

**DEVELOPMENT OF A POLICY BRIEF TO FACILITATE THE
IMPLEMENTATION OF THE PHYSICAL ACTIVITY/SPORTS
POLICY IN RWANDA**

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ABSTRACT

The importance of health enhancing physical activity participation (HEPA) has always been emphasized globally, as one of the means to reduce the risk of Non-Communicable Diseases (NCDs) occurrence. In Africa, it is more relevant currently, due to the growing burden of NCDs that is coupled with the existing encumbrance of communicable diseases. In Rwanda, specifically, there are limited national strategies to promote health-enhancing physical activity. Consequently, the level of physical activity among Rwandans, especially government office workers, is likely to diminish, which could possibly be attributed to the rapid urbanization that comes with lifestyle changes. Basically, most people tend to abandon the traditional labour-intensive activities, which are associated with high energy expenditure, to more sedentary activities. Therefore, the need to promote health enhancing physical activity participation is crucial.

Physical activity participation is an intricate and multifaceted behaviour that may not be viewed from a linear perspective. This current study adopted a socio-ecological framework to assess the factors that influence Leisure Time Physical Activity (LTPA) among government employees in Kigali City. The study used an exploratory, sequential, mixed methods of qualitative and quantitative designs, in order to comprehensively explore and understand the research problem. Qualitatively, a Case study and exploratory design was used to collect data, specifically from the Rwanda Sport Policy and its implementing stakeholders. Quantitatively, a cross-sectional, descriptive design was used to assess and describe the levels of LTPA among government workers in Kigali City, as well as highlight the various factors that influence, or limit, their participation.

Data were collected in four phases, commencing with a review of the Rwanda Sports Policy as phase one. The policy was reviewed using the ADEPT and Linear policy process models. In the second phase, semi structured interviews were conducted with thirteen key stakeholders of the Sports Policy, who were purposively selected. The aim was to explore their opinions and experiences, regarding the policy, and how it is implemented. The third phase was a survey among 521 government workers in Kigali City, who were conveniently selected from a stratified population sample. Their demographic profiles were assessed, as

well as their levels of physical activity, and the factors that influence their participation. Data were collected using the Godin Shephard Leisure Time Physical Activity Questionnaire (GSLTPAQ), which was customized to add the demographic section, and the open-ended questions to assess the factors that influence participation. Finally, the fourth phase was an online survey with thirteen purposively identified experts in the field of physical activity, using a snowball approach. The survey sought their opinions, regarding best practices for the promotion of health enhancing physical activity. The qualitative data were analysed, using thematic analysis and the Atlas.ti, while the quantitative data were analysed, using Statistical Package for the Social Sciences (SPSS), version 23.

The study findings revealed that the Rwanda Sports Policy does not overtly promote the Sports for Health programme; however, the health benefits of sports are automatically linked to participation. There was a disconnection between policy and practice. Besides the weak collaboration among stakeholders, as well as other challenges cited that generally affected the policy implementation, most of the stakeholders implied that there was an absence of a well-planned strategy to promote the Sports for Health programme.

More than half (61%) of the participants were not sufficiently active. Chi-square tests revealed that Leisure Time Physical Activity (LTPA) was significantly associated with years of working ($p=.002$), as well as with age ($p=.004$). The prevention of diseases and to maintain good health were some of the major motivators for engaging in LTPA. Lack of time, fatigue and not being motivated, emerged as the major factors that hindered the participants to be physically active.

However, the main aim of the Rwanda Sport Policy was to advance professional sports in Rwanda. Although the policy and its stakeholders acknowledged that the health benefits of sports are intrinsically part of participation, less efforts were invested in realizing it. Based on the overall study findings, shortcomings were identified regarding the role of the Rwanda Sports Policy, in promoting the Sports for Health programme. In addition, high levels of inactivity were revealed among government office workers. Therefore, recommendations were made, based on the socio-ecological model, as well as on the opinions of the physical activity experts.

There is a need for specific strategies that aim to promote health enhancing physical activity. The strategies should be contextualized to consider individual, the social and physical environmental factors that influence physical activity participation among individuals. Finally, policy interventions are required to reinforce stake-holder collaborations, regarding the initiatives to promote health enhancing physical activity. For example, policies on the regulation of prices at sports facilities could be introduced, as well as a tax rebate on sports, or gym equipment. In addition, the provision of sports facilities within communities or residential areas, and the creation of walking, or running tracks would serve as enablers for physical activity participation.



KEY WORDS

Policy brief

Sports policy

Socio-ecological model

Stakeholders

Leisure time physical activity

Health promotion

Non Communicable Diseases



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LIST OF ABBREVIATIONS

ADEPT	Analysis of Determinants of Policy Impact
EDPRS	Economic Development Poverty Reduction Strategy
GGDP	Good Governance and Decentralisation Policy
GSLTPAQ	Godin Shephard Leisure Time Physical Activity Questionnaire
HEPA	Health Enhancing Physical Activity
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
LSI	Leisure Score Index
LTPA	Leisure Time Physical Activity
MDGs	Millennium Development Goals
METs	Metabolic Equivalent
MINALOC	Ministry of Local Government
MINEDUC	Ministry of Education
MINISANTÉ	Ministry of Health
MNISPOC	Ministry of Sports and Culture
MOD	Ministry of Defence
NCDs	Non Communicable Diseases
NHRC	National Health Research Committee
ODI/SciDev Net	Overseas Development Institute/Science and Development. Network
PSF	Private Sector Federation

RNOC	Rwanda National Olympic Committee
RNP	Rwanda National Police
SDG	Sustainable Development Goals
SPSS	Statistical Package for the Social Sciences
WCPT	World Confederation for Physical Therapy
WHO	World Health Organization



DECLARATION

I declare that “**Development of a policy brief to facilitate the implementation of the physical activity/sports policy in Rwanda**” is my own work, that it has not been submitted for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Name: Lela Mukaruzima

Date: May 2018

Signature:



DEDICATION

I dedicate this piece of work to the Lord God Almighty, the great “I AM” of my life
“I can do all things through Him, who gives me strength” *Phil’ 4:13*.

To my lovely papa and mama, Mr. & Mrs. Rutwaza, and to my siblings, thanks for your unconditional love, your spiritual and emotional support, they kept me going even when it was tough.

Last but not least, I dedicate this thesis to Dr. Ben Karenzi, my second father. Words cannot express my gratitude towards the unceasing love, generosity, kindness and encouragement that you showed me the whole time. May God’s unconditional blessings and favour be your portion forever!



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To the Hon. Dr Eugene Mutimura, I genuinely appreciate and acknowledge your invaluable contribution to my work, while still my co-supervisor.

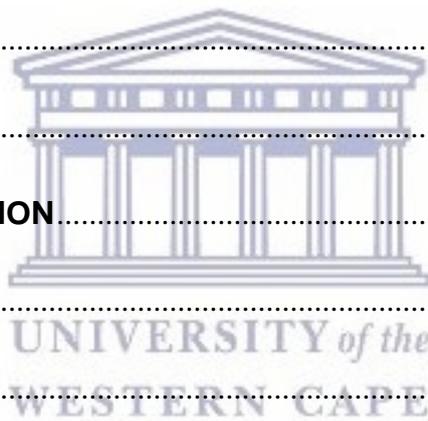
Special thanks to all the participants of this study, who willingly and generously provided me with the information that I needed. To my research assistants, for assisting me with the data collection. To my writing/statistical coach through the UWC Division for Post-Graduate Studies (DPGS) for his assistance with data analysis and critical feedback.

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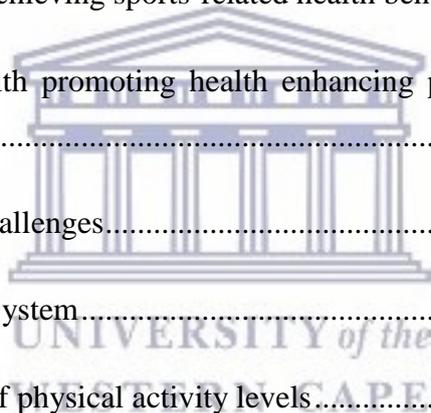
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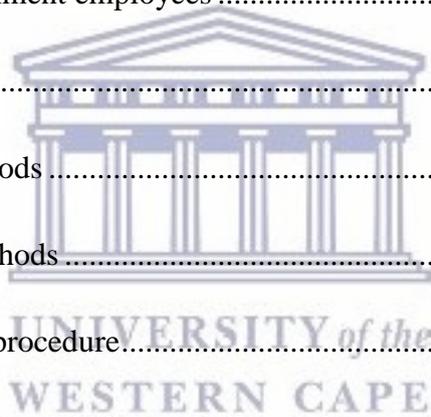
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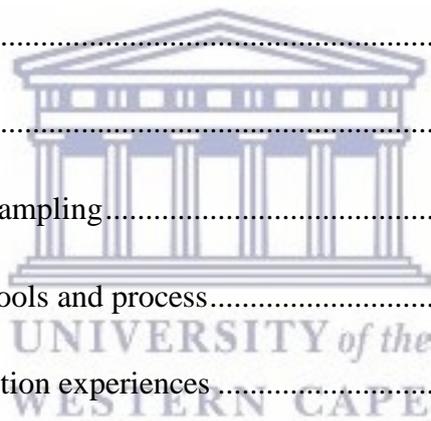
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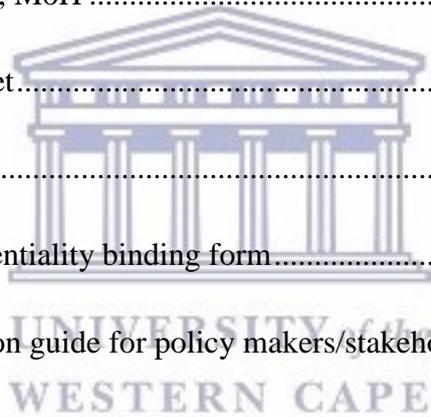
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CHAPTER ONE

INTRODUCTION

1.1. Rationale

Non-Communicable Diseases (NCDs) are increasingly becoming a global health burden, with the highest escalation rate predicted to be in the low and middle income countries (Wagner & Brath, 2012; World Health Organisation [WHO], 2008). The risk factors of these diseases are modifiable, and could be prevented by adopting healthy lifestyles, such as physical activity, among others (Burden & Branch, 2010). Effective measures to address NCDs, as well as the related risk factors thereof, require crucial policy interventions that play an important role in influencing the public to adopt healthy lifestyles (Kohl *et al.*, 2012; WHO, 2008). This current study aims to explore how the Rwanda Sports Policy (Republic of Rwanda [RW], Ministry of Sports and Culture [MINISPOC], 2012) influences health enhancing sport activities.

In this chapter, the researcher highlights the burden of physical inactivity, as well as the role of physical activity, as a primary prevention of NCDs, globally and locally. A synopsis of NCDs and the related risk factors thereof, as a burden to human health, as well as to the social economic development of nations, is provided. The global, regional (Africa) and national (Rwanda) prevalence of physical inactivity and NCDs is also presented. Additionally, the problem statement, research questions, aim, objectives, and significance of the study, the methodology, structure of the thesis and definitions of key terms are presented, culminating in the conclusion for this chapter, and the introduction of the next.

1.2. Background

One of the most cost effective means of promoting good health is through physical activity participation (Kohl, *et al.*, 2012; Allender, Cowburn & Foster, 2006; World Health Organisation [WHO], 2004; Booth, Gordon, Carlson & Hamilton, 2000). This is not only beneficial to individuals, but also to the nation's social economic development, through saving money spent on treatment of chronic diseases, adding to the increased productivity of

healthy citizens (WHO, 2008; World Health Organization [WHO], 2014). Poor health impacts individuals and nations negatively, in terms of economic development, due to the high treatment costs incurred & the management of the long-term complications (Vallgarda, 2007; Zhang & Chaaban, 2013;). Adults, who do not accumulate sufficient physical activity, are at a higher risk of all-cause mortality, as compared to those who adhere to the World Health Organization physical activity recommendations (WHO, 2014).

While there are no standard physical activity guidelines in Rwanda, the importance of sports and recreation to the general population, is recognized through the National Sports Policy and the Prime Minister's order, for all civil servants to engage in leisure time physical activity, once every week, for two paid hours (Republic of Rwanda [RW], Ministry of Sports and Culture [MINISPOC], 2012). Generally, the Government of Rwanda committed itself to improve the health of Rwandans, as well as meet the national and international priority targets of health (Republic of Rwanda [RW], Ministry of Health [MINISANTÉ], 2009). This is evidenced by the existence of the health policy and its strategic plans (Republic of Rwanda [RW], Ministry of Health [MINISANTÉ], 2005).

The development of the Rwanda health policy was influenced more by the need to address the priority health needs of the country, such as communicable diseases, which are among the leading causes of morbidity and mortality, and affect the social-economic development of Rwanda (RW, MINISANTÉ, 2009). Subsequently, complimenting policies were developed as offshoots of the major health policy, to tackle specific health issues. These include, the Reproductive Health Policy, Family Planning Policy, Nutrition Policy, National HIV/AIDS Policy, and National Community Health Policy (RW, MINISANTÉ, 2009). Although there is no complimenting policy to address NCDs, promoting healthy lifestyles, such as healthy diets and physical activity participation, are among the accepted measures of prevention (Republic of Rwanda [RW], Ministry of Health [MINISANTÉ], 2008; 2009).

1.2.1. The Prevalence of physical inactivity and NCDs

Physical inactivity is associated with major NCDs, such as coronary heart disease, breast and colon cancers, type II diabetes and chronic respiratory disease, which account for premature death of approximately 6-10% of the world's population, annually (Allender, Cowburn & Foster, 2006; Beaglehole *et al.*, 2011; Lee *et al.*, 2012;

World Health Organization [WHO], 2010; WHO, 2014). Globally, the prevalence of physical inactivity between 2010 and 2011 was estimated to range from 23% to 31% for adults above 18 years of age (World Health Organization [WHO], 2015; Hallal *et al.*, 2012). Higher levels of physical inactivity were more reported among women (27%), than men (20%), as well as among older adults (55%) than younger adults (19%) (WHO, 2015). However, irrespective of young adults being more physically active, the reverse is true for adolescents (11-17years), who were found to have a high prevalence (81%) of inactivity (WHO, 2015). Regionally, the prevalence of physical inactivity was established to be higher in affluent countries, namely American (32%) and Eastern Mediterranean regions (31%), and lower in the low income countries, such as the African (21%) and South-East Asian regions (15%). On the country level, Rwanda's physical inactivity prevalence was 15% for adults (WHO, 2015).

The lower levels of inactivity in Africa, and in Rwanda specifically, can be explained by the fact that people accumulate more physical activity from work and transport (Republic of Rwanda [RW], Ministry of Health [MINISANTÉ], 2015; WHO, 2015). While this may be true for rural and semi-rural dwellers, it might be quite the contrary for urban dwellers, due to urbanisation and globalization, which influence unhealthy lifestyle changes, including physical inactivity (Hallal *et al.*, 2012; Kouvonen *et al.*, 2005; WHO, 2010). There has been a paradigm shift from the traditional way of manual energy expenditure, due to the invention of machines, which lessen the physical work, such as automobiles, computers and telephones, among others. These have greatly increased the odds of exerting less physical energy in individuals' day to day lifestyle activities, especially with job and domestic related activities (Hallal *et al.*, 2012; Hanefeld, 2015).

The rapid unplanned urbanization and globalization, occurring mainly in low social economic countries, affects public health, and is linked to NCDs, as a result of unhealthy environments and behaviours, such as physical inactivity, among others (Assah, Ekelund, Brage, Mbanya & Wareham, 2011; WHO, 2010). While the impact of NCDs is felt globally, the low and middle income countries suffer more, with 45% of all diseases' burden attributed to NCDs (World Health Organization [WHO], 2012a).

This further weighs down, not only the health systems that are already confronted by infectious diseases (Unwin *et al.*, 2001; WHO, 2012a), but also Africa's economic development (African Union [AU], 2007). Similarly, the 2012 United Nations (UN) conference on sustainable development informed that NCDs are among the major challenges of sustainable development in the 21st century, especially in the low and middle income countries (World Health Organization [WHO], 2012b). To address this challenge, a new health goal of minimizing 25% of premature deaths due to NCDs by the year 2025, was approved (Horton, 2013).

1.2.2. Physical activity as a primary prevention of NCDs

“The focus of the Global Recommendations on Physical Activity for Health is primary prevention of NCDs through physical activity at population level, and the primary target audience for these Recommendations are policy-makers at national level” (WHO, 2010: p. 7). During the 2008-2013 global meeting on prevention and control of NCDs, the prevalence of NCDs was predicted to increase in ten years' time, if not addressed, with the highest increase (27%) occurring in the African region (WHO, 2008). Hence one of the global strategies to prevent NCDs was to reduce 10% physical inactivity by 2025 (WHO, 2008). This compliments the health goal in the Sustainable Development Goals (SDGs) for 2030 agenda that was launched in 2015 by the United Nations heads of state and government (WHO, 2015). Goal 3, which is the overall health goal to “Ensure healthy lives and promote well-being for all, at all ages”, has 13 sub-goals, of which sub-goal 3.4 is to “By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being” (WHO, 2015: p. 196).

Non-Communicable Diseases and the related risk factors thereof, are multi-factorial and, therefore, require multi-level interventions, such as an inter-sectoral policy approach, where private and public sectors partner with the health division, to control and prevent NCDs, as well as the related risk factors (Kohl *et al.*, 2012; WHO, 2008). For instance, sectors like transport, urban planning and education could be pivotal in influencing large numbers of people to engage in some kind of physical activity, as a means of primary prevention of NCDs (WHO, 2008).

1.3. Problem Statement

The effectiveness of the manner in which a country addresses a public health issue, is not only reflected in its ability to formulate a policy related to the challenge, but also in its ability to execute the policy, effectively. Physical activity, although widely accepted as a healthy lifestyle, and a cost-effective means of primary prevention of NCDs, has not yet gained enough advocacy in the health sector, particularly in most African countries (Varela *et al.*, 2017). This may be attributed to its complexity, which requires multi-sectoral engagement, to successfully develop it (WHO, 2008). The level of physical activity participation, particularly leisure-time PA among urban dwelling Rwandans, is still low, even though national legislative documents, such as the Sports Development Policy and the Ministerial Order, stipulate that government employees engage in leisure time/sports activities for 2 hours, once every week (RW, MINISPOC, 2012).

With the current social economic development in Rwanda, it may be argued that the working class continuously engages in full time white collar activities, which may limit them from engaging in leisure time physical activities (Breuer, Hallmann, Wicker & Feiler, 2010). Additionally, as much as urbanisation and globalization have well appreciated advantages, they also harbour certain disadvantages. Urbanization increases the chances of individuals, especially urban dwellers, to adapt sedentary behaviours, as a result of reduced traditional labour-intensive activities, which are associated with high energy expenditure (Wagner & Brath, 2012). As highlighted earlier, low levels of leisure time physical activity were revealed across various population groups in Rwanda, such as the elderly, the working group, as well as individuals with chronic lifestyle diseases like diabetes, hypertension & HIV/AIDS (Frantz & Ngarambe, 2013; Kabanda & Phillips, 2011; Kagwiza, Phillips, Struthers, 2005; Kanyoni & Phillips, 2009; Mukaruzima & Frantz, 2012). Physical inactivity, similar to diabetes, alcohol, smoking, overweight and obesity was significantly linked to hypertension among university employees in Kigali ($p < 0.05$) (Banyangiriki & Phillips, 2013).

It might not be possible to generalise much of these results across the entire population of Rwanda; however, the need to increase the level of leisure time physical activity participation cannot be ignored, owing to its wide range of health benefits, such as averting the effects of the morbidity and mortality of NCDs (Muthuri *et al.*, 2014; Tremblay *et al.*, 2011; WHO,

2004). Non-communicable diseases in Rwanda are currently on the rise and encroaching on the health system, which is already burdened with infectious diseases (RW, MINISANTÉ, 2015). The findings of Alleyne *et al.* (2013), as well as WHO (2014), assert that NCDs account for 25% and 35%, respectively, of Rwanda's national disease burden.

The onset of NCDs is a slow and gradual process, which evolves over a long period of time, and is associated with lifelong debilitating complications (Booth, Gordon, Carlson & Hamilton, 2000). Therefore, most people at risk may not necessarily find any reason to seek medical care during their active working period, but would rather later, when the disease has fully developed, and, in most cases, hard to reverse (Booth *et al.*, 2000). Consequently, this is associated with diverse negative impacts for an individual and his/her family, as they face financial, physical, emotional and spiritual burdens (Zhang & Chaaban, 2013; Booth *et al.*, 2000). To the society, employers and the nation, the burden is linked to the financial expenditure by the health insurance, loss of productivity and participation (Booth *et al.*, 2000; Hannon, 2005; Horton, 2013; Patel *et al.*, 2010; Stout, 2009).

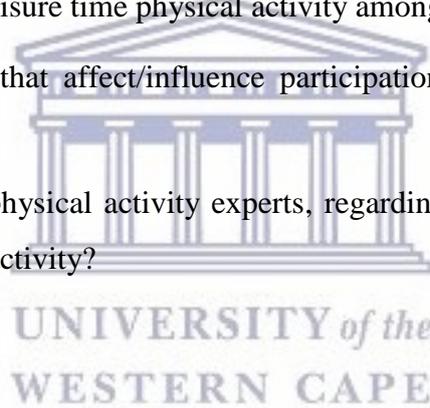
While early clinical detection is important in controlling and managing NCDs, primary prevention is a cost effective means, which is equally important in minimizing their incidence (Booth *et al.*, 2000). Meanwhile, the health care system puts more emphasis on secondary and tertiary management of chronic diseases, which mainly slows the progression of the disease, instead of reversing it once the clinical signs have manifested (Booth *et al.*, 2000; Stout, 2009). This is sequel to the weak recognition of preventive medicine as a curative option, whereby medical students are trained to cure diseases, as opposed to preventing them (World Health Organization [WHO], 2003).

Physiotherapists, therefore, have an important role to play in the primary prevention of diseases, based on their scope of practice, which encompasses health promotion, prevention, treatment/intervention, habilitation and rehabilitation (Kigin, 2009; World Confederation for Physical Therapy, 2017). In Rwanda, there is strong political will to promote physical activity, as traced through the National Sports Policy, as well as other legislative strategies, such as the mandatory Friday sports for government employees, and the car free zone in some streets of Kigali CBD, to encourage walking (Tashobya, 2015; RW, MINISPOC, 2012).

However, it has been observed that the implementation framework of these strategies is obscure, with inconsistencies between policy and practice, as well as stakeholders' interests in and motivation towards their implementation.

1.4. Research Questions

1. How does the Rwanda Sports Policy respond to the health aspect of Rwandans?
 - a) What was the motive for developing the sports policy?
 - b) Who were the stakeholders involved in developing the sports policy?
 - c) What was the role of different stakeholders in developing the sports policy?
 - d) What are the implementation strategies of the sports policy?
 - e) How are the stakeholders involved in the implementation of the sports policy?
2. What is the prevalence of leisure time physical activity among government workers?
 - a) What are the factors that affect/influence participation in leisure time in physical activity?
3. What are the opinions of physical activity experts, regarding best practices in promoting health enhancing physical activity?



1.5. Aim of the study

This study attempts to develop a policy brief, with implementation strategies, to facilitate the promotion of health enhancing sport activities among government employees in Kigali City, as a healthy lifestyle and means to minimize the risk factors of NCDs.

1.6. Objectives of the study

- 1) To review the development process and implementation strategies of the current Sports Policy, in terms of promoting leisure time physical activities/sport in Rwanda as a healthy lifestyle.
- 2) To explore the views of key stakeholders of the Rwanda Sports Policy regarding its development and implementation.

