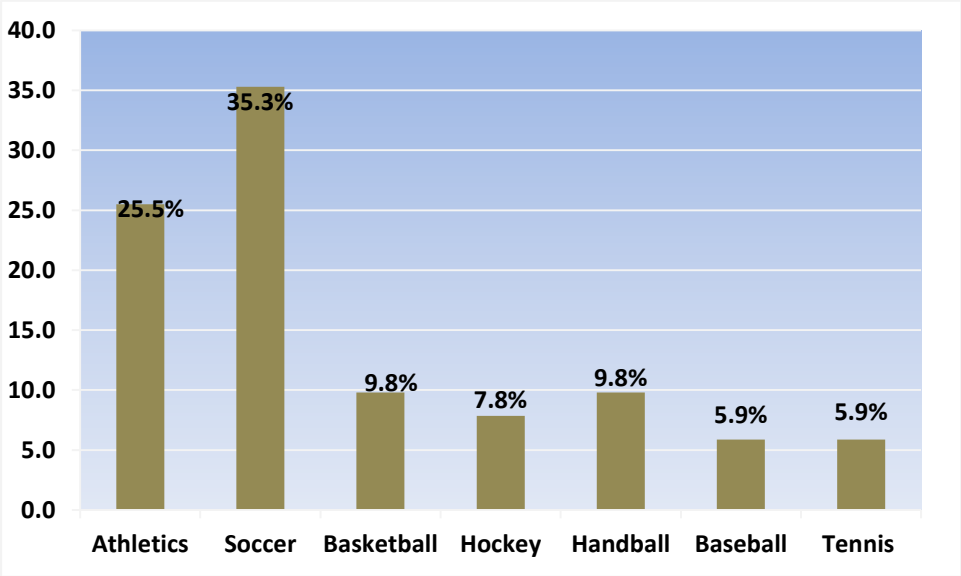

Figure 4.2: Sports played in secondary schools

It is evident from Figure 4.2 that soccer was the most frequently played sport 33.3% (17) in the schools, followed by Athletics which reflected 25.5% (12) participation. Other games played by students include Basketball at 9.8% (5), Field Hockey at 7.8% (4) and Handball at 9.8% (5), Tennis5.9% (3) and Baseball 5.9% (3).

4.6.2: Types of Injuries

The study explored the frequency of types of injuries sustained or experienced by the players in the different sports. Results concerning the types of injuries that were most common in secondary schools are shown as in Figure 4.3.

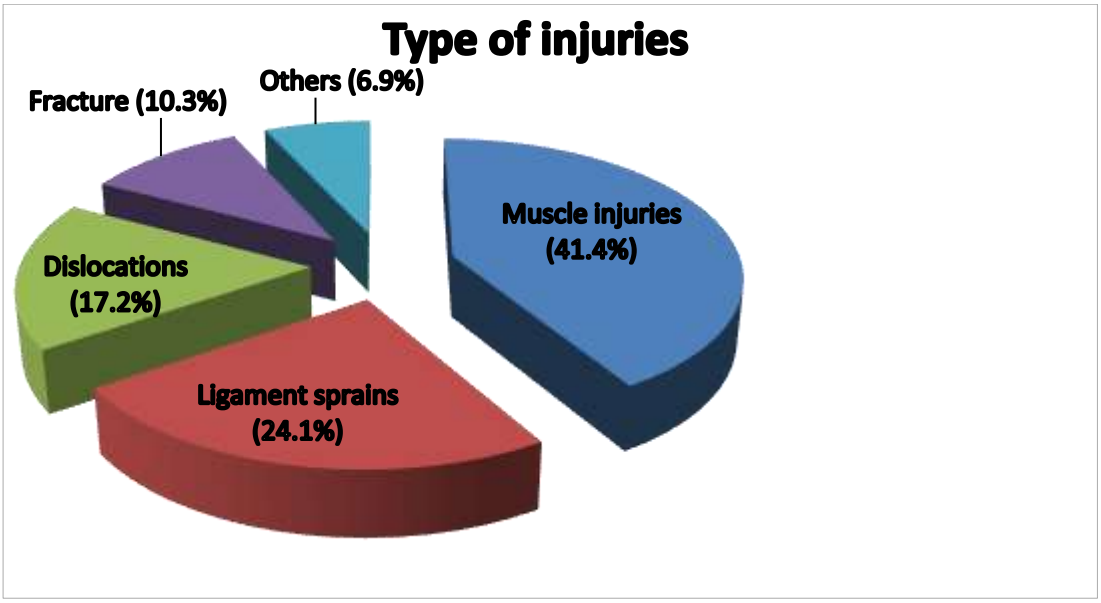

Figure 4.3: Types of Sports Injuries and their Frequencies

The games instructors reported muscle injuries being the most frequent type of injuries. Muscle strains accounted for 41.4 %(21) of all the injuries during sporting events in secondary schools. Ligament sprains in knees and ankles were revealed by 24.1 %(12). It also emerged that dislocations and fractures accounted for 27.5% (13) of injuries during competitions or trainings. Contusions and overuse injuries combined, accounted for 6.9% (4) of the injuries that were recorded during sporting events.