- 3) To explore and describe the factors that motivate, or limit, individuals to participate in leisure time physical activities.
- 4) To explore the opinions of physical activity experts concerning best practices in promoting health enhancing physical activity.
- 5) To develop a policy brief with implementation strategies that facilitate the promotion of leisure time physical activity.

1.7. Significance of the study

The researcher contends that human capital makes a major contribution to the stable economy of a nation. For example, poor quality of life of affected individuals has a negative impact on their optimal productivity at work and in their social spheres. Cumulatively, this indirectly affects the employing institutions' and the nation's economy due to increased expenditure on treatment costs and reduced production of workers (Baicker, Cutler & Song, 2010). Generally, workplace wellness programs in USA, significantly saved employers an amount of 3.27 USD and 2.73 USD for every dollar spent on treatment expenses and absenteeism respectively (Baicker, Cutler & Song, 2010). Therefore, it is in the best interest and responsibility of a nation to keep its citizens healthy, if they are to be productive. This can be achieved through creating safe, enabling and favourable environments that encourage people to make informed healthy choices.

While the promotion of physical activity alone may not be the solution to preventing all diseases, it is associated with a wide-range of health and non-health benefits that cannot be disregarded, besides it is a modifiable risk factor that can be prevented (Burden & Branch, 2010). Therefore, physical inactivity should be considered and addressed as one of the high risk behaviours by public health policy makers (Wen, Tsai, Wai & Wu, 2013; Wen *et al.*, 2011; WHO, 2007). In addition, the values and interests of stakeholders, or other parties that are most likely to influence successful implementation of policies, in general, should be highly considered (Weimer & Vining, 2005).

This study has compiled evidence-based information that will guide the development of a policy brief document, for instance, data on the prevalence of leisure-time physical activity among selected government employees in Kigali, and the factors that influence, or affect,

their participation, as well as the experiences of key sport policy stakeholders on their views and experiences in developing and implementing the sports policy. Based on these data, recommendations regarding implementation strategies to promote health-enhancing leisure time physical activity/sports, in relation to the prevention of risk factors for NCDs, will be made. The policy brief will contextualize and highlight the importance of promoting health enhancing leisure time physical activity/sport among urban dwellers, with specific focus on government employees in Kigali city.

1.8. Methodology

This current study employed a mixed methods approach of both qualitative and quantitative designs for data collection and analysis. Data were collected in phases, from four sources. The first phase of data collection involves reviewing the sports policy to understand its development and implementation strategies, in terms of promoting health enhancing sports. This phase informs the second phase, which is to interview the sports policy stakeholders, regarding their views and experiences in the policy development and implementation.

The third phase is a survey with closed and open ended questions, regarding the level of leisure time physical activity, as well as the enabling and limiting factors towards participation. In this phase, the dependent variable is physical activity participation, while the independent variables are the respondents' demographic profiles, and the factors that contributed, or limited, their participation in leisure time physical activity. The respondents are government employees, sampled from the stakeholder institutions, located in Kigali, for convenience. The fourth phase is a Delphi survey, which seeks the opinions of physical activity experts, regarding the best practice strategies to promote health enhancing physical activity. The first round of open ended questions are based on the results of the preceding phases, namely, the sports policy review, the interviews with stakeholders of the sports policy and the survey with government employees. The last phase of this study is to develop a policy brief, with recommendations, regarding the implementation strategies of promoting leisure time physical activity participation among government employees.

Designing the policy brief entails a combination of the findings from all four phases, as well as the socio-ecological framework, in order to cover all aspects. The socio-ecological framework that guides this study, describes the multiple social and contextual factors that

influence individual behaviour, such as physical activity or inactivity. The researcher anticipates that this will provide a concrete basis to design evidence based implementation strategies, to promote leisure time physical activity behaviour.

1.9. Definitions of key terms

Physical activity refers to body movement that is produced by the contraction of skeletal muscles and increases energy expenditure (WHO, 2010; Chodzko-Zajko *et al.*, 2009; Caspersen, Powell & Christenson, 1985).

Exercise is a sub-category of physical activity that is planned, structured and repetitively done, with a purpose of gaining, improving or maintaining health and fitness (Chodzko-Zajko *et al.*, 2009; Caspersen, Powell & Christenson, 1985; Laporte, Montoye & Caspersen, 1985).

Policy is a formal statement that defines priorities for action, goals, and/or strategies, as well as accountabilities of involved actors (Beets, Wallner & Beighle, 2010). The World Health Organization [WHO] defines policy as a specific official decision, or set of decisions, designed to carry out a course of action endorsed by a political body, which includes a set of goals, priorities and main directions for attaining the set goals (WHO, 2012).

The Delphi survey is a research method used to collect data from a group of experts, in a succession manner, through rounds of questionnaires on a particular subject, until consensus is reached (Aarts, Schuit, Goor & Oers, 2011; Hsu & Sandford, 2007).

Sport refers to all forms of physical activity performed in a casual, or organized, manner to achieve health related benefits, such as physical fitness and mental well-being, or non-health benefits, such as social cohesions, or for competitions (European Sports Charter, 2001).

Sport for All: A form of organised physical activities that are accessible to everyone (WHO, 2011b)

1.10. Structure of the thesis

This thesis is structured in eight chapters, each representing different aspects of the study. Each chapter commences with a brief introduction that describes what it comprises, and concludes with a summary of its contents.

Chapter One which is the background, comprises a brief description of the main components of the study. The researcher provides an overview of the Sports and Health programme in Rwanda, and that of physical activity/inactivity in respect to NCDs generally. In addition, the problem statement, aim and objectives of the study, the research questions, significance of the study and the methodology, are highlighted. Finally, the chapter is concluded by outlining the structure of the thesis and definitions of the key terms.

Chapter Two comprises the literature review, which includes a narrative literature of existing research and the disparities regarding the major aspects of the study. In this chapter, the researcher delves into previous and current studies of different proponents, which relate to this current study's objectives. Essentially, a general overview of Rwanda's health status and the health policy is provided in detail. A review of literature relating to the Sport Policy, as well as the extent to which it does, or does not facilitate health promotion, is highlighted. Additionally, the factors that affect the advancement of Sport, as well as Leisure Time Physical Activity (LTPA), as means of health promotion measures are discussed. Ultimately, a comprehensive description of the theoretical framework, which guides this current study, is provided.

Chapter Three comprises the methodology, in which the overall procedures used in the study to collect and analyse data regarding the study objectives described. The rationale for using mixed methods design, with a detailed description of each method, as well as how it applies to each phase of the study is provided. The adopted procedures for identifying and recruiting participants and the study settings are indicated. Finally, the data collection tools and analysis procedure, as well as the ethical procedures that guided the study, are outlined. The following chapters, Four, Five, Six and Seven are the results/findings of each corresponding objective of this current study.

Chapter Four contains the findings for objective one and two, which were combined as they complimented each other. They include findings of the Sports Policy review, as well as the opinions and experiences of its stakeholders, regarding the role of the Sport Policy in promoting the Sports for Health programme. In addition, the socio-ecological framework, regarding how public policy, specifically the Rwanda Sports Policy, influences physical

activity participation to some of its beneficiaries is explored. This was assessed through the policy development process, which highlights its goals, how it was adopted, and its implementation framework, using the policy process models.

Chapter Five includes the results that correspond to objective three. The aim of this objective was to assess the demographic profiles, levels of Leisure Time Physical Activity (LTPA), as well as the factors that contribute, or limit, participation among government employees. Presented in this chapter is a description of the demographic profiles of the respondents in the survey and their level of LTPA. A relationship between the demographic profiles and respondents' levels of activity are also explained. Finally, their perceived factors that contribute to, or hinder, their participation in LTPA are reported.

Chapter Six comprises the results of the Delphi survey, which sought expert opinion in the field of physical activity regarding physical activity/sports and health. Only two rounds of inquiry were conducted, as a high consensus, ranging from 75% to 100%, was reached at the end of round two of the survey. The first round required experts to provide their opinion on the following subjects: 1. Sports/physical activity participation vis-à-vis health. 2. The most cost-effective and practical strategies of promoting physical activity. 3. How these strategies could be tailored to benefit people in different settings, namely, rural and urban, and, 4. The potential interventions to address the challenge of non-compliance/non participation in physical activity. The responses from the first round were presented and analysed qualitatively. The main constructs were identified and grouped under four general scales, corresponding to the initial questions, to form the second round of the Delphi survey, in the form of a five-point Likert scale. Subsequently, the experts were requested to rate their responses on a scale of one to five, where 1=strongly Agree, 2=Agree, 3=Neutral, 4=Disagree, 5= Strongly Disagree. Most of the experts were in general agreement on all the variables; therefore, another round was not required.

Chapter Seven comprises the Sports Policy Brief, which is presented under the following sub-headings: 1. Executive summary, 2. Introduction, 3. Identified gap, 4. Supporting evidence, 5. Recommendations, and, 6. Its implications. The policy brief is the ultimate outcome of this current study. It serves as a means to communicate the current research

findings to the target audience, which is the policy makers in the Ministry of Sports and Culture (MINISPOC), as well as the Ministry of Health (MINISANTÉ).

Finally, **Chapter Eight** comprises a recap of all the findings, in relation to the theoretical framework used in the current study. It constitutes a summarised outline of the study objectives, the strengths and limitations of the study, as well as the implications and concludes with recommendations.



CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter is an exploration of the literature, relevant to the main aim of this current study and its corresponding research questions. Most of the background literature, regarding the study objectives, have been discussed under each objective. Therefore, presented herein is a general review of the literature that relates to the sports policy, as well as the extent to which it does, or does not, facilitate health promotion. Discoursed also, are the factors that affect the advancement of sport and/or leisure time physical activity, as a health promotion measure, as well as the role of physiotherapy in health promotion. In addition, a general overview of Rwanda's health status and the health policy are highlighted in this chapter. Finally, the theoretical framework that supports this study is discussed in detail.

2.2. Sport and Health

Sport is associated significantly with health benefits and, therefore, has the potential to improve people's health, across all ages, specifically "Sport for all" which is linked to health development, from the sports policy perspective (Mountjoy *et al.*, 2014; Bloyce, Smith, Mead, & Morris, 2008). Scholars determined that structured sport, when performed in low and moderate bouts, provide more health related quality of life among its participants, as compared to any other forms of physical activity (Omorou, Erpelding, Escalon & Vuillemin, 2013; Kull, Ainsaar, Kiive & Raudsepp, 2012; Eime, Harvey, Brown & Payne, 2010).

In order to understand sport in its entirety, it is crucial to unpack and describe it from its operational context. Essentially, sport is a sub-category of exercise, which has expected goals, predetermined regulations to observe, and may be performed independently, or in a group (Khan *et al.*, 2012). Besides, sport and exercise are parts of physical activity, specifically Leisure Time Physical Activity (LTPA). Unlike the general physical activity, both sport and exercise are planned, structured and repetitive bodily movement, intended to improve or maintain physical fitness (Caspersen, Powell & Christenson, 1985). Overall, all

three provide health benefits, partly through their contribution to cardiorespiratory fitness (Laskowski & Lexell, 2012; Lee *et al.*, 2011), as well as reducing the risk of all-cause mortality by 20-40%, compared to non-participation (Khan *et al.*, 2012).

2.2.1. Sports policies and health

Generally, although sports policies have the potential to promote health, it is not their primary allegiance. In fact, there has been fundamental critics of the role of sport and sports policies in promoting health. Allegedly, sports policies tend to prioritize elite sport over other sport categories. Specifically, Sport for all and mass sport, which are more linked to health promotion (Waddington, 2000). Additionally, this is portrayed through the way sport activities are commonly structured, which is more for competition, rather than for recreational purposes (Khan *et al.*, 2012). Consequently, this poses a challenge as some people may shy away from engaging in sports activities because they feel inadequately skilled as compared to their colleagues (Somerset & Hoare, 2018; Allender, Cowburn & Foster, 2006).

Governments also readily sponsor professional sport, as it puts them on the global scene, where they are recognized as sporting nations (Grix & Carmichael, 2012). According to Richards & Foster (2013), countries that have suffered civil unrests, offer more political support to sport, because it is used as a means of social economic development, as well as to create social cohesion among people. Subsequently, opportunities for investment often neglect community sport engagement, which seemingly has no direct economic benefits, other than contributing to people's health. Eventually, due to its social influence, and the economic benefits attached, professional sport, as opposed to other sport categories, attract more financial support; hence its popularity (Hone, 2005).

2.2.2. Sports as an instrument for socio-economic development

While the health benefits of sport are unequivocally appreciated, the efforts to use it in health promotion, are seemingly dominated by the urge to use sport as a tool for social economic development and conflict resolution. This is attributed to the power and fame that sport has over, and among its fans. As declared by various scholars, sport, generally, has gained much popularity as a means of creating peace and socio-development, especially in unstable environments (Cardenas, 2016). This is mainly

because sport is believed to have the ability to eliminate barriers, and, therefore, bring people together, through unbiased communication, creating a team building spirit (Cardenas, 2016; Coalter, 2010; Right to play, 2008). More specifically, sport as a means of development, capitalizes on its universal reputation, and the fact that sports fans identify themselves with sports brands (Heere & James, 2007).

However, sport alone does not provide these benefits, but rather it is the non-sport activities, incorporated, that make a positive impact. For example, commercial sport events, sport federations and athletes are the components of sport, used to bring about social development, by being platforms for public awareness drives, role modelling and advocacy (Cardenas, 2016). As illustrated in a study conducted in the United Kingdom, sport was used as a means to resolve issues regarding domestic violence and sexual abuse, by encouraging behaviour change and increasing public awareness. The participants of this study were coerced into attending educational sessions about domestic violence and sexual abuse, in return for being trained by players of one of the well-known football clubs (Walker & Hills, 2017). This method was successful in raising awareness about such delicate subjects as domestic violence and sexual abuse. The love and respect for sport, as declared by the fans or spectators, ensured their absolute attention, so that they were bound to listen to the messages passed on to them in a sporting environment (Walker & Hills, 2017). Values, such as respecting one another, or one's partner, were delivered in the context of the sport, where respect for the game, fellow players, coaches and opponents is highly observed (Walker & Hills, 2017). Sport brings people together, and it is through this social cohesion component that horizontal and vertical associations between communities, governments and possible funding programmes, among others, are created (Right to play, 2008).

From this perspective, therefore, it is clear that sport is a cross-cutting discipline that is used to realize different national and internal developmental objectives, such as the millennium development goals, as well as the sustainable development goals (Right to play, 2008). The realization of these objectives, however, is dependent on the priority and emphasis they receive. Therefore, with health being part of the objectives, more emphasis should be drawn towards achieving them, specifically.

2.2.3. The process of achieving sports-related health benefits

Normally, participation in sport is assumed to indirectly provide health benefits to the participants. Although further evidence is required to ascertain how these benefits are achieved, they have been linked to the nature of sport, which is normally structured or organised (Eime *et al.*, 2015). For example, owing to its social characteristics, structured sport provides more social and mental health benefits, improving the quality of life, compared to other types of physical activities (Eime, Young, Harvey, Charity & Payne, 2013; Eime *et al.*, 2010). Additionally, the mechanisms through which these health benefits are achieved, are described from two different theoretical perspectives, which complement each other. Specifically, Sport as a “virtuous cycle”, and Sport as a “double pyramid” (Grix & Carmichael, 2012: p. 74). Although the two theories are similar, where one builds on the other, they differ slightly, as the former portrays a circular relationship, while the latter has a direct relationship.

The double pyramid depicts a two stage direct relationship of sports participation. It starts with mass sports participation, or sport for all at the base, which eventually results in elite sports participation at the top. In essence, mass participation, which is the wider base of the pyramid, increases the chances of more individuals participating in sport; therefore, gaining the related health benefits. From this physically active population, a few talented professional sports men and women are selected to form the apex of the pyramid (Grix & Carmichael, 2012). Subsequently, the virtuous cycle continues to describe that these elites, at the top of the pyramid, become role models for the vast majority, who are encouraged to continue engaging in various sports activities, with the aim of becoming professionals at a certain point in time (Khan *et al.*, 2012; Hanstad & Skille 2010).

Therefore, the virtuous cycle of sports, as the name implies, is a circular chain of sports activities, as well as how they relate to each other, in terms of the benefits they provide. (Grix & Carmichael, 2012). This stage complements the double pyramid, by defining the relationship of sports, and its benefits, in three stages. It starts with successful performance in elite sports, which leads to global recognition and, therefore, increased

mass sports participation. Ultimately, this creates a wider base of healthy people, from which talented individuals are identified as the future elites, and the process starts all over again (Grix & Carmichael, 2012; Hanstad & Skille, 2010).

As much as the assumption that participation in elite sports lead to mass participation, is not disputed, the argument is that it is not based on concrete research evidence. Therefore, this defies the anticipated outcomes, which are not guaranteed (Eime *et al.*, 2015; Grix & Carmichael, 2012; Hanstad & Skille, 2010). Similarly, Khan *et al.* (2012) impugn the validity of how sports participation is defined, causing concern about what rates of sports participation is sufficient to influence population health. In fact, since there are no clear pathways, or even resources (financial or human), attached to the implementation of health enhancing sport, the chances of promoting it are dwindling. In light of these findings, therefore, instead of expecting or assuming that people will indirectly gain health benefits, when they engage in mass sports for talent identification, specific attention should be directed towards promoting and financing health enhancing sports or physical activity.

2.3. Challenges associated with promoting health enhancing physical activity or sport for health

Despite strong evidence that endorses physical activity as a cost effective measure of enhancing health (Eime *et al.*, 2015), physical inactivity still remains a challenge, and among the neglected high risk behaviours (Allender, Cowburn & Foster, 2006; Booth *et al.*, 2000). This is mainly attributed to policies and the health care system as discussed in detail below.

2.3.1. Policy related challenges

While public policies are able to influence change on a large scale, the process of formulating them involves a number of complex dynamics, which eventually affect their intended outcomes (Eyler, Chriqui, Russell & Brownson, 2016). For example, the development process of policies, especially public policies, should ideally involve all its stakeholders and beneficiaries, as this contributes to a better understanding of the policy, as well as how it is to be implemented (Ball & Stevenson, 2006; Bloyce & Smith, 2010). However, this is not always the case, because of the top-bottom approach

that is normally used when developing these policies. With this approach, decisions are made at the top management level, and directives pertaining implementation are given to individuals in the lower ranks, or other implementers, who are not necessarily part of the decisions made (Sabatier, 1986). The downside of this approach, however, is that the important contribution of the stakeholders is overlooked, yet they are believed to be closer to the policy beneficiaries (Matland, 1995).

Both the development and implementation processes of the policy require adequate resources (Weimer & Vining, 2005). However, while inadequate resources can have a negative impact on the effective promotion of health enhancing physical activity, so can lack of motivation, skewed attitudes and beliefs of stakeholders. In addition, poor attitudes and beliefs of policy makers and stakeholders, including individuals for whom policies or strategies are intended, can negatively affect the advancement, or adoption of policies that are instead intended for a good cause (Weimer & Vining, 2005). Therefore, sufficient resources should be accompanied by the desirable, or non-biased attitudes of the stakeholders.

The conflicting power influence and personal gains of the various players may also present as major setbacks that complicate the entire policy process, including its implementation (Smith & Platts, 2008; Bloyce & Smith, 2010). Therefore, the inability of stakeholders to decide on how to implement a specific policy, or determine how resources are allocated, negatively affects their commitment, as well as how they conduct the implementation process, which, eventually, thwarts the intended outcomes (Bloyce & Smith, 2010; Weimer & Vining, 2005). These elements, therefore, should be considered and addressed during the initial stages of the policy process, such as its adoption and implementation, as well motivated and influential people are vital to support a specific policy.

Finally, the insufficient and biased understanding of the technicalities involved, in terms of stakeholders' responsibilities, as well as the issues around policy implementation, affect how these policies are enacted (Weimer & Vining, 2005). Stakeholders neglect to internalize their counterparts' challenges with carrying out

policy directives, and, therefore, appear to pass the buck (Weimer & Vining, 2005; Dopson & Waddington, 1996).

2.3.2. The health care system

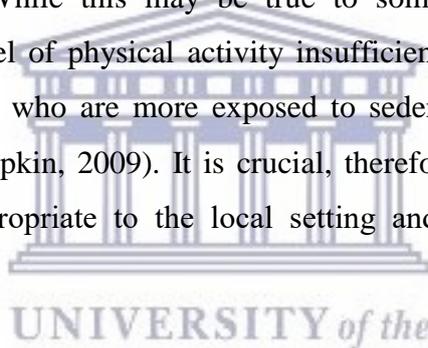
While the modus operandi of the health care systems may vary across different countries, the predominant one in Rwanda is the biomedical approach. Basically, this approach primarily focuses on biological factors to determine healthy or unhealthy persons, in order to prevent, or cure their illness (Mugisha, Ssebunya & Kigozi, 2016). Although this approach is not wrong, it is not comprehensive either. It is a major hindrance to promoting health enhancing physical activity, which is out of the sphere of biological causes of ill health (Mugisha, Ssebunya & Kigozi, 2016). As a result, people are not given enough choices to manage their health, as they are subtly coerced into using the biomedical model approach, to maintain good health. Besides, health promotion is seemingly encapsulated within the boundaries of the health care arena, yet it reaches beyond. The health care system is a small part of the entire social system, which is closely linked to other services. Therefore, it is important to understand how it functions vis-à-vis the social system, in order to identify mutual objectives, as well as how they can be achieved, efficiently.

Physical activity is still a neglected and underexploited option in the health care system, as far as primary prevention of diseases is concerned (Allender, Cowburn & Foster, 2006; Booth *et al.*, 2000). Strategies that promote public health are more biased towards the biomedical model of health care delivery, and less towards the non-pharmacological means, such as the biopsychosocial approaches. In a nuanced manner, alternatives such as health enhancing physical activity initiatives are not accorded equal importance as the traditional pharmacological prevention methods, such as vaccination or prophylaxis medicines (Vancampfort *et al.*, 2017; Mugisha *et al.*, 2016). This is also aggravated by the global funding attached to such interventions, as stated in research findings. For example, Roberts, Ocaka, Browne, Oyok and Sondorp (2008) assert that the health sector is generally not well funded, as even the available funding is channelled towards the more seemingly priority areas.

Conversely, the fact that the sports policy does not primarily derive from a health perspective, but instead from a socio-political angle, makes incorporating it into the health system challenging. Therefore, for sports policies to be used as strategies to promote health, sport should be equally prioritised and considered in the health care system, as a measure for improving people's health.

2.3.3. Misconception of physical activity levels

The possibility exists of under or over estimating physical activity levels among people in low and middle income countries. The assumption that people in low socio economic settings are highly active, may be a prevailing hindrance to promoting health enhancing physical activity in such populations (WHO, 2010; Starkey, Ellis, Hine & Ternell, 2002). Generally, most people in low and middle income countries are believed to be physically active, by virtue of their daily lifestyles, which involve physically demanding activities. While this may be true to some extent, it poses a risk of underestimating the level of physical activity insufficiency among some populations, such as urban dwellers, who are more exposed to sedentary lifestyles (Assah *et al.*, 2011; Ng, Norton & Popkin, 2009). It is crucial, therefore, to adopt physical activity guidelines that are appropriate to the local setting and relevant to people's needs (WHO, 2010).



2.4. Physiotherapists as public health promotion advocates

According to the World Health Organization (WHO, 2007), the overall health care service delivery for all patients should incorporate health promotion. The Bangkok charter for health promotion defines it as “The process of enabling people to increase control over their health and its determinants, and thereby improve their health. It is a core function of public health and contributes to the work of tackling communicable and non-communicable diseases and other threats to health” (WHO, 2005: p. 1). Similarly, other scholars have described health promotion as a means of improving the general health and well-being of people through disease prevention, identification of the sick and maintaining their good health (Laliberté, Perreault, Damestoy & Lalonde, 2012).