4.6.3: Injuries and Type of Sports

The Interviews of the participants established that more incidences of injuries were reported in organized sports than in non-organized sports. At the same time, the findings of the study showed that there were differences in the types and severity of injuries among sports organized within the school, sports organized outside the school (inter schools) and unorganized sports. Many respondents observed that sports organized

outside the school had more incidences of injuries compared to sports organized in the school. For example, one of the participants commented:

> *"From my experience, sports outside the school are mostly competitions putting our school team against another team. The matches are usually full of tension because high stakes are in place; therefore, many students get rough and unrealistic with each team struggling to out-do the other"*

This implies that sports outside the school usually present higher risk for injury to the students than the ones organized within the school. As indicated in the Figure 4.4, it also became evident that some sports were more pr one to injuries than others.

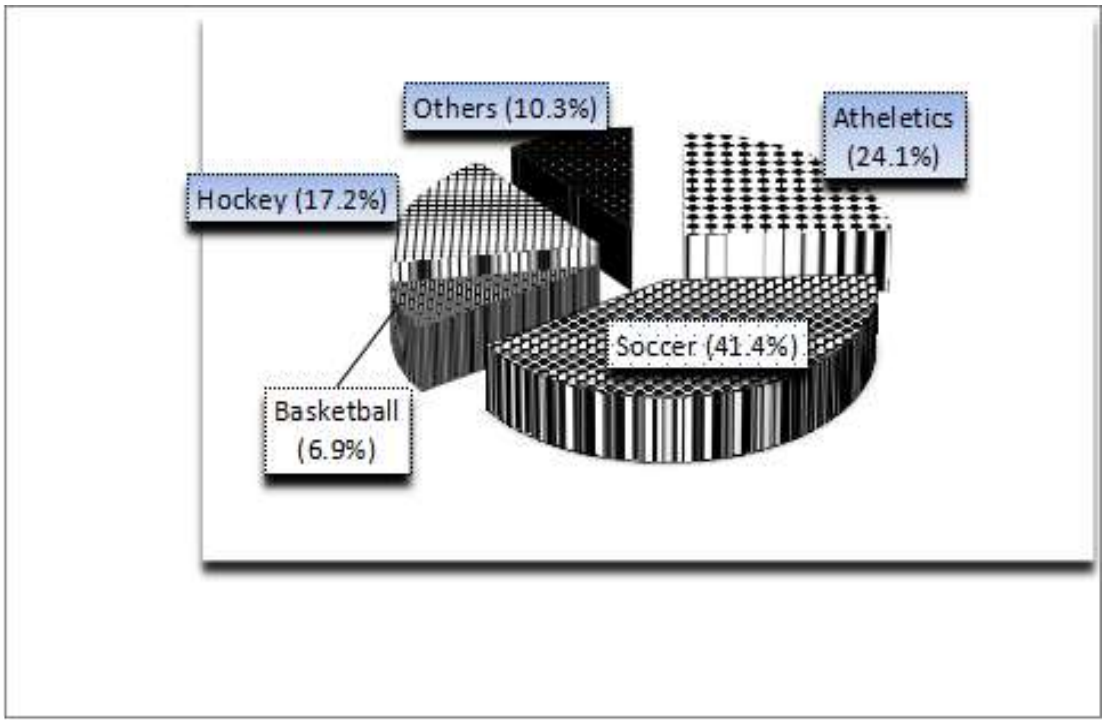

Figure 4.4: Rates of Injury in different sports over the past one year

With regard to which sports are responsible for most sports injuries in the schools, Figure 4.3 reveals that soccer generally had the highest injuries. Soccer alone accounted for 41.4% (21) of the injuries in sports reported in the last one year in public Secondary schools with the Suba sub-county. Interestingly, basketball had the least incidence of injuries. Other sports, such as rugby and handball, accounted for 6.9% (4) of all the injuries reported in the secondary schools in Suba sub-county in the last one year.

CHAPTER FIVE: DISCUSSIONS OF THE FINDINGS

5.1 Introduction

Though several injury risk management studies have been conducted worldwide, no study that has examined injury risk management practices during school sports exists in the Homa Bay county of Kenya. Therefore, this study was of an explorative and descriptive nature. Literature review provided the fundamental elements to develop this study. The primary objectives of this study were to determine: (i) whether facilities and equipment were predisposing factors for risk of injury to participants in public secondary schools. (ii) the strategies and techniques applied by coaches/games masters for managing sports injuries in public secondary school sports, and, finally that (iii) the injury risk management strategies and techniques put in place by secondary schools for protecting participants from harm, injury or even death.

To achieve these objectives, data was collected by administering a self-developed questionnaire to all games coaches in all secondary schools in the sub- County. The study revealed that coaches, with higher education level performed better. The findings were in agreement with Castro (2010) who found that coaches with a higher education had higher score in injury risk management.

5.2 Types of Sports and Injuries

As revealed by the games captains, soccer was the most popular sport in secondary schools. This revelation concurs with that of (Tyler, 2006) who documented that, like in the rest of the world, football (soccer) being the most attractive and popular sport in the world could document more injuries. Tyler also asserts that injury type has a close relationship with the nature and characteristic of sports. Miller and Veno (2002) found that some risks exist only in certain sports. Golblatt (2002) asserts that high-risks sports, such as football and hockey, are associated with body contact. Wiese-Bjornstal (2010)

emphasizes that the primary causes of sports injuries are both, extrinsic and intrinsic; and inadequate rehabilitation of previous injury.