Public health is largely affected (positively or negatively) by various factors, such as the environments in which people live and work, as well as the social, economic and political influences (WHO, 2008). Therefore, a comprehensive approach of health care delivery, which includes health promotion should be applied. It should go beyond the traditional biomedical model of disease management, which mainly deals with only the biological causes of the disease. The biomedical model of health care poses a challenge to holistic health care service delivery, because it excludes other factors that affect people's health, such as the social, environmental and psychological factors that are part of human life (Wade & Halligan, 2004).

Health promotion is an important aspect of health care services, and is emphasised even more in the physiotherapy context, specifically promoting health enhancing physical activity. It is one of the core bases of physiotherapy practice, which is why physiotherapists are regarded as experts in prescribing exercise therapy (World Confederation for Physical Therapy [WCPT], 2007). While most health personnel are generally trained to concentrate more on curative care (WHO, 2003), physiotherapists are trained to identify and improve the quality of life and functional movement, within the spheres of promotion, prevention, maintenance, intervention/treatment, habilitation and rehabilitation (Frantz, 2004; WCPT, 2007). The findings of a systematic review revealed that many physiotherapists in developed and low income countries were competent to enact health promotion services to their clients, such as prescribing health enhancing physical activity for both treatment and non-treatment purposes (Taukobong, Myezwa, Pengpid & Van Geertruyden, 2014).

However, physiotherapists in countries such as Sweden and New Zealand were hindered by the lack of support from the system to successfully apply this skill (Johansson, Weinehall, & Emmelin, 2009; Mulligan, Fjellman-Wiklund, Hale, Thomas & Hager-Ross, 2011). In another study, the authors assert that most health professionals experienced challenges with providing health promotion services to clients, even though it is acknowledged as a crucial part of their practice (Lobelo & Quevedo, 2016). Health promotion is a key component of health care systems, in terms of prevention of diseases and improving people's quality of life. However, its implementation is challenged with intertwined factors at different levels, which hampers its delivery by health professionals (Rubio-Velera *et al.*, 2014). Generally, some of

the barriers identified include, but are not limited to, lack of time, incompetence of health professionals (regarding health promotion skills), and inadequate institutional support (Lobelo & Quevedo, 2016; Rubio-Velera *et al.*, 2014; Hébert, Caughy & Shuval, 2012).

Rubio-Velera *et al.* (2014) describe the factors that influence health promotion practice, from an ecological model perspective, which has five levels, including, intrapersonal, interpersonal, institutional, community and policy related. At the intrapersonal level, the factors identified were mainly health professionals' competences, views and knowledge about health promotion; while at the interpersonal level, the attitudes and behaviours of health professionals, the patients, as well as all other people involved, greatly determined the health promotional practices. For example, patients' views and perceptions towards health promotion interventions, may determine the health care professionals' willingness to include it in the treatment package. At the Institutional level, health promotion is affected by the dominating nature of health care delivery (biomedical model), workload, inadequate time and referral resources. At the community level, factors pertaining to the patients' social and cultural values, such as religion and financial incomes, affect health promotion. Circulating messages from the media, as well as from the pharmaceutical industries, also determine how community members respond to health promotion interventions. Finally, policy decisions could reinforce the importance and implementation of health promotion at various levels, through the provision of financial support and academic training. Policies could influence social marketing drives to promote health, and encourage individuals and communities to make healthy lifestyle choices (Rubio-Velera *et al.*, 2014).

2.5. Theoretical framework for the study

A theoretical framework is a format that determines a research direction, based on an existing theory that has been established and verified by other scholars. It is used to explain specific occurrences and how they relate to each other (Grant & Osanloo, 2014; Eisenhart, 1991). Theoretical frameworks can be applied by both academics and practitioners to provide a basis for research studies, or for designing various programmes (Grant & Osanloo, 2014). In addition, theoretical frameworks support researchers' thoughts regarding how they understand and endeavour to create a coherent association between the research problem, purpose, significance and research questions (Grant & Osanloo, 2014). Human behaviour,

such as physical activity behaviour, is intricate and multifaceted; therefore, the factors that influence it should not be viewed through a single lens of a linear perspective (Hagger, 2016; Biddle, Hagger, Chatzisarantis, & Lippke, 2007; Winett, 1995; Stokols, 1992). Theoretical frameworks are ideal tools that help to understand and describe these various factors, which facilitate or hinder the adoption of physical activity behaviour. Besides, they could be used to guide the development and implementation of physical activity strategies, relevant and contextualized to people's settings (Grant & Osanloo, 2014). Therefore, a number of theoretical frameworks have been developed and used to explain such factors (Biddle, Hagger, Chatzisarantis & Lippke, 2007). As displayed in figure 2.1, some of these include:

- a) **Belief-attitude theories:** They are based on attitudes and beliefs, and are believed to be strong predictors of people's behaviour. However, as research advanced, scholars highlighted that attitude alone is not enough to affect behaviour change, and, therefore, a component of social cognitive theories was incorporated.
- b) **Competence-based theories:** They are centred on self-efficacy, confidence and motivation, as well as competence.
- c) **Control-based theories:** They highlight that adoption of physical activity behaviour is a result of an individual's desire to have control over his/her lifestyle.
- d) **Stage-based theories:** They propagate that behaviour change is not static, but evolves through different stages. They include multi-stage frameworks, such as the trans-theoretical model, which is used to understand the willingness to engage in physical activity. The stages of change are defined in five stages, namely: 1. Pre-contemplation; 2. Contemplation; 3. Preparation; 4. Action; and 5. Maintenance. These stages of change are further catalysed by four processes, namely: 1. Self-efficacy for change; 2. Perceived advantages for change; 3. Perceived disadvantages for change; and 4. Process of adapting to change, based on the individual's judgements, emotions and behaviour.
- e) **Hybrid models, such as the Health Action Process Approach (HAPA):** They combine both continuous and multi-stage models, hence the name, *Hybrid*.

This study, however, is guided by the Social Ecological Model (Figure 2.2), which helps to identify and understand the various individual and environmental factors that determine the physical activity behaviours of people. In addition, the model is used to design strategies that promote health enhancing physical activity among specific target groups in Rwanda (Stokols, 1992; 1996).

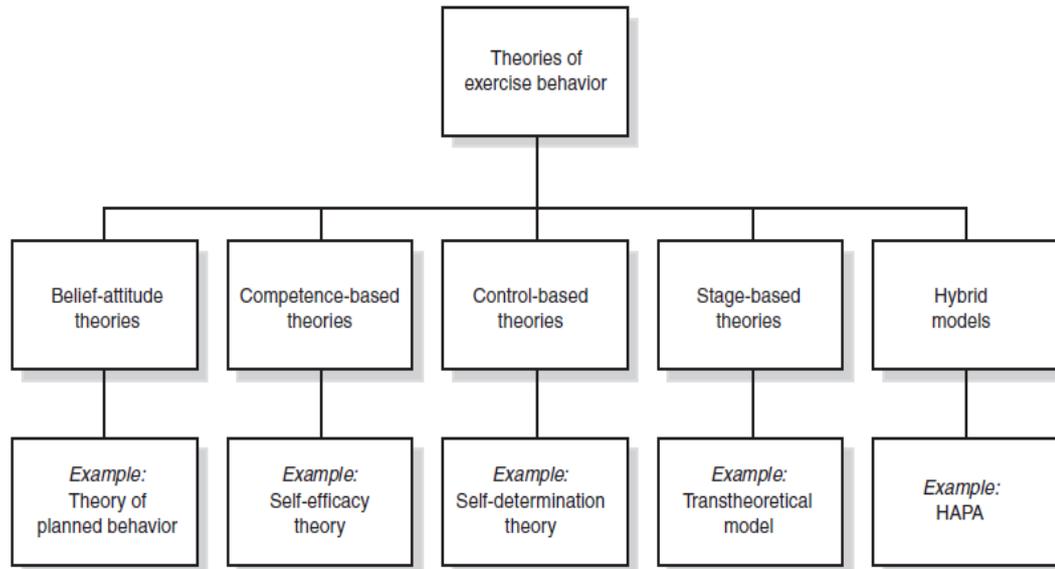


Figure 0.1: A framework classifying physical activity behaviour theories

Source: Biddle, Hagger, Chatzisarantis & Lippke (2007). Theoretical frameworks in exercise physiology

2.5.1. The Social ecological framework

The social ecological model describes the various factors that have an effect on human health and disease and how they are interconnected. These are: 1). Individual factors, 2). Social environment, 3). Physical environment, and 4). Public policy

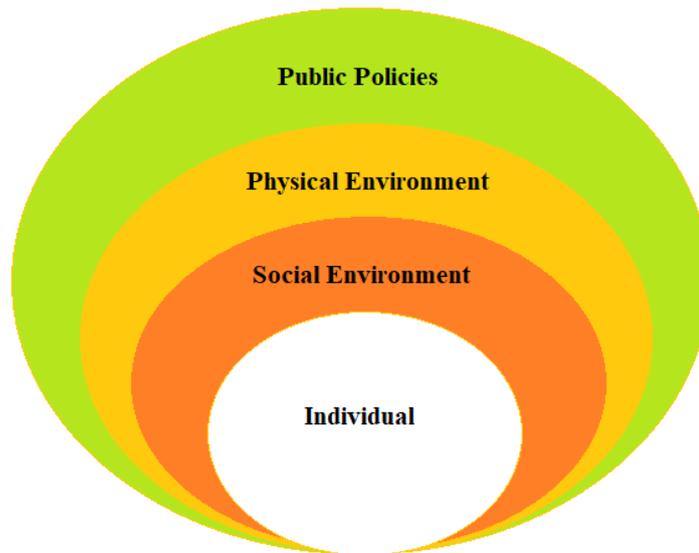


Figure 0.2: The Social Ecological Framework

Source: Stokols (1992; 1996)

This theory criticizes the previous versions of health promoting strategies, namely: *Stages of Change* (Marcus & Forsyth, 2003; Marcus & Simkin, 1994) and *Self-efficacy* (Bandura, 1977). These strategies mainly focused on modifying lifestyle changes, based on human behaviours, without considering the contributing environmental factors attached (Winett, 1995; Stokols, 1992). More specifically, these theories crucified the individual as the culprit in their ill health. For example, the Self-efficacy theory, which is a part of the overall Social Cognitive Theory, as explained by Bandura, is an important factor that contributes to an individual's behaviour, such as physical activity participation. The theory is firmly established on an individual's confidence, rather than on the skill of being able to plan and successfully accomplish goals, as well as the ability to withstand obstacles, through perseverance (Biddle, Hagger, Chatzisarantis & Lippke, 2007; Bandura, 1994). Therefore, sustained efforts are required to successfully undertake a particular task. According to Bandura (1977; 1994), individuals are more likely to overcome challenges when they are encouraged; therefore, the author emphasizes the importance of role models and self-appraisals in boosting the individual's sense of self-efficacy. This model, however, capitalises on individuals' behavioural change, based on their own efforts. Additionally, it has been established as effective in rehabilitating patients with cardiac problems, as well as sedentary non-patients (Biddle, Hagger, Chatzisarantis & Lippke, 2007).

Conversely, the Social Ecological Framework, which evolved from the studies of a number of prominent researchers, embraces the various determinants of human behaviour (Stokols, 1992; 1996). The work of Urie Bronfenbrenner's Ecological Systems Theory (Bronfenbrenner, 1992), which focused on the relationship between the individual and the environment, is one such study. Bronfenbrenner (1992; 1994) argues that human development is an interaction between individuals and their surroundings. These range from their family, friends, to school or work place colleagues, as well as the general cultural values and time factors that cause changes overtime. The theory embraces the influence of the multi-level environmental systems on human development, which also eventually influences their lifestyle behaviour. The author further discusses five ecological environments, describing them as set structures that are embedded into each other, from the inner most to the outermost levels, and specifically related them to "a set of Russian dolls" (Bronfenbrenner, 1994: p. 39). These environments are: 1. Microsystems; 2. Mesosystems; 3. Exosystems; 4. Macrosystems; and 5. Chronosystems.

McLeroy, Bibeau, Steckler & Glanz (1988), in their study, highlight the Ecological Model of Health Behaviours. The authors argue that individuals should not be entirely blamed for their ill health, as a result of their lifestyles, instead the role of the social environmental factors, in contributing to human health and sickness, should be examined. This model describes five different levels of influence on health behaviour, namely: 1. Individual; 2. Interpersonal; 3. Organizational; 4. Community; and 5. Public policy (McLeroy *et al.*, 1988). However, the physical environment, which is an essential component of a social-ecological model of physical activity, is excluded in this theory.

Finally, studies conducted by Daniel Stokols (Stokols, 1992; 1996) introduced the Social Ecology Model of Health Promotion. In his studies, this author identified the core assumptions that underpin the Social Ecology Model. He describes it as a comprehensive model that draws together different theories of enquiry. Unlike previous models, which capitalized on the biological and geographical influence on human

behaviour and their health, this model specifically focusses on the interplay between individuals and their social, organizational and cultural environments (Stokols, 1996). In order to understand the relationship between individuals and their environments, the social ecology adopts different concepts from the systems theory, such as, interdependence, homeostasis negative feedback, and deviation amplification (Stokols, 1996). In addition, the author asserts that most public health issues that involve lifestyle modifications, tend to be complicated, and can hardly be understood from one level, but instead require a more comprehensive approach to be addressed (Stokols, 1996). The Social Ecology Model, therefore, considers the social, institutional and cultural backgrounds of people, in relation to the environments in which they live, which goes beyond considering health as merely being free from disease, to the overall physical, emotional, and social well-being of an individual (World Health Organisation [WHO], 1984). Based on this concept, therefore, disease prevention strategies should encompass all levels that influence human behaviour (Stokols, Pelletier & Fielding, 1995), to address, or modify, unhealthy lifestyle, before the inception and manifestation of the disease symptoms (Green, 1984). Additionally, Green (1984) suggests that policy makers and public health professionals should devise better means of addressing health challenges related to lifestyle behaviours, instead of blaming it on the individuals and the health care providers.

Overall, all these theories seek to describe the various factors that contribute to health or sickness among humans, as well as how they are interrelated. Of specific relevance to this current study, is the Socio Ecological Model of promoting health enhancing physical activity, based on the four levels of influence, subsequently described, in detail.

2.5.1.1. Individual level

This is the primary level of influence of human behaviour and entails the biological and historical factors that determine how an individual responds towards a phenomenon. Examples of these factors include, gender, age, social status and previous exposure, self-efficacy, norms and attitudes (McLeroy et al., 1988). Regarding physical activity participation, for example, evidence reveals that physical activity levels vary according to the demographic profiles of

individuals. Various research studies report that males are always more physically active than females (Akarolo-Anthony & Adebamowo, 2014; Ying *et al.*, 2014; Azevedo *et al.*, 2007). Similarly, regarding age, physical activity levels correspond with an individual's age and, in most cases, the level of activity decreases with advancing age (Akarolo-Anthony & Adebamowo, 2014; Milanovic *et al.*, 2013; Sallis, 2000). In addition, individuals' historical backgrounds and previous exposure to physical activity, determine their perception, attitudes and beliefs towards it, which, in turn, influences their participation (positively or negatively), depending on the experience. For example, according to a British study among British adolescents, one of the factors that affected their engagement in physical activities was linked to their previous experience with school sport (Coakley & White, 1992). Although these findings were not generalised, they highlight the possibility of past negative experiences affecting future decisions.

2.5.1.2. Social environment

These include relationships with family members, workmates and friends, as well as the cultural values attached to these societies (Stokols, 1996; Bronfenbrenner, 1994). Individuals' social interactions have the potential to contribute to the kind of lifestyle they adopt. They can reinforce, or discourage, an individual's behaviour, through peer influence, or role modelling. For example, social support from family and friends, or social media campaigns, may increase the likeliness of an individual's engagement in physical activity (McLeroy *et al.*, 1988). Therefore, initiatives, aimed at modifying, or addressing the social environment, may consider community programmes, educational messages and social marketing campaigns, through social media, to increase public awareness regarding the advantages of physical activity, or the disadvantages of inactivity. Educational messages through public awareness campaigns help people to make informed choices, as well as influence positive attitudes and perceptions towards physical activity (Leavy, Bull, Rosenberg & Bauman, 2011; Madajewicz *et al.*, 2007). However, Sallis (1998) highlights that educational, or public awareness campaigns towards physical activity participation, may not be effective on their own. Instead, they should be coupled with other strategies, such as modifying

physical environments to accommodate such activities by creating, for example, walking tracks or play grounds.

2.5.1.3. Physical environment

This is the third level of influence on human behaviour and refers to the natural, or built environments that surround people, such as homes, workplaces, schools, and communities/neighbourhoods (Stokols, 1996). People are identified by the environments they live in, because their environments shape their behaviours (Bronfenbrenner, 1994). Some of the environmental factors that may affect physical activity participation include, insecure and overcrowded neighbourhoods, congested roads, and the lack of recreation space, or facilities (King, Stokols, Talen, Brassington & Killingsworth, 2002; Stokols, 1996). According to the researcher, people who live in environments where they feel unsafe, would be reluctant to engage in recreational activities, or even walk to access nearby shops. In addition, poor roads that are dusty and without sidewalks may discourage pedestrians. This phenomenon is common in low income countries mainly, where most feeder roads are not tarred and, therefore, most people, who do not own cars, prefer to use motorbikes, instead of walking to and from their residences to bus stations or other destinations. Therefore, the researcher is of the opinion that the environments in which people spend most of their waking time, should be conducive and enabling, for them to adopt physically active behaviours. For example, residential planners should avail open spaces, designated for recreation activities in the communities, and ensure that street lights are installed and maintained (King *et al.*, 2002).

2.5.1.4. Policy

Public policy forms the last segment of the Socio Ecological Model, and generally includes laws and regulations that are most likely to promote physical activity participation, or other desired population-based changes (Stokols, 1996). The adoption and implementation of local, or national policies, generally, has the ability to influence many changes, at various levels. For example, in an effort to achieve the Millennium Development Goals (MDGs) in Africa, most countries have endeavoured to create population wide policies, such as improving child and

maternal health, good nutrition, HIV/AIDS prevention, and universal education, among others (African Union, 2015). In Rwanda specifically, the MDGs influenced the formulation and adoption of strategies, such as the *Mutuelle de santé*, a national health insurance to ensure that, at least, all Rwandans received access to basic health care (RW MINISANTÉ, 2005; Republic of Rwanda [RW], 2000). Similarly, other policies include the Nine Year Basic Education Policy to make education available for all children (Republic of Rwanda [RW], Ministry of Education [MINeDUC], 2008), and the use of contraceptives for family planning (RW MINISANTÉ, 2005).

Regarding physical activity participation, since it is a cross-cutting and multi-factorial behaviour, it should be aligned to other relevant spheres of influence, such as the health system policies, urban planning, climate change and environmental policies, to encourage enabling environments (Tuso, 2015; Katzmarzyk, 2010). However, without commitment of the multilevel stakeholders, policy implementation becomes a challenge. Therefore, successful implementation of policies requires combined efforts from all stakeholders involved, starting with individuals, government and non-government institutions (Aarts *et al.*, 2011; Bauman *et al.*, 2012; Bellew, Schöeppe, Bull & Bauman, 2008; Bonita *et al.*, 2013; Christie, 1991; Lee & Moudon, 2004). This coincides with Christie's (1991: p. 17) narrative that "Society is like one human body, all the parts work together, different institutions in society have different functions but they all work together".

Overall, the concept of the Social Ecological Theory emphasises the importance of other factors that shape, or determine human behaviour, besides individual factors. Therefore, since it is impractical to tackle all levels of influence, health promotion interventions should focus on, at least, more than one of these levels that impact human behaviour (Golden & Earp, 2012; Green, 1984). Research findings reveal that some of the most successful strategies to promote physical activity are a combination of community-based strategies aimed at the less

physically active people, as well as the use of policies that influence the altering of built environments (Reger-Nash, Bauman, Cooper, Chey & Simon, 2006).

2.6. Rwanda's Health Status and the Health Policy

Generally, the Government of Rwanda committed itself to improve the health of Rwandans and to meet the national and international priority targets, concerning health, such as the millennium Development Goals [MDGs] (RW MINISANTÉ, 2009). Most of the poorer countries, including Rwanda, are challenged by poverty related diseases, which are generally responsible for 45% of their disease burden (Stevens, 2004). Such diseases include, inter alia, malnutrition, respiratory infections, malaria and HIV/AIDS, or are related to poor sanitation, congestion and high fertility rates (Stevens, 2004). Consequently, the 2012 Rwanda census report revealed that the major causes of death among Rwandans in 2008 were: malaria (15%), acute respiratory infections (13.7%), HIV/AIDS (8%), diarrhoea (7.2%), premature birth (6.3%), cerebrovascular disease (5.9%), tuberculosis (3.8%), malnutrition (3.3%), psychological trauma (3.2%) and NCDs (36%) (Leuchowius, 2014).

Besides poverty, Rwanda's health was exceptionally affected by the 1994 genocide against the Tutsis, which claimed, among others, the lives of various health personnel, and increased the prevalence of diseases like HIV/AIDS (Leuchowius, 2014; RW, MINISANTÉ, 2005). A decade after the 1994 genocide, the health sector and the economy of Rwanda were greatly burdened by a high prevalence of communicable diseases, particularly HIV/AIDS, which had escalated, due to the rape cases of women and girls (Leuchowius, 2014; RW MINISANTÉ, 2005). Together with other diseases, such as malaria, these led to high rates of maternal and child mortality, as well as a low life expectancy at birth for the whole population (RW MINISANTÉ, 2005). Consequently, this placed an extra strain on the government, and specifically on the health system, which had to forge its way out back onto the global scene, concerning health.

To improve the health of Rwandans, therefore, the Ministry of Health revised and adopted a Health Sector Policy in 2004 (RW MINISANTÉ, 2005). The Health Sector Policy is the primary point of reference for all health related activities and stakeholders involved. It provides the overall framework, regarding the objectives and priority needs in the health

sector, based on the three overarching policies: Vision 2020, Economic Development Poverty Reduction Strategy of 2002 [EDPRS] and Good Governance and Decentralisation Policy [GGDP] (RW MINISANTÉ, 2005; RW, 2000). The primary aim of these policies is to contribute to the well-being of Rwandans, by providing quality health services that are acceptable and accessible to the majority of people, as a result of their participation (RW MINISANTÉ, 2005). The policy is also meant to realize the mission of the Ministry of Health, Rwanda, which is to promote the health status of the Rwandan populace, by providing quality preventative, curative, rehabilitative and promotional services (RW MINISANTÉ, 2005).

A few years later, after the revision and adoption of the Health Sector Policy, tremendous improvements were noted in the Rwanda health arena. By virtue of the implementation of the policy directives, the health of Rwandans displayed remarkable improvements, as observed from various health indicators, such as improved life expectancy, improved child and maternal health, reduced prevalence of malaria and HIV/AIDS, among others. Life expectancy, in good health at birth, escalated from 38.3 years in 2002, to 66.2 years in 2012, and is further projected to rise to 69.7 by 2020. The gradual increase and projection for life expectancy at birth for Rwandans, is illustrated in Figure 2.3 (Maniragaba, Nkurunziza, & Michel, 2016; RW MINISANTÉ, 2005). Regarding diseases such as malaria and HIV/AIDS, two years after the 1994 genocide, the prevalence of HIV/AIDS was 47% country wide, with the highest prevalence (27%) in Kigali City. By 2008, it had dropped to 8%, and continued to drop to 3% currently. Similarly, Malaria prevalence declined by 70% between 2005 and 2010 (Leuchowius, 2014). The consequence of good health may be attributed to the nation's efforts, as well as the international funding towards achieving the global targets, for example, the Millennium Development Goals (MDGs). Three of these goals are health related, namely: Goal 4. Reduce child mortality; Goal.5. Improve maternal health; and Goal.6. Combat HIV/AIDS, malaria and other diseases (RW MINISANTÉ, 2009; United Nations, 2005).

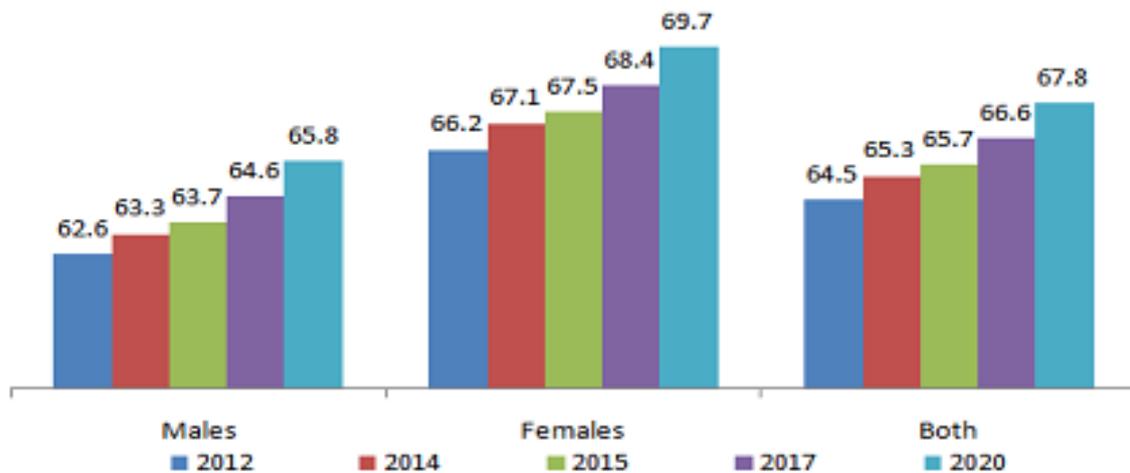


Figure 0.3: Evolution of Life Expectancy for Rwandans at birth, 2012-2020.

Source: Maniragaba, Nkurunziza, & Michel (2016).

Demographic Characteristics and Economic Growth: Rwanda's Experience (1995-2014).

In as much as communicable diseases are still predominantly a burden to Rwanda's health sector, Rwanda, like other Sub-Saharan African countries, is facing an epidemiological shift from communicable to non-communicable diseases and injuries (Marais & Petersen, 2015; RW MINISANTÉ, 2015). There are conflicting findings on the prevalence of NCDs in Rwanda, as reported by different sources. As stated in the NCD policy of Rwanda, NCDs were responsible for 52% of all outpatient consultations, and 22% of all in-patient admissions in district hospitals, for the year of 2013 (RW MINISANTÉ, 2015). Meanwhile, the World Health Organisation report indicated that NCDs were responsible for 36% of total deaths, while injuries accounted for 12% of deaths in Rwanda (WHO, 2014). To address the emerging NCDs, therefore, Rwanda's Ministry of Health developed an NCD policy, which was aligned to both the national and international policies, such as: Vision 2020: Economic Development Poverty Reduction Strategy II [EDPRS II]; Rwanda Health Policy; the NCDs Global Action Plan 2013-2020; and the Millennium Development Goals (MDGs) (RW MINISANTÉ, 2015). However, the Rwanda NCD policy does not directly consider physical activity promotion, as one of the strategies to combat the burden of NCDs. Although, the STEPS survey identified physical inactivity (21.4%) as one of the risk factors of NCDs (RW MINISANTÉ, 2015).

Generally, irrespective of the fact that there is an inconsistency regarding national physical activity guidelines towards health promotion, the Rwandan government recognizes the importance of sport and recreation for the general population. This is demonstrated by the National Sports Policy, and the Prime Minister's order for all civil servants to engage in leisure time physical activity, once every week for two paid hours (RW MINISPOC, 2012).

However, the conception and execution of these policies are often in conflict, and their presence do not necessarily translate to practice. Consequently, there is a need to address the inconsistencies in policy and practice (Bloyce & Smith, 2009), at all levels of intervention, including primary health care. A sports policy brief, therefore, would be crucial in providing recommendations to facilitate health enhancing physical activity to a specific target group of government office workers in Kigali.

2.7. Summary of the chapter

In this chapter, the researcher provided an overview of sport and health, as well as the challenges associated with promoting health enhancing sport. A highlight of Rwanda's health status was presented, as well as a general description of the Socio Ecological approach of addressing the various factors that affect health and disease. Generally, sport and the sports policies have political support, since they are used for social cohesions and economic development. Therefore, due to these characteristics, they could be an excellent means of promoting sport for health, besides professional sport. The challenges of promoting health enhancing sport are basically related to the policy processes and the health care systems. Pertaining to policies, it is the way they are developed, adopted and implemented, as well as the information that informs this process, and the resources attached. Regarding the health care system, the Biomedical Model approach focuses mainly on the disease and individual, neglecting other causative agents. In line with the health promotion definition, which entails a holistic approach of providing health to people, Physiotherapists are well trained to promote health, specifically to prevent lifestyle diseases, by prescribing appropriate health enhancing physical activities, to both their patients and the public. Overall, the Socio Ecological model seems ideal for health promotion strategies, as it helps to identify and understand the interactions between human behaviours and their environments.

CHAPTER THREE

METHODOLOGY

3.1. Introduction

In this chapter, an account of the methods used to answer the study objectives is provided. Both qualitative and quantitative data collection methods and analyses are presented. The population sample, the settings for the study and a description of the sampling techniques are described. Finally, the ethical procedures that were followed are highlighted.

3.2. Settings

This current study was conducted in Kigali City, the capital of Rwanda, where most of the administrative and business activities transpire, and all major government ministries are based. It is the largest and more central city of Rwanda. Kigali City comprises three Districts, Gasabo, Kicukiro and Nyarugenge, has a surface area of 730 km², and a population of, approximately, 1.3 million inhabitants, of which the majority (60%) are youth (Republic of Rwanda [RW]. 2016). The study sample was selected from among the employee population of the stakeholder institutions of the Sports Policy, most of which are government ministries. These are: Ministry of Sports & Culture [MINISPOC]; Ministry of Health [MINISANTÉ]; Ministry of Education [MINEDUC]; Ministry of Local Government [MINALOC], Ministry of Defense [MOD], Rwanda National Police [RNP], Rwanda National Olympic Committee [RNOC], National Sports Bodies [incorporated with RNOC], and the Private sector/Civil Society Organizations.

3.3. Population and Sampling Methods

3.3.1. Population sample

A research population refers to a well-defined group of individuals, or objects that share many common characteristics, and are the main focus of a scientific inquiry (Kothari, 2004). The target population of this current study was the Sports Policy stakeholders, as well as government workers, selected from the stakeholder institutions

of the Sports Policy in Kigali City. Additionally, included in this study, were the physical activity experts, recruited from different countries according to their expertise, availability and willingness to participate in the study.

3.3.1.1. The Sports Policy stakeholders and physical activity experts

Policy makers and experts in the sports/physical activity field were purposefully selected, using the snowball method of sampling. This method allows the selection of key subjects, who have the expertise, or knowledge in a particular area of interest to the researcher (Creswell, 2011). The inclusion criteria for the sample of the qualitative data collection subjects were any one from the stakeholder institutions that either participated in the development process of the policy, or was responsible for sports at that specific institution. In addition, the physical activity experts were selected, based on their knowledge and experience in the area of physical activity, relating to health. Since it was not easy to identify all the experts, the researcher based the selection on suggestions, provided by supervisors and other well-informed members.

3.3.1.2. The government employees

A stratified sampling technique was used to determine the study sample from the sports policy stakeholder institutions. Thereafter, a convenient sample of subjects was selected from each of these strata, to form the final study sample, which included both male and female adults, above 21 years of age, and able to furnish their written, or informed consent. Stratified sampling is a quantitative sampling technique, in which the target population of the study is divided into sub-groups, based on a prior definition of the sub-groups. Subsequently, a study sample is obtained from each of the strata, or subgroups, using either simple random, convenience or systematic sampling (Creswell, 2011; Given, 2008). Convenience sampling, on the other hand, is a non-probability sampling method, in which the subjects are selected, based on their availability and willingness to participate in the study (Creswell, 2011). In order to obtain a representative sample, as well as to reduce biases, the Yamane formula (Israel, 1992) was used to calculate the sample size for the quantitative data collection subjects, based on the overall

population of employees of the stakeholder institutions. The Yamane formula is denoted as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Equation 3.1

where ‘n’ refers to the study sample, ‘N’ the study population and ‘e’ the constant error (0.05). The total population size was 2427 employees at all the eight institutions. From the computation, using the Yamane formula, the minimum representative sample for the study was calculated at 344 subjects. However, in order to increase the accuracy of the study, more subjects, who were willing to participate in the study, were contacted and provided with questionnaires. Table 3.1, below, outlines the details of the sample calculations.

Table 0.1: Total population and Sample size computation

Stake holder institutions	Population size	Inclusion probability	Required sample size
MINISPOC	45	0.02	11
MINALOC	53	0.02	13
MINISANTE	250	0.10	62
MOD	850	0.40	210
RNP	750	0.29	185
PSF	32	0.01	8
RNOC	8	0.00	2
MINEDUC	439	0.17	109
Grand total	2427	1	600

3.4. Research Design

The researcher applied a mixed methods design of qualitative and quantitative data collection and analyses in this current study. Specifically, an exploratory sequential mixed method design was used, which involved using different approaches for collecting and analysing data from multiple sources. This procedure uses combined methods in a single study, or a series of studies, in order to attain a better understanding of the research problem (Creswell, 2011). In

order to effectively answer the study objectives, the nature of data required, as well as the process of acquiring it, determined the choice and use of both qualitative and quantitative methods.

3.4.1. Qualitative methods

The qualitative aspect of this current study used a case study and exploratory designs to collect data. The case study design specifically focused on the Rwanda Sport Policy and its implementing stakeholders, while the exploratory qualitative design was used to collect data from the physical activity experts. Case studies are in-depth investigations of a single instance of a phenomenon in its real-life context (Yin, 1994; 2009). Three types of case studies are described in literature, namely: 1. *Intrinsic case study*, which involves researching an unusual case; 2. *Instrumental case study*, which is studying a case that provides a better understanding of a particular problem; 3. *Multiple instrumental or Collective case study*, which entails reviewing more than one case, in order to have an in-depth comprehension of the issue being explored (Creswell, 2007; Wahyuni, 2012). In order to attain a thorough understanding of the subject under research, it is advised to collect data from multiple case studies. For example, one or more individuals, activities or interventions (Wahyuni, 2012). Creswell (2011), however, cautions that case studies could be time consuming, and therefore, suggests studying a few cases at a time. The current study used a multiple case study by collecting data from two sources, namely: the Rwanda Sports Policy provided secondary data, while its stakeholders provided primary data, regarding the policy development and implementation process, as well as the factors that affected the implementation of the Sports for Health programme.

In qualitative research, where the researcher is the main instrument for data collection, the researcher is able to delve further into the research problem (Creswell, 2007; 2014). Qualitative research usually aims to provide detailed descriptions of human behaviours and opinions, through listening and/or observation (Bowen, 2009; Miller & Alvarado, 2005), therefore, individual opinions are highly considered and respected (Babbie & Mouton, 2001). The research designs further seek to obtain in-depth descriptions, as well as understanding of actions and events that occur in specific social and natural contexts of individuals, rather than generalising to populations (Babbie & Mouton,

2001). Besides, in qualitative research, it is important to engage with people, within their context, in order to have a better understanding of the real life experiences that influence their choices (Creswell, 2014). Therefore, a case study method was considered to be more suitable to use, with respect to gaining understanding of how the Sports Policy promotes health, as well as the views and perceptions of its stakeholders. In addition, the qualitative method was used to identify factors that influence LTPA behaviours among government employees in Kigali City, using open-ended questions. Finally, the method was applied to seek the opinions of physical activity experts, regarding strategies that could be applied to promote health enhancing physical activity.

Qualitative research designs should be used with much caution, as they have their shortcomings. By virtue of researchers being the main data collection tool, despite the use of protocols or guides, they are most likely to be biased (Creswell, 2014; Babbie & Mouton, 2001). Qualitative researchers can easily influence the data collection process consciously, or otherwise, which could cloud their decision about the final outcome of the research (Creswell, 2014; Johnstone, 2004; Peshkin, 1988). In order to address the issue of the researcher's subjectivity, literature suggests various methods to be used, such as triangulation (which permits the researcher to get a better understanding of the research problem), reflexivity, member checking and peer reviews, among others (Anney, 2014; Given, 2008; Peshkin, 1988). In this current study, a number of methods and various data sources were applied to minimize the researcher's biases. For example, the review of the Sports Policy also included consulting other documents attached to it, such as the Sports Transformation Strategy and the Guidelines for Promoting Sports for All, at local levels in Rwanda (RW MINISPOC, 2012). Additionally, to ensure that the findings of the Sports Policy review were in agreement with the views of its stakeholders, the question guide, used for the interviews, was created, based on the review findings. Basically, the policy review findings supported the interviews, and vice versa. Besides, member checking was performed, by returning the transcribed interviews to the participants for them to check assess whether the researcher had captured the correct responses.

3.4.2. Quantitative methods

Quantitative research is an approach to empirical enquiry that focuses on statistical, or numerical data analysis, collected through questionnaires, surveys, or the use of archived data (Given, 2008). Quantitative research is specific, and seeks to identify, and describe, patterns, as well as why they occur. The quantitative researcher, therefore, recognizes a research problem, based on the patterns on the ground, and seeks to explain the occurrence of such patterns, as well as how they differ among individuals (Creswell, 2011). In addition, measurement is pivotal in quantitative studies, as it provides connection between empirical observation and mathematical expression. Therefore, the research questions are rather narrow and precise, allowing the participants to provide quantifiable data (Creswell, 2011; Given, 2008).

Quantitative research has three designs, namely, descriptive, experimental and exploratory designs (Creswell, 2011). This current study used a cross-sectional, descriptive quantitative design to assess and describe the levels of LTPA among government workers in Kigali City, as well as highlight the various factors that influence their participation. Quantitative descriptive designs use numerical data and statistical analysis to explain a phenomenon, as well as determine the level of associations between two or more variables (Endacott, 2007; Burns & Grove, 2005). Consequently, it was the appropriate design to answer the research questions related to the prevalence of LTPA among the subjects, and ascertain the factors that influence their participation.

3.5. Data collection tools and procedure

Data was collected in four phases, beginning with the Rwanda Sports Policy review, followed by individual interviews with the Sport Policy stakeholders, a survey among government workers in Kigali City, and finally, an online interview with *experts* in physical activity from different countries. The following section is a discourse of the different phases of data collection.

3.5.1. Phase one: The Rwanda Sports Policy review

This was the first phase of the study and involved reviewing the Sports Policy, in order to ascertain its responsiveness to the health of Rwandans, and its effectiveness in this regard. The Sports Policy is the major national policy that guides sport activities in Rwanda, and was reviewed, using two policy process models, namely ADEPT (Analysis of Determinants of Policy Impact) & Linear. The policy process models have predetermined criteria that were used as checklists to review the policy. The document was carefully and iteratively read (Bowen, 2009; Braun & Clarke, 2006), with more focus on particular sections, such as the background, objectives, and implementation strategies, to be able to align it with the different determinants of the policy process models, and to identify its responsiveness in advancing the Sports for Health programme.

The ADEPT model was adopted from Von Wright's Theoretical Model of Human Behaviour, which is based on four determinants: wants, abilities, duties and opportunities. These were then interpreted as: goals, resources, obligations and opportunities (Rutten, Gelius & Abu-Omar, 2010). This model has been widely used, and is highly recommended for both policy analysis, and policy development, mainly in health promotion (Rutten *et al.*, 2012).

The Linear model, on the other hand, follows a rational sequence, and has four steps of policy development, namely, problem identification, policy formation and adoption, implementation and evaluation (Sutton & Levinson, 2001; Porter & Hicks, 1995). This sequence of policy process is perceived to be ideal, as it helps to identify and understand the problem at hand, before planning execution methods; therefore, it may easily convince policy makers to consider the problem as worth intervening (Brownson, Chriqui & Stamatakis, 2009). While both models have varying strengths and weakness, using them concurrently, to review the Sports Policy, enabled the researcher to capture all the necessary data without biases.

3.5.2. Phase two: Exploring the views of sports policy stakeholders, regarding the policy and how it promotes health

This phase involved collecting data from the Sport Policy stakeholders, through semi-structured, one-on-one interviews. The key informants, representing the relevant stakeholder institutions, were interviewed to explore their opinions and experiences, regarding the development and implementation process of the Sports Policy, in relation to promoting the Sports for Health programme. A sample of 13 key informants, who participated in the interviews, were purposively identified and selected from the stakeholder institutions, as outlined in the Sports Policy. At least one participant was selected from each institution, rendering a minimum of eight participants. However, participants were asked to recommend, to the researcher, any other stakeholder, who might be knowledgeable and or in-charge of sports at their respective institutions. Therefore, from some institutions, more than one participant was selected, according to their availability and willingness to participate in the study. Appointments and follow-up action, to set up the initial meetings with the participants, were made in person, as well as telephonically, and were mainly successful after 2 or 3 visits to their respective offices. The researcher personally met with the participants, to explain about the study and to secure subsequent meetings for the interviews. Convenient times for the interviews were arranged, according to the participants' availability. All the participants were interviewed by the researcher on separate days, as per their availability. Interviews lasted for 20 to 45 minutes each, and the participants were encouraged to express themselves, in either of the two national languages used in Rwanda, namely, English and/or Kinyarwanda, during the interview sessions. All the interviews were recorded with a recording device and cellular phone for the safety of data, after receiving permission from the interviewees.

3.5.3. Phase three: Conducting a survey among employees of stakeholder institutions to identify their LTPA levels and the factors that influence their participation.

In this phase, both quantitative and qualitative data were collected using a customized self-administered questionnaire with three parts. Part one of the questionnaire captured the demographic profiles of government workers in selected ministries in Kigali City. Part two assessed their LTPA levels, and the last part, which collected the qualitative

data, sought to identify factors that affect, or facilitate, their engagement in LTPA. Part one variables included: age, gender, marital status, level of education, place of work and working experience. The levels of LTPA were assessed, using the Godin-Shephard leisure time physical activity questionnaire (GSLTPAQ). This is a self-administered tool that assesses the number of times participants engage in strenuous, moderate & mild leisure-time physical activities, for at least 15 minutes per day, per week (Godin, 2011). The GSLTPAQ uses a Leisure Score Index (LSI) classification code to classify individuals as sufficiently active, or insufficiently active (Amireault, Godin, Lacombe & Sabiston, 2015a). The LSI is aggregated by multiplying the number of times individuals engage in strenuous, moderate and mild LTPA by 9, 5, and 3 metabolic equivalents (METs), respectively (Amireault *et al.*, 2015a; Godin, 2011). However, Godin (2011) argues that mild LTPA does not strongly contribute to health benefits, and therefore, suggests that the strenuous and moderate LTPA scores be considered for the classifying of individuals into sufficiently active and insufficiently active. Consequently, the individuals whose LSI was 24 and more, were classified as active, while those whose LSI is 23 and below, were classified as insufficiently active (Amireault, Godin, Lacombe & Sabiston, 2015b; Godin, 2011). Finally, the last part of the questionnaire comprised three open-ended questions, which sought to gain a better understanding of participants' reasons that motivate, or limit, their participation in LTPA. The open-ended questions allowed the participants to provide their own views or perceptions, without being restricted to particular predetermined responses.

3.5.4. Phase four: Exploring the opinions of physical activity experts regarding strategies to promote health enhancing physical activity/sports

This phase was an online survey, in which a panel of experts in physical activity were purposively identified, using a snowball approach, and invited to participate in a Delphi survey. A Delphi survey involves several rounds of questionnaires, until consensus is reached (Hsu & Sandford, 2007). The current survey, however, had two rounds, since consensus was only reached by the second round. Although there is no ideal number of participants for a Delphi survey, the size of the panel may range between 10-100 participants (Akins, Tolson & Cole, 2005). This panel consisted of 13 experts, who participated in the study. The experts were contacted to offer their opinions, or views,

regarding the best practice strategies for promoting health enhancing physical activity/sports. Electronically mailed invitations were sent to 25 identified experts, each attached with a consent form and information sheet with details of the study, as well as information about what was expected of them. Finally, a total of thirteen experts agreed to participate in the survey.

The first round of the Delphi survey had four open-ended general questions, and panelists were not limited in providing their opinions. The experts were required to offer their opinions about; 1. Physical activity and health, 2. To list the most cost effective and practical strategies for promoting physical activity, 3. How these strategies could be tailored to benefit people in different settings, such as rural versus urban, and finally, 4. To suggest ways of addressing non-compliance/non participation in physical activity.

Round two of the Delphi survey comprised responses from the first round that were analysed and classified under four themes, corresponding to the questions in the first round. The themes were presented in the form of a five-point Likert scale with 29 items. Subsequently, they were emailed back to the panellists, who were requested to rate their feedback on a scale of one to five (1=Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree, 5= Strongly Disagree) to reach a collective consensus. Most of the experts, generally, agreed on all the variables, and as a result, there was no need for another round. This phase concluded the data collection process.

3.6. Data analysis procedure

The qualitative data were analyzed using the thematic analysis procedure, as it enables the researcher to examine and relate both theoretical and vocal data (Braun & Clarke, 2006). Data analysis occurred simultaneously with data collection (Theron, 2015), which allowed the refinement of subsequent interviews (Smith & Davies, 2010). The data from the interviews were transcribed verbatim into text form, after which the scripts were coded, manually and using Atlas ti software. A thematic analysis was employed to generate themes and produce a final report of the findings. The six phases of thematic analysis were followed, in order to to identify and interpret the emerging themes from the data (Creswell, 2014;

Braun & Clarke, 2006). Firstly, the process entailed getting familiar with the data by transcribing the interviews and filed notes, or memos, and organizing them according to their sources. Secondly, the transcripts were iteratively read, in order to have a general idea and meaning of the data, as well as to identify, and record the commonly emerging themes, or ideas. These were the first two major steps that lead to the next four phases of analysis, namely: 3. Generating the initial codes; 4. Searching for and reviewing themes; 5. Describing and naming themes; and 6. Producing a final report. While this process seems to be linear, the phases are interconnected and do not have to follow a particular order (Creswell, 2014).

The quantitative data were analyzed, using the Statistical Package for the Social Sciences (SPSS) version 23, as it is a veritable tool for quantitative data analysis. Both descriptive and inferential statistics were employed to summarize and draw meaningful associations between different variables. Descriptive statistics is used to explain, or summarize a given dataset, while inferential statistics is used to infer about a given population from which a sample was drawn (Singh, 2007). Frequency tables were used to summarize the demographic data, the various levels of LTPA, as well as data regarding the factors that facilitate, or limit LTPA, which were presented under meaningful generic themes. To test for the significance of the association between the demographic variables and the levels of LTPA, Chi-Square tests were employed.

3.7. Credibility and Trustworthiness for Qualitative data collection tools

To ensure credibility and trustworthiness in this current study, the researcher used a combination of research methods to collect and analyse data from different sources, a process known as triangulation (Given, 2008). Triangulation permits the researcher to have a comprehensive understanding of the research problem, through data collected from different sources. This current study employed both triangulation of research methods and data sources, in order to increase the accuracy of the understanding of the Sports Policy, as well as how it responds to health. For instance, the Sport Policy document was reviewed, using two policy analysis models, followed by semi-structured, one-on-one interviews with key stakeholders of the Sport Policy (Creswell, 2011) to supplement the findings. The interviews with stakeholders were conducted, based on an interview question guide that was prepared by the researcher, with reference to the results of the document review, as well as available literature. It was also checked and approved by the supervisors.