5.2.1 Categories of Injuries

The types of injuries are broadly categorized into 3 in this study (Stockton, 2021).

a.) ACUTE: This are the category of injuries that are usually as a result of a one-time traumatic occurrence within a five days' period. They include but not limited to: fractures, sprains, dislocations, muscle strains.

b.) OVERUSE: This are the category of injury that occur over a period of time, their nature makes them hard to diagnose and treat. They include but not limited to: swimmer's shoulder, runner/jumpers knee, Achilles tendonitis, shin splints.

c.) CHRONIC: This category is for the injuries that have been on for at least over 3 months and still on. They are often because of use and re-use injuries.

The highest percentage of injuries involved muscle damage Rates of injury during competitions were higher than during practice, because of the higher stakes during competitions. The findings of this study were similar to those of Morgan (2001) who had found that the rate of injury during competitions is higher than during practice.

5.3 Facilities and Equipment as Predisposing Factors.

As revealed by 70.6% (36) games captains, most schools do not have enough sports equipments and the appropriate sporting facilities which can be a cause of the more susceptibility of risks among the athlete students. Majority of the games instructors 69.0% (20) also affirmed that schools lacked sports facilities and equipment. It was also established that most sport facilities were never inspected of potential risks and their wear and tear and if it's safe for use. It also emerged that majority 65.5 % (19) of the schools do not have the physical barriers between spectators and players, thus exposing players to injury from objects outside playground. Similarly, the playfields lacked

adequate care exposing participants to accidents as indicated by 58.9% (30) of the captains. This study showed that most playgrounds in the public secondary schools do not meet the recommended standard for sports activities. The results of this findings go completely against the advice of Dwyer and Fredline (2008), who had pointed out that adequate facilities and equipment not only reduce the risk of injury but also allow for a more enjoyable experience. Alston (2003) strongly advices that schools' infrastructure plays a significant role in risk management practices. Unfortunately, it emerged that many of the sports fields or pitches in public secondary schools in Suba sub-county lack adequate care to contend with damage from the varied weather changes. Haddock (2003) also advocates for safe play grounds and leisure areas. However, as revealed by the captains in this study, heavy rainy conditions made some school pitches dangerous, exposing the players to frequent accidents and injuries, Grafwegi's, (2010) found similar situation in Rwanda (2010) where muddy and uneven playgrounds exposed participants to injury.

The findings of the study revealed that there seems to be a complete lack of compliance for appropriate and safety equipment. First aid kit and other precautionary measures that should normally be put in place during sports were evidently inadequate in most schools in Suba sub-county. The findings go against Graysons advice (2001) that first aid treatment and access to hospitals should be sufficient since immediate responses and treatment can mean the difference between life and death. Further, the findings exposed a poor state of sports facilities and equipment in the secondary schools of Suba sub-county. Here again findings of the study go completely against the view of Pule (2007) who had warned that lack of enough facilities and equipment lead to a decline in sports participation and rise in the chances of injury to participants. The instructors are aware that these conditions. The nature of sports equipment and facilities have been

implicated in many injuries sustained by sports persons who had used unsuitable or faulty sports equipment. Such faulty facilities and equipment expose students to high risk of injuries during trainings or competitions. Despite this knowledge that sports equipment and facilities in this state of despair are unsuitable for use and could cause harm, they continue being used.

5.4 Strategies' and Techniques Applied by Coaches to Curb Injuries

For the purposes of this study, injury risk management plan was defined as the existence of clearly written procedures and policies designed to increase the safety of student participants in sports. Unfortunately, the study revealed that none of the coaches had a written injury risk management plans. Amazingly, none of the participating schools have any risk management plans in place. Fortunately for them, none of the schools has been sued to date. This implies that residents are either not litigious or are unaware of their rights; and that the population of the country is not inclined to rush to the courts. It is possible that since the coaches have never experienced any litigation, though aware of the need for injury risk management plans and the need for protecting their players, they continue being complacent and ignore drawing up injury risk management plans. Most games coaches indicated that they did not have injury risk management plans because they lacked time to develop and implement them or there was no perceived need and insufficient budgetary allocations. The findings were similar to Muller (2001) who stated that organizations often claim that the cost, time, and effort required to implement a risk management system are prohibitive. Information from some studies according by Miller and Rushing (2002) indicated that one reason for these state of affairs may be lack of knowledge about developing, implementing and carrying out injury risk management plans and anything that goes with it. Chances are that the

situations may not change until an accident, injury or even death occurs as a result of not having action plan or risk management.

5.5 Injury Risk Management Plans in Schools.

According to Basson & Loubser (2003), the coach is responsible for ensuring provision of a safe environment for players, evaluating injury and administering first aid. The findings of the study showed that the coaches are present at both, practices and competitive games. As such, they are the first to respond and evaluate the degree of injury both during practice and during competitions. Consequently, the coach should have adequate knowledge of injury risk management principles to act prudently in case of injury experienced during any activity. From this stand point, the result of the study suggests that high proportion of relevant personnel do not have the requisite expertise to address these responsibilities. It must be noted that with limited human resources most educators at public secondary schools serve a dual function in relation to sports responsibilities. Schools therefore are hardly in a position to afford professional coaches who are not also administrators. From the study, there is evident lack of adequate preparedness against risk of injury in schools. As revealed in the study, only 35.5% (8) of the instructors tried to ensure the presence of one qualified competent first-aider during competitions. Presence of a qualified first aider during sport competitions is extremely important because it ensures prompt and appropriate response to any actual injury which to prevent the condition from getting worse as well as to promote full recovery, hence reducing the chances of re-injury. Surprisingly, none of the schools had a written injury risk management plans. However, 72.4% (21) agreed that a written risk management plan makes conditions safer for participants. This, therefore, calls for the establishment of injury risk management plans which should be

put in place in schools to ensure that policies and procedures on injuries and injuries risks are made clear to both participants and instructors.

5.6 Overall Observation

Coaches, must be knowledgeable in the technical aspect of the various sports they coach, knowing proper biomechanics and training techniques required as per the sport. This in itself is strategy against risk of injuries and harm to players because it ensures prompt and appropriate response to any actual injury to prevent condition getting worse and to promote full recovery, hence reducing the chances of re-injury. The findings show that, even though the instructors were divided on the reasons for failure to have written risk management plan, majority of them observed that lack of expertise and skill in writing risk management plans among staff was the major hindrance. An indication that reasons for the lack of well stipulated risk management plans could be attributed to lack of experience in the department. Interestingly but ironically, games masters' and coaches in Suba county believed that having an injury risk management plan was vital to ensuring safer conditions for their student athletes. Results in this study suggest that more attention should be given to the safety of the participants. Having a comprehensive injury risk management plan would draw greater attention to all accidents within and outside school. Even though games coaches did not have formal risk management plans and have not yet faced law suits, they were aware of what needs to be in place to protect the participants. Injury risk management is an enabler of an effective and efficient sports management process. Whereas it may not be possible for sports coaches in secondary school's sports in Suba sub-county to provide absolute safety; they should be able to ensure maximum awareness and attentiveness to safety issues. They need to consider all potential risk factors with commensurate precautions to avoid injury. The results of this study indicate that games masters/ coaches in Suba-

Sub-county need to be educated about conducting comprehensive injury risk management programmes that aim at minimizing and preventing programmatic risks.

Persons charged with sports management should therefore have the appropriate skills to give proper direction and guidance on how to protect the participant from injury during both, practice and competition. There is need to develop policies and guidelines for coaches in this area because of the knowledge diversity that exists among coaches.

CHAPTER SIX: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Summary of the Findings

The sole purpose of this study was to investigate and understand injury risk management practices during sports in secondary schools of the Suba sub-County in Kenya. A questionnaire was developed to seek answers to selected demographic and injury risk management information research questions that were the focus in this investigation. It was noted in this study that 100% of games coaches did not have written injury risk management plans. The findings of the study showed (i) an evident lack of adequate preparedness against risk of injury in schools, (ii) that none of the games coaches had written injury risk management plans suggesting that because they lacked time to develop and implement them or there was no perceived need and insufficient budgetary allocations,(iii) that most schools do not have adequate or appropriate sporting facilities, and the sport facilities were never inspected, (iv) that the majority [65.5 % (19)] of the schools do not have physical barriers between spectators and players, (v) that Playfields lacked adequate care exposing participants to accidents; and (vi) that most playgrounds do not meet the recommended standard for sports activities.

The finding of the study also revealed that sport facilities and equipment in most schools were inadequate and in poor state; thus, unsuitable for use and exposed the students to high risk of injuries during trainings and competitions ideally, it is necessary for games departments to have a written injury risk management plans. Numerous studies have been conducted elsewhere regarding this issue. However, there has been no prior study regarding injury risk management in Homa Bay County that examines injury risk management practices in secondary school sports. Miller and Rushing's

(2002) examination of the issue in universities revealed that 66% of the physical education supervisors did not have risk management plans.

Facilities were not frequently checked, inspected or maintained in order to ensure they are safe for use. Similarly, equipment was rarely inspected and maintained in order to make it hazard free for the participants, neither was it safely stored when not in use.

6.2 Conclusion

This study provided an in-depth understanding of the concept of injury risk management practices in secondary school sports. The following conclusions were made based on the views of the findings:

- Although the risk of injury is generally higher in contact sports than non-contact sports, many participants choose to take part in contact sports rather than in non-contact sports. Around the world there exist active programmes for promotions of injury risk management in sports; United Kingdom has published guidance documents for managing the risks associated with sports. Australia published guidance for risk management practices for sports. In Kenya the latest development stipulates that no athletic competitions should be carried out on a grass track. An athletics track must be laid with at least marram for it to be licensed by Athletics Kenya. However, few schools and learning institutions recognize the importance of managing risks and adopting proactive injury risk management approaches.

- Secondary schools lack professionals who could help them plan and implement comprehensive risk management strategies that address the key components for safety in schools. Such strategies would demonstrate that the schools foremost concern and commitment is the welfare of the participants.

- Professionals' preparation programmes do not include current relevant philosophy, trends and practices regarding sports injury and physical recreational activities risk management

- Though to date no games masters have been sued. It is evident that games masters have become sufficiently interested in drawing up plans for sports injury risk management in their institutions for future protection.

- It is educationally, psychologically, physiologically and legally unacceptable that participants continue to be exposed to unreasonable risk of injury in sports

6.3 Recommendations for Policy and Practice

Based on the findings of this study the researcher makes the following recommendations for policy and practice in the area of sports injury risk management:

(i) Persons involved in sports, physical education and any physical activity in schools should receive comprehensive training in injury risk management procedures and practices to reduce and prevent injury occurring

(ii) The one in charge of sports should be aware of their personal responsibility for keeping comprehensive health and fitness records and documentation of their participants in appropriate confidential files.