During data analysis, two external coders were invited to code the same work, and later reconciled it with the researcher's own, to highlight any differences or errors, and to ensure that they were in one accord. In addition, the Socio-Ecologic Model was used as a point of reference, in interpreting the research findings, and to draw conclusions and offer recommendations for the entire study. Credibility was further ensured through member checking of the scripts, and by providing a rich description of the context (Lincoln & Guba, 1985). The transcribed interviews were returned to the interviewees, in order to ensure that the correct information had been captured. Transferability and dependability of the data were maintained through a clear description of the methodology, to allow the study to be repeated (Guba, 1981).

3.8. Validity and Reliability of the Quantitative data collection tool

Validity confirms whether the tool measures what it was intended to measure, while reliability is the extent to which an instrument can reproduce similar results, when used repeatedly (Sarantakos, 2005; Golafshani, 2003). The Godin-Shephard Leisure Time Physical Activity questionnaire has been widely used across different countries, and in different languages, and was deemed consistent, and therefore, reliable (Godin, 2011). It was also tested for validity and proved to be able to assess self-reported Leisure Time Physical Activity with 69% ability to categorize fit, or unfit individuals (Godin, 2011). Besides, a positive correlation was observed between the final scores of the questionnaire, as well as the percentile maximal volume (V02max) of the respondents ($r = 0.24$, $p < 0.001$) and percentile body fat ($r = 0.13$, $p < 0.01$), which are the two major determinants of physical fitness (Godin & Shephard, 1985).

The questionnaire was also translated from English to Kinyarwanda, in order to accommodate respondents, who would opt for it, and to further ensure its reliability and validity. To ascertain that it was accurately translated, and that the meaning was maintained, the Kinyarwanda version was then translated back to English. Although the questionnaire maintained its original meaning, some sport names could not be directly translated from English to Kinyarwanda, such as tennis, golf, badminton and bowling. Therefore, in order not to distort the meaning, the researcher and two research assistants were always available to explain where necessary. In addition, the three open-ended questions, which formed the last

part of questionnaire, were carefully developed by the researcher, with reference to relevant literature and guidance from the supervisor. Finally, the questionnaire was piloted on a sample of the population that was not part of the main study sample. These measures were necessary to ensure its clarity, and where necessary, correct any possible errors. Additionally, these measures were applied to ensure the clarity of the tool, determine how well the respondents understood it, and how long it would take to be completed.

3.9. Reliability of the Delphi Survey Round Two Scale

According to literature, the consistency of the scale, as well as its ability to measure the same composite is important, and should be determined prior to being employed in research (Sullivan & Artino, 2013; Tavakol & Dennick, 2011). Using the Cronbach's Alpha test, reliability was measured for each set of the items. The Cronbach's Alpha measures an estimate of the internal consistency, in relation to the scores of the construct and is between 0 and 1 (Tavakol & Dennick, 2011; George & Mallery, 2003). The acceptable Cronbach's Alpha test scores are those that are greater than, or equal to 0.7. Scores that are between 0.7 and 0.6 are questionable, while those less than 0.6 are considered poor, and call for a review that would require removing some variables, which when omitted will increase the Cronbach's Alpha test score (Tavakol & Dennick, 2011; George & Mallery, 2003).

3.10. Ethical procedures

This current study was approved by the Senate Research Ethics Committee of the University of the Western Cape, under the registration number, 14/7/8. Permission to conduct the study in Rwanda was obtained from the Ministry of Education, under reference number; 0511/12.00/2015 and from the National Health Research Committee of Rwanda under reference number, NHRC/2015/PROT/009. All the subjects, qualitative and quantitative, were provided with details about the study and handed information sheets, containing the aim and objectives of the study, before participation.

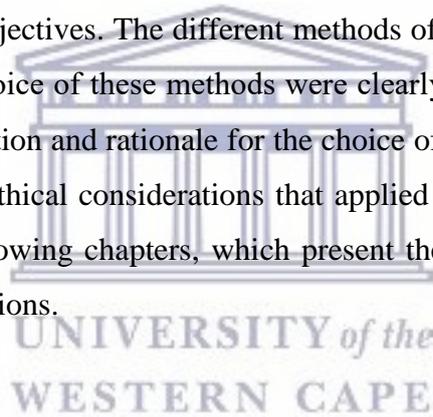
The qualitative participants were requested to sign an interview confidentiality binding form before participation. All the subjects were informed that their participation was voluntary, and they were free to withdraw from the study at any stage, without any negative

consequences. Their respect, anonymity and confidentiality were guaranteed, and it was clearly communicated to them that only codes would be used for identification. Thereafter, consent forms were distributed to all to be signed before participation.

The researcher and the research assistants hand-delivered the quantitative questionnaires, and provided clear explanations to the respondents, regarding the purpose of the self-administered questionnaires, as well as how to complete it. The researcher and/or research assistants were available to help, whenever required to do so. The questionnaires were collected immediately after completion, where possible, and provisions were made to collect those that were not completed, within at least 2-3 days after the respondents had received them.

3.11. Summary of the chapter

This chapter provided a detailed description of all the steps and procedures followed to answer this current study's objectives. The different methods of data collection and analyses, as well as the researcher's choice of these methods were clearly explained. Additionally, the research setting, study population and rationale for the choice of participants and respondents were discussed. Finally, the ethical considerations that applied in this study were explained. This chapter leads to the following chapters, which present the study findings, discussions, conclusions and recommendations.



CHAPTER FOUR

THE RESPONSIVENESS OF THE RWANDA SPORTS POLICY IN PROMOTING THE SPORT FOR HEALTH PROGRAMME

4.1. Introduction

In this chapter, the findings of the Sports Policy review are presented, as well as the views and experiences of the Sports Policy stakeholders, regarding the role of the Sport Policy in promoting the Sports for Health programme. In the broader perspective of the socio-ecological framework, insights are provided into how public policy, specifically the Rwanda Sports Policy, positively or negatively influences health promotion. Also highlighted are the factors that determine the direction of the policy, and how it operates.

Firstly, the development process of the Rwanda Sports Policy was reviewed, using two policy process models, as outcome measures, to determine the indicators of promoting Sports for Health programme. Secondly, with reference to the policy review findings and the interview guide questions, specific questions relating to how the policy responds to health were posed to the Sports Policy stakeholders. Their experiences regarding the development and implementation process of the policy, in line with promoting health, were explored. The successes, as well as the challenges encountered, were also probed. Finally, the findings are presented under five themes, with corresponding sub-themes and categories that emerged from the interviews, supported by relevant excerpts.

4.2. Background

The World Health Organization (WHO) defines policy as a specific official decision, or set of decisions, designed to carry out a course of action, endorsed by a political body, which includes goals, priorities and main directions for attaining the desired action (WHO, 2012a). In line with this definition, Ball's narrative describes policies as "the operational statements of values" (Ball, 1990: p. 10). Policies fulfil a major role in enhancing public health, as they have the potential to influence many people (Eyler, Chiqui, Russell & Brownson, 2016). The

Sports Policy, although not entirely a health policy, is indirectly related to public health, because sports participation renders a wide range of health benefits (WHO, 2010).

Therefore, the role of stakeholders, and their active involvement in implementing policies, cannot be ignored, as it positively influences policy outcomes. Anderson & Baumberg (2006) suggests that policy stakeholders could be influential parties in setting the policy agenda, as they shape the policymakers' perceptions on policy issues, and determine the outcome of policy debates. Drawing from definitions of different scholars, stakeholders are considered a pivotal part of an organisation, industry or business, as they contribute to the achievement of its goals (Miragaia, Ferreira & Carreira, 2013). Freeman (2004), the founder of the Stakeholder Theory, defines stakeholder as "any group or individual who can affect or is affected by the achievement of the organization's objectives". Clarkson (1995), on the other hand, defined stakeholders as individuals, or groups, that are legitimately part of an organization, with an interest in its past, present or future activities. Another definition by Freeman, Harrison, Wicks, Parmar and de Colle, 2010: p. 51), refer to stakeholders as groups, or individuals, whose support contributes to the existence of an organization. They further suggest that for stakeholders to be in unison, their interests should be valued and convergent (Freeman *et al.*, 2010: p. 51). While all stakeholders are important, their relevance is mainly attributed to power, legitimacy and urgency (Miragaia *et al.*, 2013; Freeman 2004). For instance, some stakeholders are determined by the power they possess to influence decision-making, such as those in high ranking positions, member associations and sponsors (Miragaia *et al.*, 2013). Although the Stakeholder Theory is mainly defined from a business perspective, it provides some insights on the relevance of stakeholders in the context of policy implementation. Therefore, the views and perceptions of stakeholders, regarding the development process of the policy, its objectives, implementation, evaluation and the challenges encountered, are crucial and valuable in determining how the Rwanda Sports Policy promotes the Sport for Health programme.

4.3. A Synopsis of the Rwanda Sports Policy

The Rwanda Sports Policy was developed under the Ministry of Sports and Culture [MINISPOC] to advance sport, in general, and to contribute to the nation's social economic development. Its main objective was to establish a framework that promotes the development

of professional sport, mass sport and sport for all, at individual, community and national levels in Rwanda (RW MINISPOC, 2012). The Sports Policy is hitherto the one major document that serves as a broad channel to develop all sports activities in the country, and is divided into three categories: elite sports, mass sports and sports for all. However, the development of elite sports takes precedence over the other two sports categories. For instance, this is visible in the aspiration for Rwanda to be ranked among the top ten African countries in football, by 2020, and to be among the top three countries in basketball, volleyball, cycling, athletics and Paralympic sports (RW MINISPOC, 2012).

Rwanda's sports background is still in its infancy, gauged by the National Sport Federations that are performing poorly, and the fact that Rwanda is not internationally recognized as a sporting nation (RW MINISPOC, 2012). The policy document highlights that the underperformance of these Sport Federations was due to various challenges, for example, lack of sufficient funding, lack of professional skills, as well as modern sporting facilities. However, as cited in literature, there are other challenges that hinder sports participation, most of which are self-imposed, namely, traditional norms and culture, perception towards sports, ignorance or lack of awareness of the benefits of sport, as well as the various types of sports activities (Allender, Cowburn & Foster, 2006; Rotich, 2014; WHO, 2007; Wen, Tsai, Wai & Wu, 2013). Despite the prevalent challenges, Rwanda is still determined to engage in sports participation to gain international recognition (RW MINISPOC, 2012).

In summary, the government of Rwanda is endeavouring to improve the health of Rwandans, as stated in the Rwanda vision 2020 document, which is the overall document that influences most policies in Rwanda, the Sports Policy, included (RW, 2000; RW MINISPOC, 2012). Additionally, as stated by the Minister of Health of Rwanda, in the Second National Health Strategy, 2009-2012, the Government of Rwanda is committed to improving the health of Rwandans, as well as to meet the priority national and international targets, regarding good health (RW MINISANTÉ, 2009). Consequently, the Rwanda Ministry of Health has a mandate to promote the health status of Rwandans, by providing quality preventative, curative, rehabilitative and promotional services (RW MINSANTÉ, 2005). However, the strategies aimed at promoting the health status of Rwandans could be skewed towards the clinical aspect, while neglecting the non-clinical aspect. Proponents of the non-clinical

aspects suggest that health promotion initiatives should transcend the medical scope of health care, and integrate other determinants of health (Green & Kreuter, 2005).

As defined under the social ecological framework guiding this study, human behaviour is influenced by four fundamental factors, individual, social and physical environments, as well as public policy, which have an important bearing on people's participation in sport activities (Sallis, Bauman & Prat, 1998). Therefore, the purpose of this current study, and specifically this chapter, is to identify the role of the Rwanda Sports Policy in promoting health.

4.4. Methods

4.4.1. Research design

For this chapter, the researcher used a qualitative multiple case study design, with specific focus on the Rwanda Sport Policy, and its implementing stakeholders. Three types of case studies are described in literature: *Intrinsic*; *Instrumental*; and *Multiple instrumental* or *Collective case study*. The third was used to collect data in this current study. It entails studying more than one case, in order to have a better understanding of the issue being explored (Creswell, 2007).

4.4.2. Population and sampling

Non-probability purposive sampling was used to identify participants for the in-depth, semi-structured interviews. This method allows the researcher to choose participants, who are well informed, or in a position to provide relevant responses, regarding the research question/s (Wahyuni, 2012). The Sports Policy and its stakeholders, were purposively selected as data sources (Creswell, 2011). A sample of 13 key stakeholders were purposively selected from the stakeholder institutions, stipulated in the policy (RW MINISPOC, 2012). The stakeholder institutions included: Ministry of Sports & Culture [MINISPOC], Ministry of Health [MINISANTÉ], Ministry of Education [MINIEDUC], Ministry of local government [MINALOC], Ministry of Defense [MOD], Rwanda National Police [RNP], Rwanda National Olympic Committee [RNOC], National sports bodies, the Private sector and civil society organizations.

Considering the busy schedules of the key stakeholders, at least one participant was selected from each institution, for a sample minimum of eight participants. However, in some institutions, more than one stakeholder was selected, according to their availability and willingness to participate in the study; therefore a total of 13 participants were interviewed. The inclusion criteria for this cohort included anyone in charge of sport activities in the stakeholder institutions, or who directly/indirectly participated in the Sports Policy development. Finally, the sample mainly comprised directors, or heads of the sports departments, or units. In cases where a sports departments were non-existent, human resource managers, or other designated individuals, identified by the institutions' officials were selected to be interviewed.

4.4.3. Data collection tools and process

A policy review was executed, and in-depth interviews were conducted with the sports stakeholders. The Sports Policy was reviewed using two policy process models, namely ADEPT & Linear (Rutten *et al.*, 2010; Sutton & Levinson, 2001). The policy process models have predetermined criteria that were used as checklists to review the policy. The document was carefully and iteratively read (Bowen, 2009; Braun & Clarke, 2006), with more focus on particular sections, such as the background, objectives, and implementation strategies, in order to align it with the different determinants of the policy process models, as well as to identify its responsiveness, in advancing the Sports for Health programme.

The ADEPT (Analysis of Determinants of Policy Impact) model was adopted from Von Wright's Theoretical Model of Human Behaviour, which is based on four determinants: wants, abilities, duties and opportunities. Subsequently, these were interpreted as: goals, resources, obligations and opportunities (Rutten *et al.*, 2010). The Linear model follows a rational sequence and has four steps of policy development namely: problem identification, policy formation and adoption, implementation and evaluation (Sutton & Levinson, 2001). Both models have varying strengths and weakness; therefore, using them concurrently to review the Sports Policy, enabled the researcher to capture all the necessary data without biases.

Regarding the interviews, Parker (2012) emphasises its relevance as a means of creating a rapport with interviewees, in order to identify with their practical experiences. Specifically, semi-structured in-depth interviews are ideal tools for data collection in case studies, as they allow the participants to express themselves freely, while providing the researcher the opportunity to probe for further clarification, where necessary (Wahyuni, 2012). Therefore, semi-structured interviews were conducted with the key stakeholders of the Sports Policy, in order to explore their views and experiences. The interviews were conducted, with the aid of an interview question guide that was prepared by the researcher, and approved by the supervisor, to ensure it was appropriate and unbiased. The question guide was prepared, with reference to the findings of the policy review, as well as relevant literature.

The process of conducting interviews involved seeking permission from the respective institutions. Appointments were arranged, in person, with the participants, and followed up with telephone calls. Mutually convenient times were arranged for the interviews, according to the participants' availability. The initial meetings with the participants, to set up appointments was challenging, as with some participants, the arrangements were only successful set, after 2 or 3 visits to their respective offices, while with others, appointments were made telephonically; however, finally, with patience and persistence, all the stakeholders were interviewed within a reasonable time.

All the participants were interviewed by the researcher on separate days, as per their availability, and the interviews lasted for 20 to 45 minutes. The participants were allowed to express themselves in either of the two national languages used in Rwanda, namely, English and/or Kinyarwanda, during the interview sessions. All the interviews, except one, were recorded with an audio tape recorder, as well as the researcher's cellular phone, for safety of data, with the permission from the interviewees. After the interviews, the recordings were transcribed into computer files. The researcher assured the participants that their identity and the place of work would be kept confidential in any subsequent report, and once the final research report had been written, the interview recordings would be destroyed.

4.4.3.1. Data collection experiences

Generally, the participants were cooperative and willing to provide the information required by the researcher. However, a few challenges were encountered during the interview process:

- **Access to information:** One participant declined to be audiotaped, and instead, only field notes were recorded; therefore, the possibility exists that some information could have been missed, or lost. Due to security consciousness, access to some institutions, and gathering information was often a challenge, as well as time consuming, especially as an outsider.
- **Access to participants:** Due to work demands, some participants were not easily accessible. The researcher had difficulty setting up appointments with some participants, while others did not always stick to their arranged interview times. Often back and forth visits to their respective offices ensued, as mere telephone calls were not always enough to confirm appointments. Prolonged waiting periods resulted, either trying to contact the subjects, or due to the re-scheduling of appointments.
- **Inappropriate venues;** Due to lack of convenient venues, in which to conduct the interviews, most were conducted in the participants' offices and a few in hotels/restaurants. Therefore, the interruptions from people, and/or background noises were constant hindrances during the interviews.

4.4.4. Credibility and trustworthiness

Triangulation of methods and data sources was employed to ensure accuracy and a better understanding of the Sports Policy, as well as how it responds to health (Lincoln & Guba, 1985). The Sport Policy document was reviewed, using two policy analysis models, followed by semi-structured interviews with 13 key stakeholders of the Sport Policy. Credibility, which is the truth, or trustworthiness of the findings, was further ensured through member checking of the scripts, and by providing a rich description of the context (Lincoln & Guba, 1985). The process of member checking was accomplished by sharing the transcribed interview scripts with the interviewees, for their approval that the researcher's interpretation of their responses were accurate, or

for more explanations/information where required. In addition, the findings were supported by participants' direct quotations from the interviews. To ensure transferability, a rich description of the research methods used was provided, by describing the participant's profiles, the criteria for inclusion, as well as the study settings (Lundman & Graneheim, 2004; Guba & Lincoln, 1989). During the analysis phase, the data were coded independently by the researcher, and an external coder, who later met to reach consensus regarding the emerging themes (Shenton, 2004; Krefting, 1991; Lincoln & Guba, 1985). The data were also given to a translator to ensure cohesion between the Kinyarwanda interviews and the English transcription. Finally, the participants were assured of anonymity, as their names or identities were not recorded, and only codes were used for identity purposes.

4.4.5. Data analysis procedure

The data were analysed using the thematic analysis procedure, which is well recommended for its wide range of advantages, such as enabling the researcher to examine and relate theoretical and vocal data, for instance, people's opinions (Braun & Clarke, 2006). The interview data were transcribed verbatim, after which the scripts were coded manually, in conjunction with Atlas ti software. Following the six phases of thematic analysis, emerging themes from the data were identified and interpreted. Subsequently, a report of findings was produced (Creswell, 2014; Braun & Clarke, 2006). The six phases are as follows:

- 1. Familiarizing with data:** audio data was manually transcribed verbatim into text form, and the scripts were loaded on to the Atlas.ti software. The scripts were iteratively read to gain understanding.
- 2. Generating initial codes:** related ideas in the text were highlighted and systematically assigned potential codes, manually, as well as with Atlas.ti software.
- 3. Searching for themes:** the generated codes, in line with the research question, as well as with the data context, were regrouped into categories and finally into meaningful themes.

4. **Reviewing themes:** emerging themes were compared with the data to ascertain coherence.
5. **Defining and naming themes:** the identified themes were named according to their meanings.
6. **Producing the report:** the findings were presented under general themes with relevant excerpts from the data corpus to support them.

4.5. Findings

4.5.1. Rwanda Sports Policy Review

Using the two policy process models, the Rwanda Sports Policy was deconstructed into sections, which made it easier for interpretation. Each policy process model has four components, which were used as the overarching themes, under which findings were presented. Table 4.1 illustrates a summary of the policy review findings for each model.

4.5.1.1. The ADEPT model of policy process

The main areas of the Sport Policy that were reviewed, using the ADEPT model of policy process, were mainly the goals, obligations, resources and opportunities, which are divided into organizational, political and public opportunities. The outcome and output of the policy were not assessed, as this was beyond the scope of this current study.

4.5.1.1.1. Goals of the Sports Policy

The policy has eight specific objectives, which are linked to promoting sport in general. The objectives were further detailed with an orientation and strategic action plan, which describes how each objective will be achieved, and at which level. However, there was no specific objective to promote the Sport for Health programme.

4.5.1.1.2. Obligations

Some of the obligations identified in the policy were linked to government priorities, such as making Rwanda an internationally recognized sporting

nation, and using sport as a platform to contribute to the social economic development of the country. Other obligations were linked to tasks assigned to each of the stakeholders, according to their normal designated functions. An example is the Ministry of Education [MINEDUC], which is mandated to ensure that physical education is made part of the school curriculum, as it is perceived as an ideal setting to promote sport, and develop talent from the grassroots.

4.5.1.1.3. Resources

Only the policy development process was externally funded, as stated in the policy. The estimated cost of implementing the policy was expected to be funded by the government, private sector sponsorship, as well as home grown solutions, such as the use of “UMUGANDA” (community work), to intervene where necessary. As for human resources, the policy relies mainly on stakeholders’ collaboration.

4.5.1.1.4. Opportunities

The major opportunity for the policy was the government’s strong will to support and develop sport in Rwanda. Other opportunities stated in the policy include the Rwandan population, which is mainly comprised of the youth (54%), as well as the geographical setting of Rwanda, which is at a high altitude; therefore, favouring sports training.

4.5.1.2. Linear Model

The linear model of policy process helped to identify the four major steps taken in developing the Rwanda Sports Policy, namely, agenda setting, policy formation and adoption, implementation and evaluation.

4.5.1.2.1. Agenda setting/problem identification

According to the policy, the major problems identified were linked to the under-development of sport in Rwanda, generally, and not specifically related to health. Therefore, this stage involved centrally made decisions to develop sports in Rwanda.