(iii) Games personnel should reinforce established training rules and regulations in schools.

(iv) The Ministries responsible for Sports and Education should work together in developing policies and guidelines for injury risk management in sports for secondary schools.

(v) Sports organizers should take the initiative to coordinate the development of risk management plans for sports and physical activities. The initiatives

should include policies regarding safety precautions such as emergency action plans, supervision and maintenance of good records.

(vi) While Safety recommendations should cascade from ministries level/executive level to the grassroots/schools, measure should also be put in place to ensure implementation of the same by the Ministries and schools managements.

(vii) Opportunities to support and evaluate the coaches in the field of injury risk management programmes should be put in place to support risk and safety practices in schools.

6.4 Recommendations for Further Research

Based on the above findings and the conclusion, the researcher wishes to recommend the following for feature research,

- A study on how sports fans perceive different injury risk management practices in secondary school sports.
- A qualitative study of sports injury risk management plans in selected counties in Kenya.

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APPENDICES

APPENDIX A: LETTER OF INTRODUCTION

JOHN KWERI NDIEGE,
P.O BOX 8,
MAGUNGA
DATE----------

Dear Sir/Madam,

RE: ACADEMIC RESEARCH PROJECT

I am a postgraduate Student at Kenyatta University. I wish to conduct a study entitled. "**MANAGEMENT PRACTICES OF INJURY RISK IN SPORTS AMONG SECONDARY SCHOOLS IN HOMA-BAY COUNTY, KENYA** "The relevant data will be collected through questionnaires, and observations. Am writing to kindly request for your permission to administer a research questionnaire to few selected games captain, coaches/games instructors. I will be grateful if you would also allow me to observe sports and sports training practices. NOTE the study is an academic research hence the information is confidential. Ethical considerations will be observed. The findings of the study outcomes will not include reference to any individuals.

I value your acceptance

Sincerely,

John Kweri Ndiege

APPENDIX B: LETTER TO TEACHER IN-CHARGE OF GAMES IN THE SCHOOL

Dear Instructor /Coach

I, John Ndiege, pursuing a Master of Science programme at Kenyatta University in the Department of Physical Education Exercise and sports science. I am examining injury risk management practices in the secondary schools in the Suba Sub-County of Homa-Bay County.

I invite you to participate in this study by responding to the questionnaire. From the study I hope to determine **Management Practices of Injury Risk in Sports Among Secondary Schools in Homa-Bay County, Kenya**. The information will help establish practices that improve and increase participants' safety. If you agree to participate, kindly complete the questionnaire to the best of your ability and return all the completed pages. Participate in the study is on voluntary basis, and one is free to withdraw at any stage without any condition. You may keep this note for your own records. Thank you very much for your consideration.

Thanks again, I look forward to your response.

Yours Sincerely,

John Kweri

APPENDIX C: LETTER TO SCHOOL GAMES CAPTAIN

Dear Student**,**

Am John Kweri and I am Master's student at Kenyatta University in the Department of Department of Physical Education Exercise and sports science. The study is for my Masters programme. The study seeks to investigate **Management Practices of Injury Risk in Sports Among Secondary Schools in Homa-Bay County, Kenya.** Kindly respond to a series of questions on injury risk management plans in your school. The time will be about 15-20 minutes to complete. Confidentiality will be observed at all cost. It is voluntary participation and there is no penalty for non-participation.

For the success of the study your response is great value. I look forward to get the best cooperation from you.

Thank you for your anticipated assistance. Feel free to ask or inquire on any information regarding the study.

Sincerely

John Kweri.

APPENDIX D: CONSENT

I do confirm that I have been taken through the purpose of the stated study. I am aware that there is no intimidation and the results of the findings will be anonymously processed in the final research report. My participation is voluntary and that I can withdraw, at any stage my consent and participation in the study. I therefore declare that am prepared to participate in the study.

Participant's name:_____(Please print) Signature:_____

Date:_____

Researcher's name:_____(Please print) Signature:_____

Date:_____

VERBAL CONSENT

I hereby do declare having known the nature and purpose of the study as explained that, I have room to withdraw from the study at any point or stage, without jeopardizing the cordial relationship with the researcher. I hereby certify that the research participant has verbally consented to participate in this study.

Participant's name:_____(Please print)

Researcher's name:_____(Please print) Signature:_____

Date:_____

APPENDIX E: GAMES INSTRUCTOR / COACH QUESTIONNAIRE

Part A

The purpose of this questionnaire is to evaluate Sports injury risk management practices among secondary schools in Suba Sub County, Homa Bay County. The responses and information gathered will be treated with utmost confidentiality. The results will be therefore purely for research purposes.

Kindly key in the blank spaces or putting a tick [√] in the appropriate spaces that corresponds with your response.

General Information

1. Gender: Male [ ] Female [ ]
2. Age 25-30 [ ] 31-35 [ ] 36-40 [ ] 41-45 [ ] above 45 [ ]
3. Academic qualification

Masters [ ] Bachelors [ ] Diploma [ ] Others [ ]

4. Type of the school where you teach.

Boys Boarding [ ] Girls boarding [ ] Mixed boarding [ ] Mixed day schools [ ]

5. Number of years that you have worked as games instructor:

(a) 1-5 [ ] b) 6-10 [ ] c) Above 10 years [ ]

Part B

6. How many types of sports does your school participate in? ----------

7. What risk management responsibilities do you have as a coach/ games Instructor? ----------

8. Do you have emergency procedures in place during sports?

   Yes [ ] No [ ]

9. Which between organized and non-organized sports contributes to more? Injuries in your players?

   1. Organized Sports [ ] 2.Non- Organized Sports [ ]

10. What is the difference in the types and severity of injuries among sports? Organized in the school, outside school and unorganized sports? ----------

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11. Which sports are responsible for most sports injuries in the school?