4.5.1.2.2. Policy formation and adoption

This stage involved assigning a team of people to define the terms of reference, the need for the policy and its implementation strategy. Various stakeholders were consulted for their opinions, as well as relevant policy documents, reviewed for consistency with other government policy priorities. A conference to discuss the policy was held with representatives of different institutions. Ten orientations of the policy and the proposed strategic actions at the different levels, were developed by the Ministry of Sports and Culture [MINISPOC], and finally, as reported by one of the stakeholders, “It was approved by cabinet on 1st March 2013...” (P: 8). The Policy was presented to the cabinet ministers for approval, prior to being implemented in 2013;

Table 4.1: Summary of the Sports Development Policy Review

ADEPT Model		LINEAR Model	
Determinants of policy process	Policy components	Determinants of policy process	Policy components
1. Goals	<ol style="list-style-type: none"> 1.To strengthen the administrative and management capacity of the different sporting bodies 2.To develop a framework that promotes & support young talented sports men and women 3.To strengthen the collaborative relationship with private sector to support sports development 4. To develop the capacity of sports technical officials 5.To enhance the publicity of sports activities so as to stimulate public support and increased participation of the people in sports 6.To develop sports infrastructure facilities that meet international standards and those that allow mass participation of the public in a range of sports disciplines 7.Promote gender equity and participation of people with disability in different sports 8.Leverage the development of sports in Rwanda as a significant opportunity for economic generation 	1. Agenda setting	<ol style="list-style-type: none"> 1. Rwanda, not yet recognized internationally as a sporting nation due to the underperformance of the sports federations. 2. There is lack of talented sports people who can perform locally and internationally 3. The various benefits of sports such as good health, as well as the socio-economic development of communities and the nation at large is yet to be tapped into

<p>2. Obligations</p>	<ol style="list-style-type: none"> 1. Promote and encourage talented individuals to pursue professional sports so as to make Rwanda an internationally recognized sporting nation 2. Use sports as a platform to contribute to the social economic development of the country at a personal, community and national level 3. Develop sports culture that promotes a healthy lifestyle for Rwandans 4. Promote sports for all, including girls and women and persons who are physically and intellectually challenged 	<p>2. Policy formation & Adoption</p> <p>- Policy adoption</p>	<ul style="list-style-type: none"> - A group of individuals was appointed to work on the terms of reference, describe the need for the policy and its implementation strategy - A wide range of stakeholders were consulted for their opinions -Various policy documents and sector-wide reports were reviewed to identify trends and align the policy with other policy priorities of the country - A symposium was then organized for sports leaders, representatives from other Government Ministries, Universities, Provincial Government and Business to discuss on the whole process <p>Adoption of policy was to be guided by 10 orientations at different levels and their corresponding strategic actions as follows;</p> <ol style="list-style-type: none"> 1. At the ministry level; to strengthen organizational and institutional capacity for sports in all government institutions and sports bodies to plan and implement different sports activities 2. Local Government to establish framework in every province and district that allows young men and women to participate fully in sport 3. National Sports Bodies to develop strategic plans with clear targets and accountability on how they are going to support and develop their sport 4. Develop sport in schools, Army and Police institutions as a key aspect contributing to the long-term success and sustainability of sports development in Rwanda 5. The national sports bodies to establish a concrete pathway for player and coach development so as to encourage athletes and coaches gain experience and progress to achieve their maximum capacity 6. Sport and business: a framework to be established that promotes the private sector towards the development of sport in Rwanda such as increased private sector sponsorship for sports activities and other sponsorship initiatives 7. Communication should be developed to enhance publicity of sports and sustain public interest in sporting activities 8. Infrastructure for sports development: Increase sports facilities to facilitate increased sports participation among the public 9. Equity and empowerment through sport for all: ensure promotion of equal and inclusive sports for all 10. Sports for Development and Peace building; Promote the use of sports as strong avenue for the nation's development objectives and peace building
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<p>3. Resources</p>	<ol style="list-style-type: none"> 1. The political will by the government to support sports development in Rwanda 2. The various national sports bodies in Rwanda act as human resource 3. Part of the financial resources are expected to be provided by the government while the rest are to be raised through the following ways; <ul style="list-style-type: none"> - Encourage private sector involvement to invest in sports - Use of UMUGANDA (community work) to acquire basic infrastructure that are important in promoting sports for all and also talent development - Establish a business development unit in the ministry that should be self-financing - Availability of external funding for the policy development 	<p>3. Policy Implementation</p>	<ol style="list-style-type: none"> 1. Policy orientations and strategic actions were established to guide implementation, i.e.; Joint efforts of all stakeholders such as sports partners, government ministries and the population, with different tasks assigned to each stake holder 2. Policy orientations for sports management are categorized into two, i.e.; institutional and technical <ul style="list-style-type: none"> - Institutionally, the policy caters for the needs of sports management at the ministerial level, local government, National sports bodies, Universities & colleges, Primary & secondary school levels - Technically, the policy looks at players and coach development, infrastructure, sports and business & communication
<p>4. Opportunities</p>	<ol style="list-style-type: none"> 1. The young population, 54% youth 2. Political commitment to support sports development 3. The geographical setting of Rwanda which is at a high altitude favors sports training 4. The developing private sector which may have to give back to the community 5. Rwanda as an up and coming country in terms of business and innovation 6. Sports may be used as a development tool to influence the available resources for its development 	<p>4. Evaluation</p>	<ol style="list-style-type: none"> 1. Under the ministry of sports and culture, monitoring and evaluation of the policy is to be done through the following activities; <ul style="list-style-type: none"> - Organize quarterly and annual meetings for the stakeholders to review the progress, challenges and issues of the policy - Periodic reviews conducted bi-annually and annually after 3 years of implementation to assess the overall progress and effectiveness - Plan an ongoing database of quantitative and qualitative data consolidated at the national level with input from the various sporting entities - Conduct periodic surveys (SMS, web surveys, and sample surveys at sporting events) to measure the real experience of various stakeholders such as private sector participants, funding agencies, sports men and women, national stakeholders and the public opinion.

4.5.1.2.3. Implementation

An implementation framework was developed by the Ministry of Sports and Culture outlining the various tasks of each stakeholder. A total of eight stakeholder institutions were assigned tasks on how to implement the policy. Successful implementation of the policy was mainly dependent on the joint collaboration of the stakeholders, which included sports partners, as well as some government ministries. The Ministry of Sports and Culture took the lead in coordinating the implementation process of the policy.

4.5.1.2.4. Evaluation

Generally, proper evaluation of the policy was still a challenge, due to factors such as the lack of tools, regardless of the well-defined strategies, stated in the policy. As indicated in the policy, the Ministry of Sports and Culture was responsible for monitoring and evaluation of the policy in the following ways: to organize quarterly and annual meetings for the stakeholders to review the progress, challenges and issues of the policy; to conduct periodic reviews, bi-annually and annually, after 3 years of implementation, to assess the overall progress and effectiveness; to plan an on-going database of quantitative and qualitative data, consolidated at the national level, with input from the various sporting entities; and to conduct periodic surveys (SMS, web surveys, and sample surveys at sporting events) to measure the real experience of various stakeholders

4.5.2. The Sports Policy stakeholder views and experiences

The findings of the interviews are presented under five major themes, with corresponding sub-themes and categories. The quotations are presented in italics, with corresponding identity codes.

4.5.2.1. Description of the participants

The sample mainly comprised of (but not limited to) directors or heads of the sports departments and, in cases where sports units were non-existent, human resource managers or other designated individuals, as identified by the institutions' officials, were interviewed. As shown in Table 4.2., a total of thirteen key stakeholders were interviewed, aged between 31 and 50 years of age (mean age 41.6years). All the participants held, at least, a university degree. The sample was dominated by male participants (92%), who were married (92%) and directors of sports units (62%). The majority were aged above 40 years and had working experience of 1-4years in the current office (62% & 46%), respectively.

Table 4.2: Demographic profile of the participants

Participants	Position/Department	Gender	Age	Education level	Marital status	Work experience
P 1	Human Resource director	Male	>40yrs	University/Bachelor's	Married	1-4yrs
P 2	Executive director/Sport body	Male	>40yrs	University/Bachelor's	Married	1-4yrs
P 3	Director/Sports body	Male	>40yrs	University/Master's	Married	1-4yrs
P 4	Director/Sports unit	Male	>40yrs	University/Bachelor's	Married	>10yrs
P 5	Good governance	Male	31-40yrs	University/Bachelor's	Single	5-10yrs
P 6	Human Resource director	Female	>40yrs	University/master's	Married	1-4yrs
P 7	Director/Sports unit	Male	>40yrs	University/Bachelor's	Married	>10yrs
P 8	Director/Sports unit	Male	>40yrs	University/Master's	Married	5-10yrs
P 9	Head/Sport unit	Male	31-40yrs	University/Bachelor's	Married	1-4yrs
P 10	Head/Sport unit	Male	>40yrs	University/Master's	Married	5-10yrs
P11	Designated staff/RBC	Male	31-40yrs	University/Bachelor's	Married	5-10yrs
P 12	Office manager/Sport fed	Male	31-40yrs	University/Bachelor's	Married	1-4yrs
P 13	Director/Sport body	Male	31-40yrs	University/Bachelor's	Married	5-10yrs

While exploring the views of the Sports Policy key stakeholders, regarding its development and implementation, specific attention was directed towards identifying how the Sports Policy influenced the promotion of the Sport for Health programme. For instance, the stakeholders were asked about the policy development process, their involvement, and whether health promotion was part of the motivating factors for developing the policy. In response to these questions, the participants had different views, which are expounded under the following five major themes, with corresponding sub-themes (see Table 4.3).

Table 4.3: Themes and sub-themes

Themes	Sub-themes	Categories
1. Participation in policy development	1.1. Direct participation 1.2. Indirect participation	1.1.1. Stakeholders' knowledge of the sports policy
2. Sport and health	2.1. Sport participation and health gains are not mutually exclusive	
3. Policy implementation strategies	3.1. Implementation strategies depend on institutions' function 3.2. Developing different talents in sports especially for future elite professionals 3.3. Facilitate mass sports and train sports trainers 3.4. Informal implementation of the policy	
4. Challenges of implementing the policy	4.1. Cultural beliefs towards sport/exercise 4.2. Lack of infrastructure 4.3. Lack of human resources to develop sports 4.4. Accountability of the sports policy	4.1.1. Lack of prior exposure to sport 4.1.2. An attitude of reluctance towards engaging in sports programmes 4.4.1. Evaluation of the policy
5. Recommendation	5.1. The need for a social marketing strategy to promote sport and exercise for general health 5.2. Use of role models for sports development	

4.5.2.2. Participation in policy development

The stakeholders' participation in the policy development process was not necessarily direct. It mainly involved consultative meetings with stakeholders, whose day to day activities directly consisted of sport activities, such as (but not limited to) sports bodies/federations and the National Olympic Committee. The development process also entailed consulting national policies, such as the Vision 2020 and the Economic Development and Poverty Reduction Strategy (EDPRS), in order to align the Sport Policy within government priorities:

“...., and for a policy to be developed there are guiding documents, e.g. Vision 2020, we have the 7 year government program, EDPRS and other guiding documents in the government's plan so that the policy will be well aligned with the vision of the country, those guiding documents are the ones that helped us.” (P8)

4.5.2.2.1. Direct participation

When asked about their involvement, besides the formulators of the policy, only a few participants admitted to having been directly involved in the development process of the Sports Policy. Specifically, only two participants explicitly indicated being part of policy development:

“For sure when the Sports Policy was being developed we were significantly involved that's one, and our daily responsibilities are in line with the policy as we can't do anything outside the policy.” (P13)

“...yes we were also involved as a ministry in its development, I was directly involved.” (P4)

4.5.2.2.2. Indirect participation

Most of the other participants indicated that they were not directly involved in the policy development. However, they knew about the policy, and stated that their institutions could have been involved in the development in one way or another, by the virtue of being a stakeholder;

“Not recently do I know who participated in the sports development its self, but as far as sports development goals, yes that’s what our mandate is..... So operationally speaking, Olympics and sports committee has a strong mandate of involvement for the operations of sports within Rwanda.” (P2)

“Since it’s a national policy, it involves everyone, even those who were not involved as stake-holders are concerned. So when they give you a task you can’t refuse especially when it is beneficial to the general population” (P7)

4.5.2.2.3. Knowledge of the Sports Policy

The stakeholders’ participation in the Sports Policy development, as well as their knowledge about it, dictated their commitment level towards its implementation. A sense of either indifference, or incognizance about the Sport Policy was noted among some stakeholders, particularly those who were not directly involved in its development. Only a few participants admitted to knowing about the policy. On the contrary, all the participants seemed to be more aware of the Prime Minister’s order, regarding sport participation for all government employees, than the Sports Policy;

“I have no idea about that policy, however I do know about the prime minister’s order for sports participation in all government institutions, which requires people to do sports at least every once a week in the afternoon, and in this institution we have the directorate of sports which facilitates all our employees to do sports on every Friday afternoon (14hrs-17hrs).” (P1)

“I really don’t know much about the Rwandan sports policy but one thing I can tell you is that sport is a recommendation... Yes, every Friday, all... members...are supposed to do sports.” (P10)

“It’s more evident that sport is important, with the mandatory sports for all civil servants in general every week Friday afternoon, although they were not really responding, with time it is getting better they have started to understand and respond.” (P4)

“...the Friday sports as stipulated by the prime minister’s office for all employees especially government employees to go for sports. Some comply but some don’t, that’s why public awareness should be a continuous process.” (P11)

“I have no idea about that policy, not anything that I know of, either we might not have been invited during its development or it might have been brought and kept in the CEO’s office and not disseminated..... We do sports for different reasons. One of them is for the good of our staff and also in response to the mandatory Friday sport from the PM instructions.” (P6)

4.5.2.3. Sports Policy and Health

The health benefits of sport are acknowledged in the Sports Policy and are automatically expected when people engage in sports. While “Sports for all” was intended to promote health, practically, it was still a challenge, as more focus was directed towards advancing elite sports, than mass sports and sports for all, as demonstrated in the quotation below:

“In relation to health, you see, we started doing sports, and realized, or rather that’s how I see it. We were going more towards the competitive sport that is related to federations, international federations, and things like that for competition. We forgot sport for all/mass sport.” (P4)

Basically, stakeholders acknowledged the importance of the Sports for Health programme, on an institutional level, but not on a policy level:

“We realize the importance of sports in terms of health and fitness as far as our profession is concerned, so we subscribe to gyms for sport activities, avail sports facilities” (P1)

“We do sports for different reasons. One of them is for the good of our staff and also in response to the mandatory Friday sport from the PM instructions.” (P6)

“So for us whether the policy is there or not, sports is our life...” (P7)

4.5.2.3.1. Sport participation and health benefits are mutually inclusive

Although health was not a prime factor that influenced the Sports Policy development, it was believed to be inherently part of sports. The participants were of the view that health benefits were automatically expected, when individuals engage in sport activities;

“No it was not in that sense although in our policy it’s included that we should promote sports for all among Rwandans, the population of Rwanda to do sports, however, that was not our motivating factor... It’s understandable that health is part of the policy..., but normally sports cannot be separated from health promotion. That is implied. May be during the review we shall address it in writing so that any reader will see it as an objective otherwise it’s obvious and implied that you can’t do sports with people who don’t have a good health and get anywhere...” (P8)

“One is that, first of all sports is umm..., you know sport is healthy and so we believe Rwandans are getting healthy...” (P12)

“...and this is true for everyone who engages in sports they will tell you something changed about their health...” (P11)

4.5.2.4. Policy implementation strategies

Strategies to implement the policy were assigned to various stakeholders, in line with their functions as institutions. However, some specific strategies seemed to be more about institutional goals, and less about active implementation of the Sports Policy. Some of these strategies mentioned included: train the trainers/coaches; create sport teams; organize mass sport for talent detection; facilitate informal and compulsory exercise sessions on Friday afternoons; and health promotion campaigns.

4.5.2.5. Developing different talents in sports, especially, for future elite professionals

Some stakeholders, such as the sports federations, were expected to develop sport, mainly from the grassroots, in order to identify and develop various talents;

“...and our daily responsibilities are in line with the policy as we can't do anything outside the policy. The sports policy has many parts but as we represent sports federations we encourage them to develop sports based from children who gradually develop until they become professionals.” (P13)

“...basically there is one section that mostly concerns...(name of institution), which is mass sports for the young children, especially now that there is a policy for universal education all children should go to school, and therefore that's when all of them are expected to participate in sports.” (P4)

4.5.2.5.1. Facilitate mass sports and train sports trainers

Another strategy for implementing the policy was to encourage more people to engage in sport, specifically through mass sports, as the following excerpts indicate:

“We support it (the sports policy) from all angles, example in elite sports we have different sports teams such as basketball,

soccer, volley etc. Mass sports we go to retreats, “itorero” and other gatherings... Basically that’s how I think we can implement it, train people who can train and teach others the benefits of sports and we shall continue training many people/trainers and we believe that with time people will love sports. May be to know the level of exercise needed for health purposes can be done by others such as the MoH.” (P7)

“Our role is to train trainers, thus people who will motivate people to involve in sports, people who will be able to create an interest in people to be involved in sport activities. Our major pillars of mission is lead to win, so we try like to introduce like sports administration, clubs, federations, and even ourselves to make them understand our mission and fulfil it professionally.” (P3)

4.5.2.5.2. *Informal implementation of the policy linked to institutional goals*

Some of the implementation strategies were informally linked to institutional goals. When asked about how they facilitated the implementation of the Sports Policy, some participants indicated that it was done indirectly, by being exemplary to the public through their normal routine work, as per the following extract:

“We do so indirectly, example during our morning and evening runs, there are always people watching, so the thing is that people imitate what you do such as neighbours doing what they see you do.” (P7)

Another participant stated that sport is a prerequisite for their staff, and therefore, part of their institutional goals, rather than an assigned task:

“In this institution we have the directorate of sports which facilitates all our employees to do sports ...on every Friday

afternoon. We also implement the (head of institution's) instructions which require all employees to do sports activities We also have an action plan of how sports should be performed in our institution.... We realize the importance of sports in terms of health and fitness as far as our profession is concerned.” (P1)

4.5.2.6. Challenges in implementing the policy

The participants expressed various challenges encountered with the implementation of the Sports Policy, mostly related to cultural norms. Other challenges included (but were not limited to) insufficient finances, lack of infrastructure and human resources, unclear implementation framework, and accountability.

4.5.2.6.1. Cultural beliefs towards sport/exercise

Most participants were of the view that, among Rwandans, engagement in exercise programmes was influenced by various factors; however, the most recurrent one was related to culture or traditional norms, which do not positively encourage sports participation, as per the following excerpts:

“Otherwise in general I think sports performance is not yet a well-established culture in Rwanda and people still have poor perceptions about sports, they haven't really appreciated its importance in as much as they are being told to engage in sports activities...” (P11)

“The main challenge which is possibly general is culture and people not being aware of the benefits of sports ... culture that contributes to people not liking sports...” (P7)

4.5.2.6.2. Lack of prior exposure to sport

The extracts below suggest that the lack of prior exposure to sports, affected the individual's perception and value regarding it:

“One of the challenges is the political back ground/history of our country where sport participation is not part of the Rwandan culture. Always when something is new there will be resistance to change, where promoting sports among all Rwandans is a challenge in terms of perception but of which we hope it will change with time.” (P8)

“Sport in Rwanda is plagued with a disease of a charity mind set, and that’s our biggest obstacle, in that even if we have good leadership in sport but still coming from a sports history that sports is maintained through gift versus through sports that is maintained through commercial structure. And the second issue being, the children of Rwanda are not being exposed early enough to healthy lifestyle choices and to the enjoyment of sport activities thus exposing them to choose sedentary lifestyle at an early age in primary school due to lack of exposure.” (P2)

“...the structure is still weak due to various reasons such as perceptions of people about the importance of sports is still a strong barrier especially among parents, teachers, school directors, owing to the fact that most of them were not initially exposed to sports. Basically people don’t understand the importance of sports, thinking that sports is just a waste of time, some think that sports would interfere with a child’s education rather than facilitate them...” (P4)

4.5.2.6.3. An attitude of reluctance towards engaging in sports programmes

The following extracts indicate that Rwandans are reluctant to engage in LTPA, irrespective of the existing challenges:

“Of course, one main problem is the attitude of the Rwandans, they are lazy in doing sports, take an example of this Friday sports, people use this time as an advantage to do their own

business, that shows that not all people have gotten the concept.” (P11)

Infrastructure goes hand in hand with equipment and they are expensive as they are not made in Rwanda, be it soccer balls etc. they are all imported. Therefore, the fact that they are expensive plus people not really acknowledging the importance of sports, results in lack of interest in investing in them and instead they wait for the government.” (P8)

4.5.2.6.4. Lack of infrastructure

Although it was not the main challenge hindering participation in sport, the participants acknowledged the need to increase and improve infrastructure that is more accessible to the general population, for example, in their communities, schools or work places, as expressed in the following quotations:

“One of the recommendations should be to avail sports facilities where many people meet, example most universities here are found by the roadside, they don’t have space for sports so how do they expect them to do sports, look at Mukono university it’s well equipped with good sports facilities and has won many awards/cups for different sports. So already MINEDUC (Ministry of Education) is to blame because before such universities are given permission, they should look at such requirements.” (P7)

“Another challenge is lack of enough sports infrastructure at different levels, today when you go to schools, you find that they don’t have enough space for doing sports, in the residential areas, all the space is built with residential houses thus no space is left for sports facilities especially in the city areas... (P8)

“However, if we had sports facilities in our institution, then it would be easy for everyone to participate.” (P7)

4.5.2.6.5. Lack of human resources to develop sports

The lack of human resources to facilitate sports development was commonly mentioned. For instance, there is a need for committed people to be in charge of activities involving the implementation of the Sports Policy, especially, in all the stakeholder institutions, while sports mentors, trainers or coaches to advance sports in its different domains, are also lacking. The following extracts refer:

“...then we also have few staff/representatives there (stakeholder institutions), we have just one at the district level, who doesn't do everything as we desire, that's how our structure is designed, we try but it is not easy.” (P8)

“Another problem is that our stakeholders, the people in federations are volunteers. So you can find a federation which doesn't have any permanent staff because they are doing other paying jobs. We lack people who can develop sports such as professionals ...as volunteers we take those who are willing, may be they once played that particular sports, and now they retired and are wealthy...” (P9)

“Also there is shortage of sports trainers who can't reach to the majority of the population, though we are working on that and hope to achieve it soon.” (P7)

4.5.2.6.6. Accountability of the Sports Policy

Another challenge observed in the implementation of the policy was linked to accountability. There was lack of a formal structure for monitoring and evaluating the policy implementation process, as different stakeholder institutions reported their own approaches. However, a sense of “passing the buck”, regarding the implementation and evaluation of the policy, was

obvious. Some participants supposed that it was not their duty to evaluate or implement the policy, but rather that of the policy formulating ministry. Overall, the participants were adamant that the ministry in charge of the policy should be responsible for spearheading, both the implementation and evaluation processes.

Following the question of how the policy is evaluated, three participants stated as follows:

“Basically what I can’t tell you is that we don’t have tools to use for M&E and therefore be able to say that such and such a department or ministry is at this or that level of implementation...” (P8)

“The ministry in charge should do that otherwise we will be taking over their responsibility, because the policy is theirs even though we help them to implement it, they are the ones supposed to implement it, they are responsible/answerable.” (P7)

“We have never seen people from the ministry of sports come to monitor and evaluate how sports is done. Basically there is no follow up from the ministry. As a policy, the owners should inform the implementers on the way forward. This should be part of their duties.” (P1)

4.5.2.6.7. Evaluation process of the policy

Based on the participants’ responses, more attention was directed towards monitoring and evaluating the institutions’ sports programmes. Ensuring that sports activities were running and reporting on the performance levels, specifically for organised sport, was the main recurring theme, when the participants were asked about how the policy implementation was evaluated. To some, evaluation was done through mere observation of specific sports activities, and the attendance of the public, while others used

meetings and activity log books. Ultimately, according to all the responses, what seemed to be lacking were set progress indicators and/or standards for measuring progress and outcomes, health indicators included. Regarding evaluation through observation of on-going organised games, the following response was received:

“We only go to the field to observe what is happening, to see if the locals have been well mobilized depending on the turn up number/crowd, identify the different equipment needed, see if there any problems, and later give recommendations on how things should be done next time” (P5)

Concerning evaluation done through meetings with stakeholders to remind them of their responsibilities, the following response was received:

“...The other stakeholders who are independent we only try to meet with them regularly and remind them of the policy and what they ought to do...” (P8)

With reference to evaluation done through completing activity log books, the following response was received:

“With our partners, there are forms we give them to fill out stating how far they have gone per activity, but mainly we always convene meetings every term to meet with partners and discuss about the issues at hand and they also give us reports on their progress...” (P9)

4.5.2.7. Recommendations

Most of the participants' views about the policy were expressed in the form of recommendations, such as, the need to change people's perceptions about sports and the lack of motivation towards sport/exercise participation, to increase public awareness of sports and the importance of role models, to encourage the public, especially, the youth, for talent development, as per the following extract:

“They need to understand sports and its benefits and then be motivated to participate, so there should be a strategy to motivate individuals to do sports” (P 8)

4.5.2.7.1. The need for a social marketing strategy to promote sport and exercise for general health

Most participants alluded to the lack of proper strategies for promoting sport participation, which is viewed through the lens of the “culture” of Rwandans not engaging in sports. The following excerpts refer:

“...there are various activities that Rwandans have heard and implemented and we should be thankful to that because when Rwandans understand something and acknowledge it, they make sure they do it, likewise, if they understand the importance of sports, it can be done, in other words if the local leaders put in more efforts, it should not be a problem, use radio dialogues, MOH to talk about the importance of sports.” (P4)

“Change perceptions by practicing more, practice makes perfect, we have to try our best to sensitize people to make them addicted to sports.” (P7)

“What I can say is that we need to find strategies after knowing that sports is medicine to various diseases, we should encourage people to make sports a culture, basically it goes in hand with changing our perceptions, you find people fat and they think it’s a good thing to be fat, not knowing that this can lead to diseases, so we need to change our perception and make sport a culture.” (P11)

“...so basically like I said earlier this calls for more efforts to motivate and facilitate people. Work on their perceptions, make them understand that sports is beneficial to them and tell them about the dangers of being physically inactive such as the high

incidence of NCDs globally and particularly within our African countries due to the current trend of modernization.” (P10)

4.5.2.7.2. Use of role models for sports development

The participants highlighted that positive perception towards sports was related to positive tendencies to promote sports, and vice versa. Leaders with a positive perception towards sport, were most likely to promote it among their subordinates. The following quotations refer:

“It is therefore evident that where the leadership has a good perception about sports, the outcome is good they easily and readily promote it among the locals, it’s all about how the leaders perceive sports and thus promote it for the people to own it and make it their responsibility to engage in sports, because the minister will not always come to explain and sensitize the people to do sports.” (P9)

“Again it all comes back to perception among the people, we are lucky that our leaders love sports and so act as role models, if they dint like or do sport, it wouldn’t have been easy, sometimes people do things because of fear but even then when they do it like that, it eventually becomes a habit which is beneficial to them.” (P4)

4.6. Summary of findings

The Rwanda Sports Policy does not overtly promote the Sports for Health programme, instead, the health benefits of sports are automatically linked to participation. Specifically, health is associated with “Sports for all”, which unfortunately has not received much attention; therefore, clouding the prospect of promoting health. Additionally, there is discordance within the policy statements and practices. While it is indicated in the policy that sport will be developed to promote health, not much effort is invested in realizing such statements. For instance, the mission of the Sports Policy is to instil a sports culture among Rwandans that promotes health, as quoted; “... to pursue the attainment of sports culture that promotes health lifestyle for Rwandans....” (RW MINISPOC, 2012: p. 10). Similarly, as stated from the policy’s context and rational sections:

“Sport plays a significant role in the quality of life of people....Ministry of Sports and Culture will work with relevant stakeholders to ensure sports significantly contributes to health promotion, education, gender equity and equality, peace and reconciliation...” (RW MINISPOC, 2012: p. 6).