    Ballgames [ ] Athletics [ ] Others [ ]

12. Kindly state some challenges you face in relation to injury risk management in your school.----------

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Injury risk management procedures and policies used in your school

Using strongly agree, Agree, Neutral, Disagree and strongly disagree rate injury risk management procedures and policies used in your school

	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
All participants wear appropriate personal protective equipment during sports.					
Emergency procedures are in place during sports.					
The First/Aid kit is present and accessible before each game/ practices.					
Sports grounds and facilities are inspected and maintained regularly.					
The sports equipment provided by the school in good condition and safe to use.					
There are physical barriers between spectators and sport activities.					
Steps are always taken to ensure spectators do not put participants at risk.					
There is no appropriate first aid equipment on hand during sports practice or competition activities.					

Instructors' view on the Availability of Sports' Equipment and Facilities

Using strongly agree, Agree, Neutral, Disagree and strongly disagree rate injury risk management procedures and policies used in your school

Item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The school has an inclusive sports health care administrative system and efficient way of ensuring provision of appropriate medical care to all injured participants.					
The school has procedures for immediate treatment of injury and appropriate referrals.					
Coaches' know their legal duties and roles they are expected to perform in sports.					
Always student individual's readiness to participate is checked through the pre-participation physical examination.					
A comprehensive emergency action plan is in place to ensure that appropriate action is taken in a timely manner in the event of sports accidents.					
Procedures and rules to ensure protection of initial injury, prevention from further injury and timely decision-making with regard to return-to-play is in place.					
The school instructors are knowledgeable in the technical aspect of the sports they coach, they are aware of training techniques required by that sport.					
School games instructors have appropriate knowledge and experience that is commensurate with the injury risks involved in sports.					

The students are instructed about the consequences of not adhering to established safety rules.					

Thank you for your time.

APPENDIX F: GAMES CAPTAIN'S QUESTIONNAIRE

The purpose of this questionnaire is to assess Injury risk management plans in sports among secondary school in Suba-Sub County, Homa Bay County. All your responses and information will be treated with confidentiality. The results will only be used for research purposes.

Please, give your view/s by filling in the blank spaces provided or putting a tick [√] in the most appropriate brackets

General Information Part A

1. Gender: Boy [ ] Girl [ ]
2. Age 10-15 [ ] 16-21 [ ] above 21 [ ]
3. Form 1 [ ] 2 [ ] 3 [ ] 4 [ ]
4. Type of the school

   Boys Boarding [ ] Girls boarding [ ] Mixed boarding [ ] Mixed day schools [ ]

5. Best performed sports in your school to the highest levels

   Ball games [ ] Athletics [ ]

Part B. 1. Condition and state of sports equipment and facilities

Tick appropriately to show your view on the condition and state of sports equipment in your school by using strongly agrees, agree, neutral, disagree and strongly disagree.

Item	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
The playing ground is very ragged and uneven, usually causes falling down of the players.					
The players in our school do not have appropriate shoes and other attires for sports.					
The playground is not accurately measured and lacks legible marks.					
Weather conditions make our pitch to be more dangerous resulting into frequent accidents and injuries.					
Inadequate training and lack of sufficient practice expose many sports persons to serious danger of injuries.					

The first aid kit and other safety precautionary appliances are never in place during a sporting event.					
There are trained medical personnel on standby during a sporting event in the school.					
Use of inappropriate equipment in sport is always the order of the day.					
The pitch and racing track in our school are well fenced keeping the players safe distance from the spectators.					
Most sporting equipment are maintained and serviced regularly.					

6. Are the players given the appropriate physical fitness training including on warm Up and Cool down? Yes [ ] No [ ]

7. Are players taught the rule of the game?

   Yes [ ] No [ ]

8. Are players taught the need for respecting and playing within these rules?

   Yes [ ] No [ ]

9. Is all equipment checked for damage, wear and tear?

   Yes [ ] No [ ]

10. Is the playing surface always in good condition?

Always [ ] Not always [ ]

11. Is the protective equipment provided by the school in good condition?

Yes [ ] No [ ]

12. How do you rate the competence of the school coach/games master in preparing? Players' for sporting activities

Excellent [ ] Good [ ] Average [ ] Below average [ ] Poor [ ]

13. Do you have all the required equipment and facilities for your sport activities?

Yes [ ] No [ ]

14. Are medical personnel accessible to participants during training and Competitions whether at school or away from school?

Yes [ ] No [ ]

15. What do you think the school could do to reduce/minimize or eliminate chances of injuries during training and competitions?

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16. Is 'out of season' equipment removed from playing fields?

Yes [ ] No [ ]

17. Are there appropriate safety zones between field boundary lines and spectators?

Yes [ ] No [ ]

18. In your own opinion and assessment, comment on how sport injury risk management is practiced in the school----------

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Strategies against injuries risks

On your view appropriately mark each item showing strategies against injuries risks indicating how you think it is used in your school.