However, the findings reveal that the Sports Policy is not primarily meant to promote the Sport for Health programme, it was rather developed to generally guide sports development in Rwanda. This is demonstrated through its goals and implementation strategies, which are rather biased towards promoting professional sports. Besides the weak collaboration among the stakeholders, which, generally, affected the policy implementation process, a general view was evident among the stakeholders, that a well-planned strategy to promote the Sports for Health programme was lacking.

4.7. Discussion

In this chapter, the aim was to investigate the role of the Rwanda Sports Policy in the promotion of the Sports for Health programme. Overall, as much as the policy acknowledges the health benefits of sports, the efforts to promote the Sports for Health programme do not appear significant in the policy content. Based on the goals, or the agenda setting of the Sports Policy, the Sports for Health programme does not emerge as a priority. However, one of the key stakeholders assured that the intention to promote the Sports for Health programme is implied in the Sports Policy, although it is not explicitly stated among the objectives. This concurs with Bernier and Clavier (2011), who argue that policy content includes stated or unstated goals and intentions. As much as this may be true, there are other contradictory findings, which emphasize the importance of stated goals in a policy. Sabatier (1986) asserts that the knowledge of the goals and perceptions of various stakeholders of a policy contribute to the understanding of its process. Similarly, Rutten *et al.* (2003) aver that a combination of solid objectives, sufficient funds and public opportunities, such as support from the media and population, positively impact policies.

With the Rwanda Sports Policy implementation, stakeholder institutions were assigned various tasks, in line with their functions, regardless of their knowledge about the policy. This resembles a Top-down perspective, where the decision-making is granted more importance than the implementation of the policy (Sabatier, 1986). In this case, the

implementers were not necessarily part of the development process, instead, policy decisions are made at the central government level and, subsequently, directives given to the stakeholders (Sabatier, 1986). As a result, some of the key stakeholders were unclear about their roles in implementing the policy, despite it being well stated. They alluded to the fact that being a stakeholder of the Sport Policy did not necessarily translate into having knowledge about it. Instead, institutions that were assumed to have the potential to promote sports activities to the wider population group, were identified and assigned tasks. Therefore, implementation strategies or guidelines were linked to the role of such institutions. The flip side is that some stakeholders were indifferent towards the policy, and did not feel obliged to carry out its implementation. As illustrated in the quotation, they indicated that the responsible ministry in charge of sports should take a lead in its implementation and the evaluation of its progress:

“I suggest the policy owners should come down and work closely with stakeholders, just as we work with sports federations”, As a policy, the owners should inform the implementers on the way forward this should be part of their duties (P: 1).

Literature suggests that for stakeholders to know their various roles, they need to have sufficient knowledge about the policy in question (Bernier & Clavier, 2011; Breton & Leeuw, 2010). This is supported by the fact that some of the stakeholders, who admitted to having participated in the policy’s development, were more inclined to implement it, than those who claimed to know little or nothing about it. There was a sense of latency noted among the stakeholders, who were seemingly still contending with the idea of implementing the policy, as their own. They indirectly expressed concerns of conflicting priorities between having to fulfil their duties, as well as implement the Sports Policy:

“I am not sure if the current sports policy was based on any research, but it gives us some responsibilities as a ministry..... that has many youth... So when they give you a task you can’t refuse....” (P: 7)

Consequently, a contradiction was created between policy and practice, where policy intentions were not necessarily in alignment with the reality on the ground. As stated in literature, the implementation of policies is multifactorial, and the implementers are not fully

in control, which eventually restrains the implementation process (Bloyce & Smith, 2009). However, the consistency of the policy on paper, as well as what it intends to do in practice, is crucial, as it determines the degree to which policies, effectively, achieve their desired goals (Sidiki, 2014). This is not always the case because of the complex development methods of most policies (Sabatier, 2007). This is supported by the following excerpt:

“...although in our policy it is included that we should promote sports for all (linked to health) so that all Rwandans should do sports, however, that was not the motivating factor. Our main motivator was to put a guiding channel for all stakeholders to have one guiding principle to follow. Of course it’s understandable that health is part of the policy...” (P: 8).

Generally, on a more positive note, the Sports Policy is not a static document, and therefore, changes can be made during its review. In addition, there is a strong political will to progress health enhancing physical activity/sports in Rwanda, through strategies, such as the compulsory collective sports for government employees, every Friday of the week, since 2012 (RW MINISPOC, 2012), as well as the car free zone established in Kigali City centre, in August 2015, to encourage people to walk and ride bicycles, as a healthy lifestyle (Tashobya, 2015). The National Olympic Committee, which is also a stakeholder of the Sports Policy programme, has initiatives such as the “Weekend Nziza” (Nice weekend) programme, which started in November 2014, giving individuals an opportunity to participate in a running race every month, and later evolved to three races every month, namely, a youth talent detection event of 3KM, a fun run and walk event for adults of 3KM, and a road race on the streets of Kigali City of varying distances (*Interviewee: P2*).

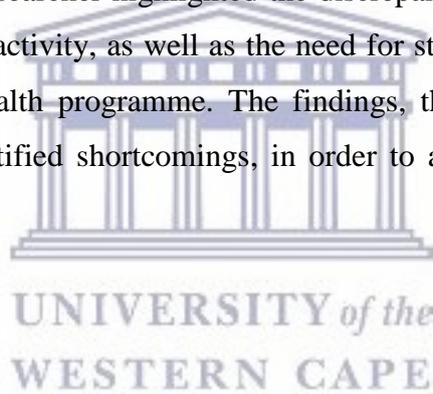
4.8. Conclusion and implications for practice

While the health benefits are well acknowledged in the Sports Policy, promoting health is not the primary objective of the Sports Policy. Clearly, there is a need for specific attention to be drawn towards promoting the Sport for Health programme. The public would benefit from these awareness drives about the value of sport/exercise as a healthy lifestyle. This can be achieved through a social marketing strategy that aims to change peoples’ perceptions and behaviours. Literature states that individuals are more likely to adopt healthy behaviours, when given the right information, as opposed to sophisticated interventions (Madajewicz *et*

al., 2007). Additionally, Rutten *et al.* (2003) assert that policy outcomes are influenced by factors such as concrete goals, adequate resources, as well as public and media support. Regarding the Sports Policy, there is hardly an objective that directly relates to promoting health; therefore, the chances of it promoting the Sports for Health programme are vague.

A recurrent theme from most of the responses implied that the Rwandan community lacked awareness of the value of sport/exercise for health. Therefore, communities need to be informed about the need to engage in sport, through advertising/publicity in media, as well as other possible means that are easily accessible. As highlighted by some participants, there are previous health promotion initiatives that succeeded in Rwanda, which could be emulated. These include, public awareness campaigns against smoking, HIV/AIDS prevention and control, malaria control and TB prevention.

Finally, in this chapter, the researcher highlighted the discrepancies regarding the promotion of health enhancing physical activity, as well as the need for strategies specifically designed to promote the Sport for Health programme. The findings, therefore, could be used as a reference to address the identified shortcomings, in order to advance the Sport for Health programme.



CHAPTER FIVE

LEVELS OF LEISURE TIME PHYSICAL ACTIVITY (LTPA), MOTIVATING FACTORS AND BARRIERS TO PARTICIPATION AMONG GOVERNMENT EMPLOYEES IN RWANDA

5.1. Introduction

In this chapter, the researcher presents and discusses the objective to identify the factors, which contribute to, or limit, individuals' engagement in LTPA, as well as their demographic information and levels of LTPA. The results are critically examined, in line with the theoretical framework adopted for the study, as they reflect three of the four core constructs of the framework. These include, the individual factors, as well as the social and physical environment related factors. The individual factors are derived from the demographic profiles of the participants, whereas the motivating and limiting factors of LTPA participation, highlight the social and physical environment-related influences of being physically active.

5.2. Background

Regular physical activity participation (PAP) has been identified as beneficial to human beings in many ways. Some of the benefits include, promoting and enhancing good health, normal functioning of the body and quality of life (Allender, Cowburn & Foster, 2006; WHO, 2004; Booth *et al.*, 2000). Unfortunately, physical inactivity, which highly contributes to poor health, is an emerging global burden (Allender *et al.*, 2006), related to major NCDs, such as coronary heart disease, breast and colon cancers, type II diabetes and chronic respiratory disease (Beaglehole *et al.*, 2011). Besides, poor health negatively affects individuals and nations, in terms of economic development, due to the high treatment costs and the management of long-term complications (Zhang & Chaaban, 2013; Vallgarda, 2007).

Physical inactivity has been identified as a modifiable risk factor that can be prevented (Burden & Branch, 2010). However, efforts to address this unhealthy behaviour have not, generally, gained enough political attention, compared to other unhealthy behaviours (Kohl *et al.*, 2012). Therefore, scholars assert that public health policy makers should consider

addressing physical inactivity, as one of the high risk behaviours (Wen et al., 2011; Wen et al., 2013; WHO, 2007). While the promotion of physical activity alone may not be the solution to preventing all diseases, its wide-ranging health and non-health related benefits, cannot be ignored.

5.2.1. The burden of and factors that contribute to physical inactivity

Physical inactivity has been, and still is, a public health burden, not only in the western world, but also in low and middle income countries, and is linked to the rising incidence of morbidity and mortality, due to NCDs (Bauman *et al.*, 2012; Wagner & Brath, 2012; WHO, 2010; Kouvonen *et al.*, 2005; Mathers, Vos, Stevenson & Begg, 2001). Several literature findings rated physical inactivity as the fourth major predisposing factor of NCDs, globally (Bonita *et al.*, 2013; WHO, 2010), with an estimated prevalence of 31% (Hallal *et al.*, 2012). Wen & Wu (2012), in their commentary paper, rated physical inactivity and smoking as the 2 major predisposing factors to chronic diseases of lifestyle, which also contribute to high mortality rate, increased health expenditures and reduced productivity. These findings are also in agreement with the results of an Australian study, more than a decade ago, which reported that physical inactivity was the second cause for high incidence of disease and injury, following tobacco consumption (Mathers *et al.*, 2001). What has evolved is that the burden of physical inactivity is not only limited to adults, but also prevalent among the younger generation. Of which was regarded as rather distressing, as they would grow up to become sedentary adults, being more exposed to a high risk of NCDs (Hallal *et al.*, 2012). Besides the negative effects on individuals' health and the quality of life, physical inactivity imposes great financial costs on governments globally, particularly for the treatment costs of major chronic diseases of lifestyle (Zhang & Chaaban, 2013).

Among the various factors that contribute to physical inactivity is urbanization that has increasingly led to modern use of machinery, which, as a result, minimizes the physical work load of humans (Hallal *et al.*, 2012; Kouvonen *et al.*, 2005). Consequently, this tremendously contributes to sedentary behaviour, which exposes humans to chronic diseases of lifestyle (Hallal *et al.*, 2012; WHO, 2010; Sparling, Owen, Lambert & Haskell, 2000). Hallal *et al.* (2012) assert that the invention of machines, such as

automobiles, computers, and phones, increased the chances of people moving less, not only at work places, but also in their day-to-day lifestyles. Some of the other major identified barriers to physical activity participation, across different population groups, are financial constraints, safe and accessible environments, culture, as well as the socio-economic backgrounds of individuals (Rotich, 2014; Allender *et al.*, 2006).

Another barrier that contributes to physical inactivity is attributed to the weak recognition of preventive medicine, as a curative option, as medical students are trained to cure diseases, instead of preventing them (WHO, 2003). The medical personnel, specifically physicians, have the potential to influence people to make healthy choices, such as physical activity participation, eating healthy diets, among others (Sparling *et al.*, 2000). The Royal College of Physicians (2012) asserts that poor organizational structures of physicians affect their ability to encourage people into making healthy lifestyle choices. Specifically, health care professionals are not confident enough to prescribe exercise as a treatment for medical conditions. Lack of national coordination, unclear referral pathways and concerns over quality assurance of the services providing exercise-based therapy, are some of the reasons physicians hardly promote physical activity (Royal College of Physicians, 2012).

5.2.2. PAP promotion strategies and challenges around their promotion

As suggested in previous literature, physical activity promotion [PAP] strategies do not have to be sophisticated, but rather basic (Lee & Moudon, 2004). They should be designed in a more fascinating and accessible manner, to attract and encourage more people to adopt a healthy lifestyle (Hallal *et al.*, 2012). Among the recommended strategies for promoting physical activity is the use of secure and supportive environments, where individuals spend their time, as this permits more options of being active, like walking (McCormack & Shiell, 2011). Such environments are as basic as well-built sidewalks in residential, working or recreation areas (McCormack & Shiell, 2011; Witten, Pearce & Day, 2011; Hannon, 2005). Additionally, scholars suggest initiatives, such as public sensitization about the importance of PA, use of social support networks, and individual behaviour change, to promote PAP (Kohl *et al.*, 2012; Reblin & Uchino, 2008; WHO, 2003).

In most developed countries, findings reveal that greater strides have been made to address physical activity as a healthy behaviour, compared to most African countries, where standardized data are not easily available. Following guidelines from WHO and CDC on physical activity, nations have managed to develop local strategies to promote physical activity, such as: “The Northern Ireland Physical Activity Strategy Action Plan 1998-2002”; “Be Active Australia: A Framework for Health Sector Action for Physical Activity 2005-2010”; the United Kingdom “Be Active, Be Healthy: A plan for getting the nation moving”; “Let’s Make Scotland More Active: a Strategy for Physical Activity”; to mention but a few (Bornstein, Pate & Pratt, 2009). In Africa, national strategies for promoting physical activity are scarce and not easily accessible to the public. As a matter of fact, physical activity promotion is perceived to be coupled with the national sports policies, which are rather biased towards socio-economic advancement, instead of health (Keim & de Coning, 2014).

In their study, Sparling *et al.* (2000) highlight the various experiences and measures used in 3 countries (America, Australia & South Africa), to promote physical activity among targeted populations, more than 10 years ago. In America, physical activity was promoted, based on the CDC guidelines, as well as the NCPPA initiative for behaviour change. Guidelines were provided to promote long-term physical activity participation, through physical and health education sessions, among the young generation in schools and communities, using conducive environments, supportive health services, engaging in extracurricular activities, as well as parents’ support. In Australia, the national physical activity promotion strategy, “Active Australia”, is to encourage the whole Australian population adopt a healthy lifestyle, as a preventive measure against diseases, through a multi-sectoral collaboration of all relevant entities. In South Africa, the two identified national plans for physical activity and health were guidelines for the older population, and the “WHO Health- Promoting Schools Network”, coupled with other national awareness programmes. Notably, non-governmental organizations seem to have more influence in promoting physical activity through regional programmes, which could later mature to target the whole population (Sparling *et al.*, 2000).

As much as strategies to promote physical activity as primary disease prevention are documented, a void has been noted, however, in terms of effective implementation, in which policy makers have a major role to play (Horton, 2013; Wen *et al.*, 2013; WHO, 2007). Developing implementation strategies alone is not enough. Sidiki, (2014) suggests that public policies should have a clear framework of how they intend to facilitate their implementation strategies, so as to create a positive impact, or else, it becomes a cumbersome experience. In addition, most physical activity promoting strategies are not tailored to meet the needs of the general population; thereby affecting their outcome (Allender *et al.*, 2006). Physical activity levels tend to vary from country to country; therefore, it is crucial to consider the available infrastructure, as well as the norms and perceptions of the people for whom strategies are developed, if they are to have a positive impact (Bauman *et al.*, 2012).

Likewise, a large body of literature suggests that interventions geared towards improving public health, should first consider factors that motivate, or affect people's lifestyle behaviours for better outcomes (Bauman *et al.*, 2012; Hallal *et al.*, 2012; Breuer *et al.*, 2010; Nizeyimana & Phillips, 2006). These findings concur with those of Brannen, Dodd, Oakley and Storey (1994), as well as Smith (1994), who suggest that, while setting the most desirable health promotion strategies, individuals should also be consulted and allowed to participate in the decisions made about their own health. Consequently, this will positively influence their attitude towards health, as well as how they choose to live it, because they will view themselves as stakeholders, and therefore, work together to achieve a common goal (Bellew *et al.*, 2008; Lee & Moudon, 2004; Bauman *et al.*, 2012; Bonita *et al.*, 2013; Aarts *et al.*, 2011). Similarly, Kohl *et al.* (2012) advocate for what they called a "Full systems approach", which suggests that a wider approach with high level political commitment, is required to address the issue of physical inactivity, as a public health hazard.

5.2.3. Status of physical activity participation in Rwanda

The national data on physical activity levels are based on a STEP survey that was conducted to assess NCD risk factors in Rwanda. The findings revealed a high prevalence of physical activity (62%), which was accumulated more from work and transport, than from recreational activities, with a majority of participants (78.3%)

being rural dwellers (RW MINISANTÉ, 2015). In consonance with these findings, studies conducted among different population groups in Kigali City revealed that a majority of the participants had higher levels of job and domestic related physical activity, as opposed to recreational physical activity. For example, a prevalence of 84% job related and 5% leisure time physical activity levels were reported among nurses working in a public hospital in Kigali City (Mukaruzima & Frantz, 2012). Among people with Diabetes mellitus, the highest (686) mean METs of physical activity were recorded within the job category, and the lowest (223) mean METs were within the leisure time category (Kabanda & Phillips, 2011). The same trend was reported among people living with HIV/AIDS, whose highest levels of physical activity were job related (38%), and the lowest (17%) was recreational related (Frantz & Murenzi, 2013). Physical inactivity, like diabetes, alcohol, smoking, overweight and obesity, was also significantly linked to hypertension among university employees in Kigali City ($p < 0.05$), where 53% of the participants with hypertension were classified as sedentary (Banyangiriki & Phillips, 2013). On a positive note, physiotherapists in Rwanda were observed to have sufficient levels of physical activity, as well as good promoting tendencies (Frantz & Ngarambe, 2013). While they may not be generalized to the entire Rwandan populace, these consistent findings, indicating low levels of leisure time physical activity, reveal a need to encourage people, especially urban dwellers, to engage in leisure time physical activities more often.

The Rwandan government recognizes the importance of sports and recreation to the general population. This has been demonstrated through the development of the National Sports Policy (which caters for all sports needs, in general), as well as the Prime Minister's order for all civil servants to engage in leisure time physical activity, once every week for two paid hours (RW MINISPOC, 2012). Recently, there has been new developments to promote health enhancing physical activity to the public. In 2016, the Rwandan government initiated car free days (two) per month (RW City of Kigali, 2016). This initiative which was pioneered in Kigali city is expected to be extended to the other parts of the country. The strategy aims to encourage Rwandans to adopt a healthy lifestyle by engaging in mass sport activities twice every month, as well as to reduce the carbon footprint in the city. During this exercise, participants also receive

free medical check-ups from health professionals (RW City of Kigali, 2016). While these initiatives are crucial in contributing to the health of Rwandans, their sustainability and effective implementation is quite a challenge as they tend to fade out with time. This could be attributed to a lack of clear or realistic frameworks for implementation, owing to the fact that less, or no prior research is conducted to identify the determinants of PAP among the general population (RW MINISPOC, 2012).

Elsewhere, initiatives to promote physical activity were observed to be supported by the private sector. For example, in South Africa, the “Community Health Intervention Programmes”, which used physical activity as a means to influence the different communities to adopt healthy lifestyles, were initiated by non-governmental organisations [NGOs], such as the Sport Science Institute of South Africa, together with a privately owned national insurance company (Sparling *et al.*, 2002). A Brazilian “Agita Sao Paulo” initiative to increase physical activity levels among inhabitants of Sao Paulo, proved to be a successful strategy with positive outcomes, such as a 70% decline in physical inactivity levels, recorded between 2002 and 2008, as well as reduced annual financial expenditures by the health sector, among others (Matsudo, 2012). This initiative capitalized on broad partnerships with various stakeholders, adopting, what was referred to as a “Two-hat approach”, whereby support was garnered from the government, as well as from the private sector (Matsudo, 2012). In Rwanda, the private sector has not yet embraced the drive to promote physical activity, owing to the fact that Rwanda’s private sector is still grappling with low level investment activities, income generation of which is a challenge (RW MINISPOC, 2012). However, considering its geographical location, coupled with the historical background of post-1994 genocide, which left the country in ruins, with so much to recover from, it would be unfair to compare the findings in Brazil and South Africa to Rwanda. Nonetheless, the intention to promote physical activity as a healthy lifestyle is communal, and therefore, successful lessons could be adopted.

To date, limited, or no studies have been conducted in Rwanda, specifically on LTPA and the factors that facilitate, or limit, individual participation. Part of this study, therefore, intends to unfold the prevalence of LTPA among a group of working people

in Kigali City, as well as their experiences regarding factors that contribute to, or limit their participation. A customized questionnaire with three parts was employed to gather demographic data, levels of LTPA, and the factors that contribute to, or limit individual to participation.

5.3. Methodology

5.3.1. Settings

The study was conducted in Kigali City, the capital of Rwanda, among employees of the stakeholder institutions of the Sports Policy. These stakeholder institutions included the Ministry of Sports & Culture, Ministry of Health, Ministry of Education, Ministry of Local Government, Ministry of Defense, Rwanda National Police, Rwanda National Olympic Committee, National sports bodies, the Private sector and civil society organizations.

5.3.2. Population & Sample

A convenient sample of both adult male and female employees were selected from the stakeholder institutions, to participate in this survey. In order to obtain a representative sample, the Yamane formula (Israel, 1992), as shown in equation 3.1, was used to calculate the sample size, based on the total population of all employees from the stakeholder institutions. The total population size was 2427 employees from all the eight institutions. According to the Yamane formula, the minimum representative sample for the study was calculated as 344 respondents. However, in order to increase the accuracy of the study, more respondents, who were willing to participate in the study, were contacted and given questionnaires. Table 5.1 below outlines the details of sample calculations.