Item	**Always**	**Often**	**Sometimes**	**Rarely**	**Never**
The players are given the appropriate physical fitness training including on warm-up and cool down.					
Players are taught the rule of the game.					
Players are taught the need for respecting and playing within the rules.					
All equipment is checked for damage, wear and tear before use.					
Are the playing surface always in good condition					
The protective equipment is provided by the school.					
At least one qualified,					

competent first-aider is pitch side whenever players are engaged in Training or match activities.					
Medical personnel are accessible to participants during training and competitions whether at school or away from school.					
'Out of season' equipment is removed from playing fields.					
There are appropriate safety zones between field boundary lines and spectators.					

19. Kindly give any additional information----------

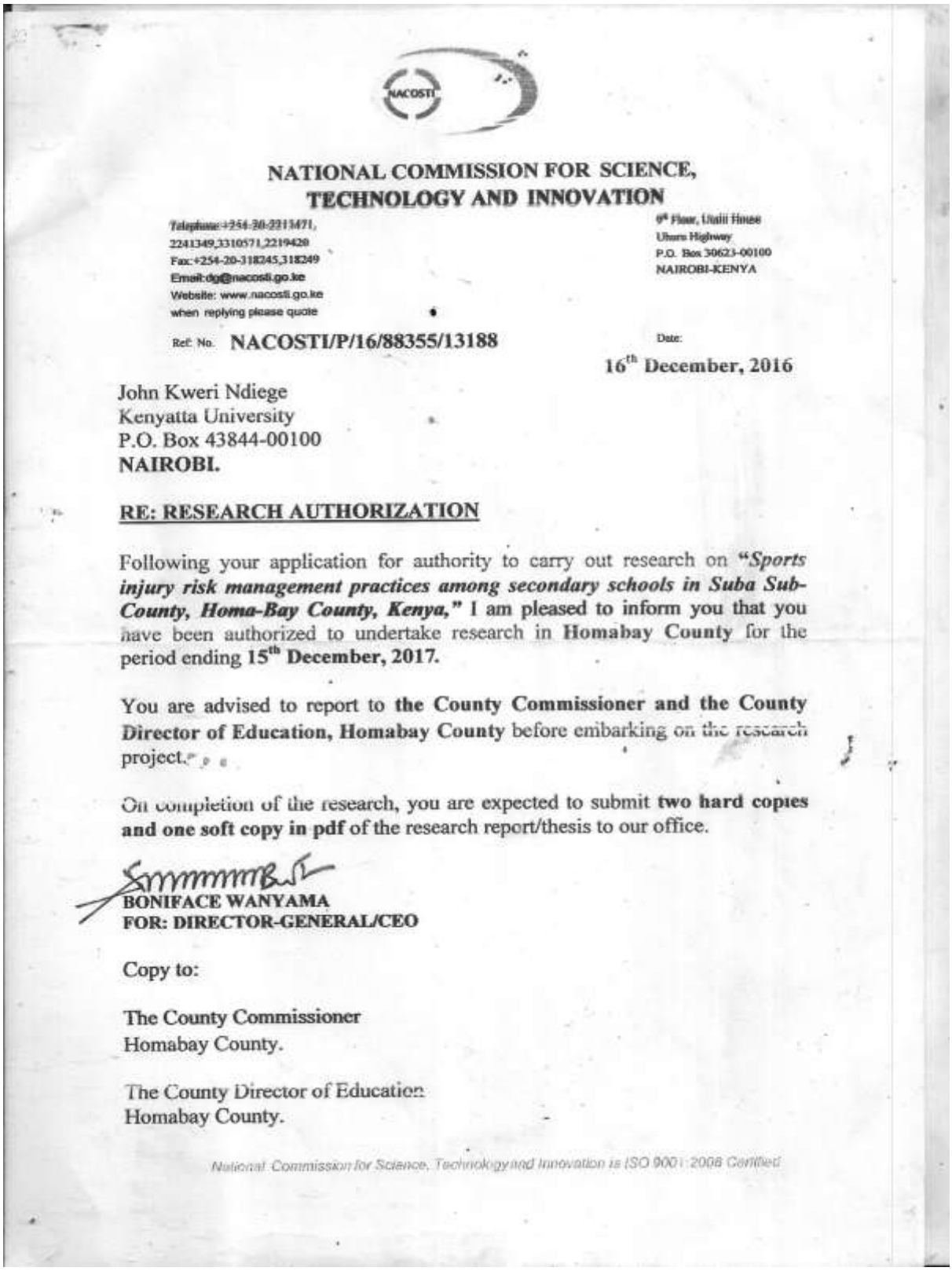
Thank you for your time

APPENDIX G: OBSERVATION/INTERVIEW GUIDE

Tick the appropriate box where agree or disagree with the statement

NO	ITEM	YES	NO
1	Is there emphasis on warm up and cool down before physical activity?		
2	Are all participants wearing appropriate personal protective equipment?		
3	Are emergency procedures in place during sports?		
4	Is the first Aid kit present and accessible before each game/practices?		
5	Are sports grounds and facilities inspected and maintained?		
6	Is the equipment properly stored?		
7	Is the equipment properly maintained?		
8	Are there physical barriers between spectators and sport activities?		
9	Are there marked warning signs in place?		
10	Is there adequate supervisions?		
11	Are steps taken to ensure spectators do not put participants at risk?		
12	Is appropriate Firs Aid equipment on hand during activities?		
13	Are there written schedules for the inspection of the (a) First Aid (b) Equipment (c) Facilities		

APPENDIX H: RESEARCH PERMIT (NACOSTI)



NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION

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P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/16/88355/13188**

Date:
16th December, 2016

John Kweri Ndiege
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Sports injury risk management practices among secondary schools in Suba Sub-County, Homa-Bay County, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Homabay County** for the period ending **15th December, 2017.**

You are advised to report to **the County Commissioner and the County Director of Education, Homabay County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

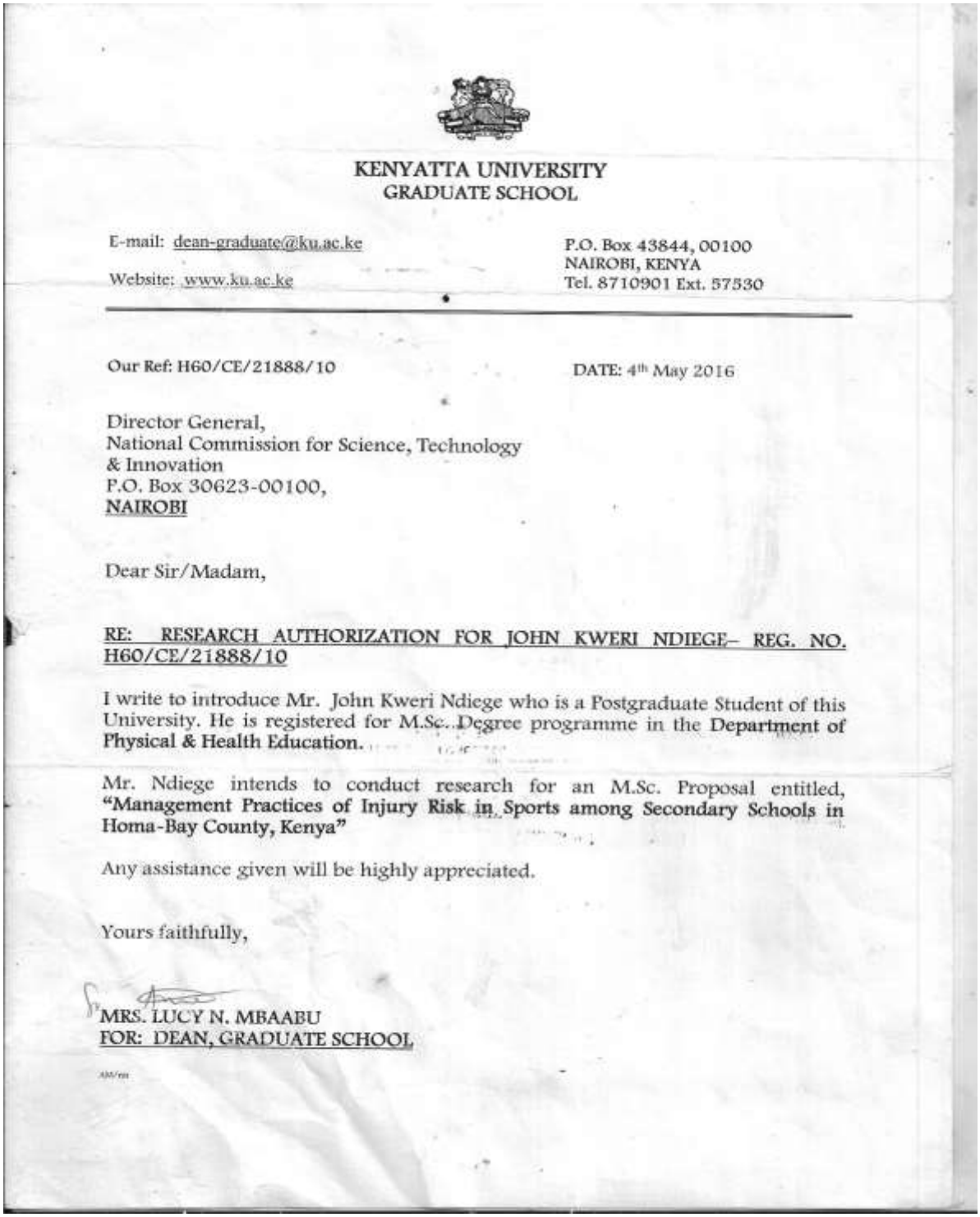
Copy to:

The County Commissioner
Homabay County.

The County Director of Education
Homabay County.

National Commission for Science, Technology and Innovation is ISO 9001: 2008 Certified

APPENDIX I: INTRODUCTORY LETTER FROM UNIVERSITY



KENYATTA UNIVERSITY
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P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: H60/CE/21888/10

DATE: 4th May 2016

Director General,
National Commission for Science, Technology
& Innovation
P.O. Box 30623-00100,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR JOHN KWERI NDIEGE– REG. NO. H60/CE/21888/10

I write to introduce Mr. John Kweri Ndiege who is a Postgraduate Student of this University. He is registered for M.Sc. Degree programme in the **Department of Physical & Health Education.**

Mr. Ndiege intends to conduct research for an M.Sc. Proposal entitled, **"Management Practices of Injury Risk in Sports among Secondary Schools in Homa-Bay County, Kenya"**

Any assistance given will be highly appreciated.

Yours faithfully,

MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL

AM/m