Table 5.1: Total population and sample size

Stake holder institutions	Population size	Inclusion probability	Required sample size
MINISPOC	45	0.02	11
MINALOC	53	0.02	13
MINISANTE	250	0.10	62
MOD	850	0.40	210
RNP	750	0.29	185
PSF	32	0.01	8
RNOC	8	0.00	2
MINEDUC	439	0.17	109
Grand total	2427	1	600

5.3.3. Data collection tools

The current objective sought to explore and describe factors that facilitate, or limit, physical activity participation, using a self-administered questionnaire, a method which is more practical for collecting data from a larger sample. A customized questionnaire, consisting of three parts, was employed to gather data. Part one of the questionnaire captured the demographic data of the respondents. Part two, the Godin-Shephard questionnaire, assessed their levels of leisure time physical activity, and the last part, with open-ended questions, assessed the factors that influenced their participation.

The Godin-Shephard leisure time physical activity questionnaire (GSLTPAQ) is a self-administered tool that assesses the number of times participants engage in strenuous, moderate & mild leisure-time physical activities, for at least 15 minutes a day per week (Godin, 2011). The GSLTPAQ uses a Leisure Score Index (LSI) classification code to classify individuals as sufficiently active, or insufficiently active (Amireault *et al.*, 2015a). The LSI is aggregated by multiplying the number of times individuals engage in strenuous, moderate and mild LTPA by 9, 5, and 3 metabolic equivalents (METs), respectively (Amireault *et al.*, 2015a; Godin, 2011). However, Godin (2011) argues that mild LTPA does not strongly contribute to health benefits, and therefore, suggests to consider the strenuous and moderate LTPA scores for classifying individuals into

sufficiently active, and insufficiently active, that is, individuals whose LSI is 24 and more are classified as active, while those whose LSI is 23 and below are classified as insufficiently active (Amireault *et al.*, 2015b; Godin, 2011).

The last part of the questionnaire has three open-ended questions, which sought to gain a better understanding of respondents' experiences, regarding factors that motivated, or limited, their participation in LTPA.

5.3.4. Ethical considerations and data collection procedure

Prior to conducting field work, the study was approved by the Senate Research Ethics Committee of the University of the Western Cape under registration number 14/7/8. Permission to conduct the study in Rwanda was obtained from the Ministry of Education upon submission of all requirements, including the study proposal. The study was also presented, orally, to the National Ethics Committee and approved. Regarding the respondents' anonymity, confidentiality and respect, they were clearly communicated to the respondents, and thereafter, information sheets, containing the aim and objectives of the study, were distributed to the respondents and completed before participation. The respondents were also requested to sign an interview confidentiality binding form, or consent form, before participation. They were informed that their participation was voluntary and that they were free to withdraw from the study, at any stage, without any negative consequences.

The researcher and research assistants delivered the questionnaires, in person, and provided clear explanations to the respondents, regarding the purpose of self-administered questionnaire, as well as how to complete it. The researcher and/or research assistants were available to help, when required. The questionnaires were collected as soon as they were completed, where possible, and provisions made to collect, within at least 2-3 days of receipt, those that were not completed immediately.

5.3.5. Validity and Reliability

Validity is the capacity of the tool to measure what it is intended to measure, while reliability is the extent to which an instrument could reproduce similar results, when used repeatedly (Sarantakos, 2005; Golafshani, 2003). The Godin-Shephard leisure

time physical activity questionnaire has been widely used in different countries, as well as different languages and was found to be consistent. It was also tested for validity and proved capable of assessing self-reported leisure time physical activity, as well as categorizing fit or unfit individuals, with the final scores, positively correlated to the percentile V02max, ($r = 0.24$, $p < 0.001$) and percentile body fat ($r = 0.13$, $p < 0.01$), which are the two major determinants of physical fitness (Godin, 2011). The three open-ended questions that formed the last part of questionnaire, were carefully developed by the researcher, with reference to relevant literature and guidance from the supervisor. Finally, prior to being used on the study sample, the questionnaire was translated from English to Kinyarwanda, and piloted on a group of respondents, not part of the main study, to ensure its clarity, and where necessary correct any probable errors.

5.3.6. Data analysis procedure

The data were analyzed quantitatively, using the Statistical Package for the Social Sciences (SPSS), version 23. Both descriptive and inferential statistics were employed to summarize and draw meaningful associations between the different variables. Frequency tables were used to summarize the demographic data, the various levels of LTPA, as well as the data, regarding factors that facilitated, or limited LTPAP, which were presented under meaningful generic themes.

5.4. Results

5.4.1. Demographic profile of respondents

A total of 600 questionnaires were distributed among the respondents, and of those, 562 completed questionnaires were collected, yielding a response rate of 80.2%. Some variables, such as age groups, marital status, education level and work experience were pooled and re-coded into smaller manageable groups, for ease of presentation and analysis, as outlined in Table 5.2.

Table 5.2: Socio-demographic data of the respondents (N= 562)

Variables	Frequency	Percentage %
Gender		
Female	171	30
Male	391	70
Age		
21yrs-30yrs	295	53
31yrs-40yrs	181	32
41yrs and above	86	15
Marital status		
Married	246	44
Single/Divorce/Widowed	315	56
Level of Education		
Secondary/Vocational training	120	22
Bachelor's degree	382	68
Post graduate degree	58	10
Work Experience		
1-9yrs	401	72
10-19yrs	115	21
20 yrs and above	39	7
Place of work		
MINISPOC	9	7
MINISANTE	53	9
MINADEF	222	40
MINEDUC	94	17
MINALOC	10	9
RNP	160	29
Private Sector & Civil society	7	1
National Sports Bodies	1	0

Of the 562 respondents, the majority (70%) were males, single or without partners (56%), had a Bachelor's degree (68%) and were aged between 21-30years (53%). More than two thirds of the respondents (72%) had working experience ranging between 1-9yrs. The majority of respondents in this survey were government employees. The Ministry of Defense had more respondents (40%), followed by Rwanda National Police (29%) and Ministry of Education (17%).

5.4.2. Respondents' physical activity levels

Individuals were classified as active, moderate or insufficiently active, based on their Leisure Score Index (LSI), as illustrated in Table 5.3. LSI is a summation of the overall score of the leisure time physical activity questionnaire. The overall score is obtained by multiplying the frequency of each level of activity by the corresponding Metabolic Equivalent of Task (MET) value (3, 5, and 9), for mild, moderate, and strenuous intensity, respectively; that is, Mild ($\times 3$) + Moderate ($\times 5$) + Vigorous ($\times 9$).

Table 5.3: Computation of the overall score of the GSLTPAQ units

Levels of activity	LSI units	METS Equivalent
Active with substantial benefits	24 units and above	14 kcal/kg/week or more
Moderately active	14 to 23 units	7 to 13.9kcal/kg/week
Insufficiently active	Less than 14 units	Less than 7kcal/kg/week

5.4.2.1. The frequency of physical activity participation in vigorous and moderate categories per week

The frequency of participation in vigorous and moderate LTPA per week are highlighted in Figure 5.1. Regarding vigorous activity, the majority of the respondents (50%) participated once or twice a week, while only the minority (4%) participated three to five times a week, and the rest (46%) did not participate in any activity. In the moderate LTPA category, more respondents (42%) participated three to five times per week, (30%) of the rest participated once or twice a week, while (28%) did not participate.

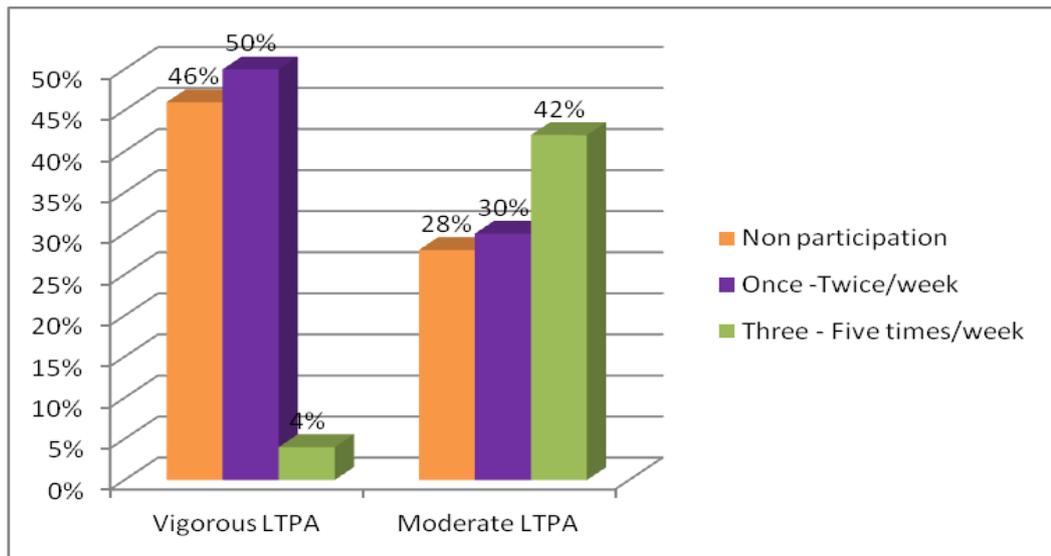


Figure 0.1: Frequency of participation in vigorous and moderate LTPA per week

5.4.2.2. Active versus inactive respondents

In order to classify active and inactive respondents, only two levels of activity were considered, namely, moderate to vigorous LTPA, under the following classification codes: Individuals who had $LSI \geq 24$ in moderate - strenuous activity were classified as sufficiently active, while those who had $LSI \leq 23$ were classified as insufficiently active. Less than half (39%) of all the respondents were categorized as sufficiently active, and the rest (61%) as insufficiently active (see Figure 5.2).

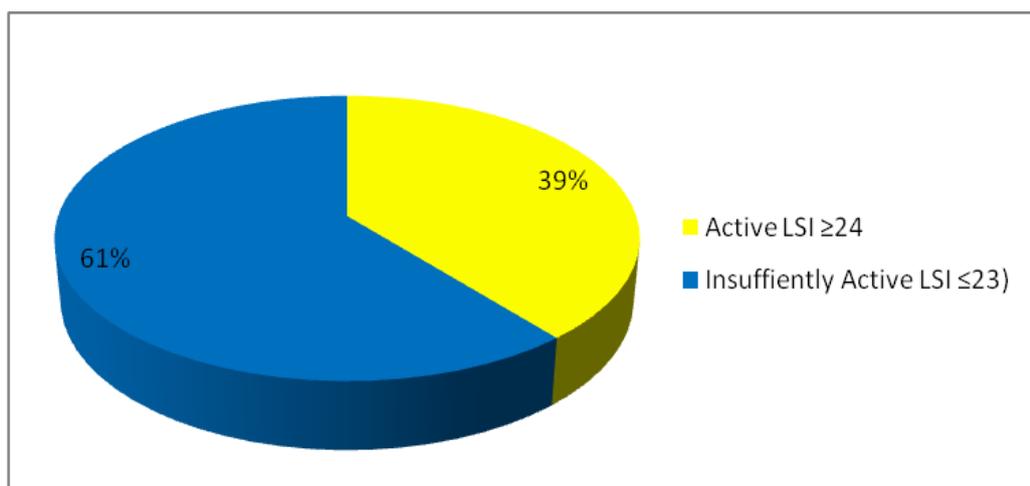


Figure 0.2: Prevalence of active and inactive participants (vigorous-moderate LTPA)

5.4.3. Physical activity levels in relation to demographic profiles

The LTPA levels of males and females are illustrated in Figure 5.3. Males were more active (41%) than females (34%). There was no statistical significance between gender and LTPA levels ($\chi^2 = 2.64$, $df=1$ $p=0.11$).

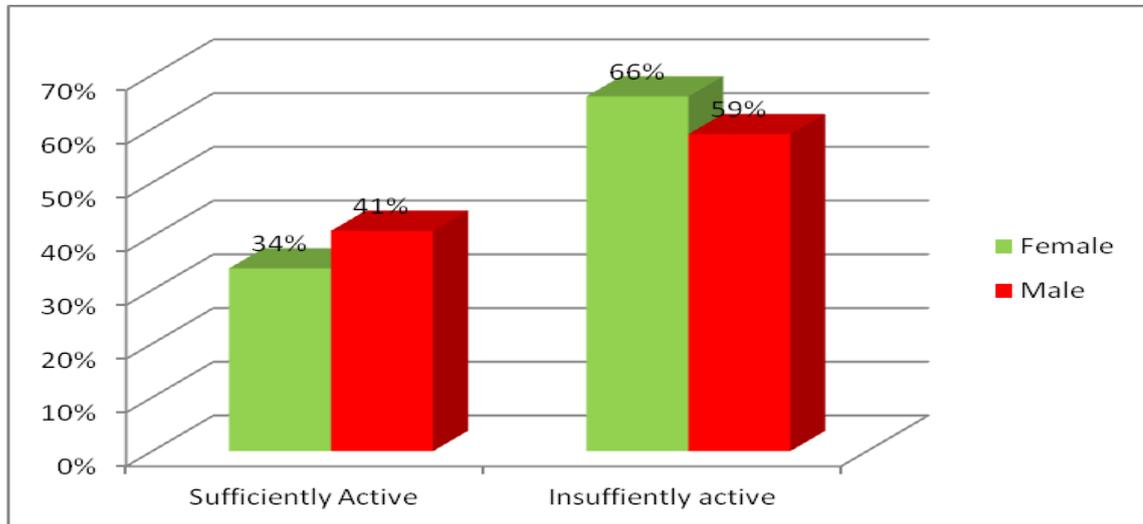


Figure 0.3: Levels of LTPA with gender

In Figure 5.4, the results reveal that the respondents, who were in the single or no partner category, had slightly higher levels of sufficient LTPA (41%), compared to the respondents in the married category (37%). No significant relationship was found between marital status and levels of LTPA, ($\chi^2 = 1.1$, $df=1$, $p=.29$).

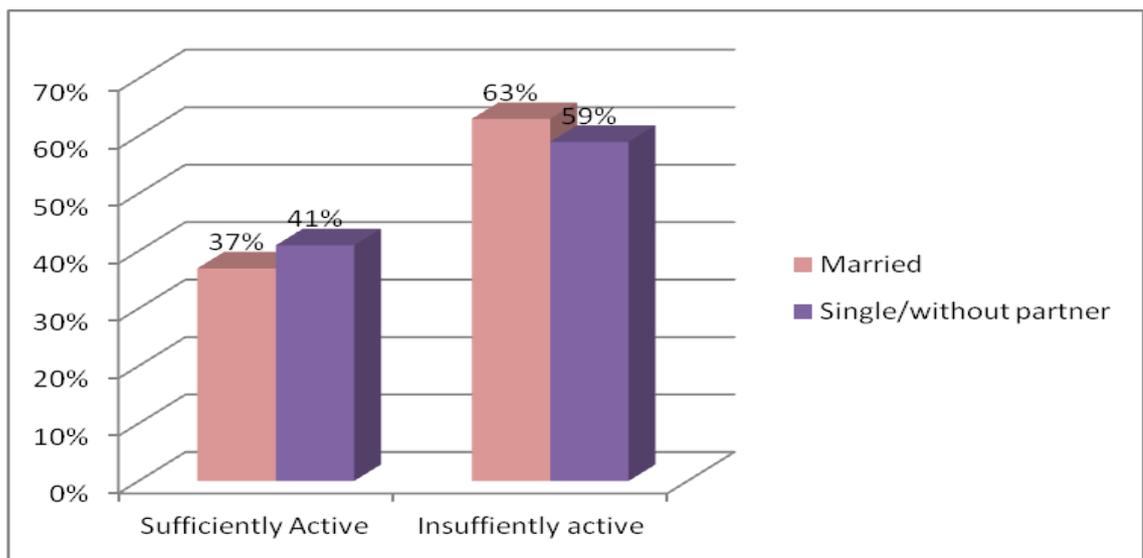


Figure 0.4: Levels of MOD-VIG LTPA with marital status

In Figure 5.5, the findings revealed higher levels of LTPA among the respondents aged between 21-30 years (43%), followed by those aged 31-40 years (40%), and above 40 years (23%). These differences were statistically significant ($\chi^2=11.05$, $df=1$, $p=.004$).

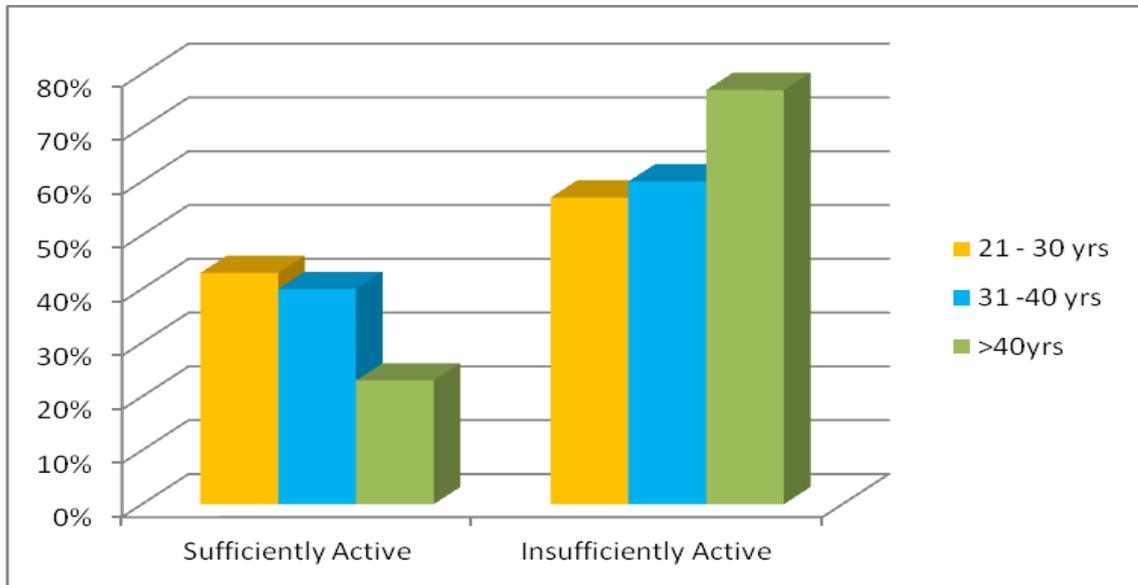


Figure 5.5: Levels of LTPA with age groups

The differences between active and inactive respondents are illustrated in Figure 5.6. Secondary level education respondents were more active (43%) than university graduates (37% and 41% for graduate and postgraduate, respectively). No significant association was found between level of education and LTPAP ($\chi^2= 1.62$, $df=2$, $p=.45$).

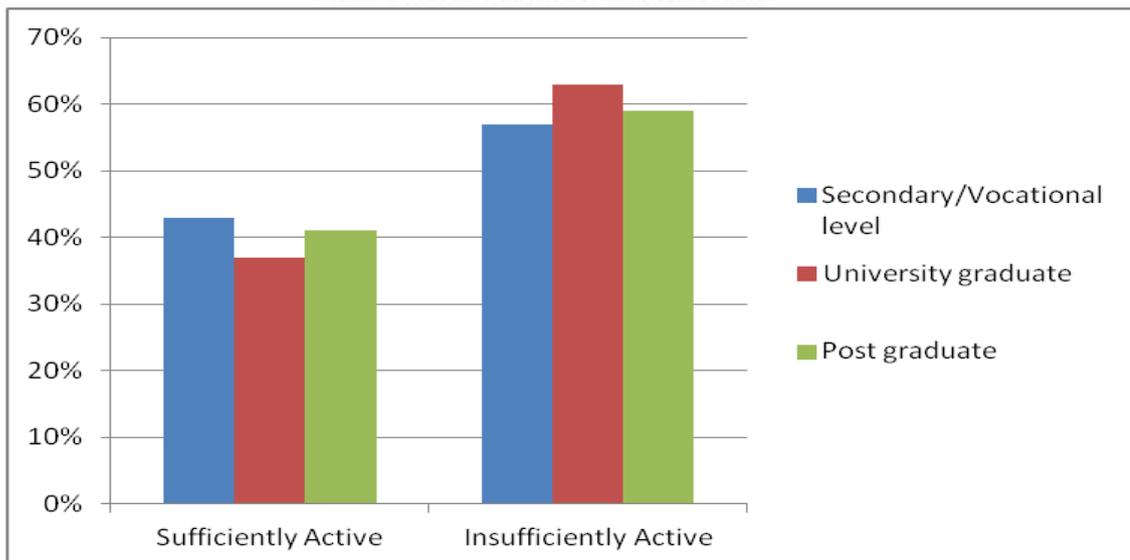


Figure 5.6: Levels of LTPA with education

In figure 5.7, the results revealed that LTPA reduced with higher working years. The respondents with 1-9 years' working experience were more active (43%), compared to those with 10-19 years, and those above 20 years (30% and 21%), respectively. There was strong evidence for significance ($\chi^2=12.05$, $df=2$, $p=.002$).

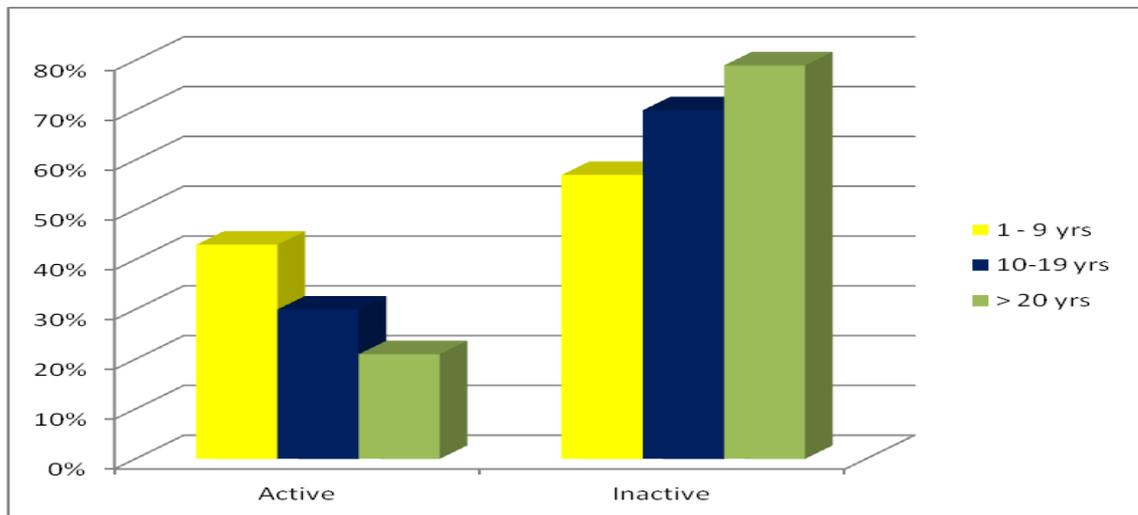


Figure 0.5: Levels of LTPA with working experience

5.4.4. Summary of main findings

Generally, the majority of the respondents (61%) were not sufficiently active. Among the active ones, males were more active (41%) than females, the respondents, who were single or without partners, also had higher levels of activity (41%), compared to the married ones. Regarding the level of education, the respondents with secondary level education were more active (43%), than the university graduates (37% and 41% for undergraduate and postgraduate degree, respectively). Statistical significance was found between physical activity levels and age ($\chi^2=11.05$, $df=1$, $p=.004$), as well as with working experiences ($\chi^2=12.05$, $df=2$, $p=.002$). Younger respondents, between the ages of 21-30 years, were more physically active (43%) than those above 40 years (23%), while the respondents with less working years' experience (1-9years) were more active than the ones with above 20 years of working experience.

5.4.5. Experiences of respondents regarding facilitators and barriers to LTPAP

The respondents in this survey were allowed to give their own responses, through open-ended questions, regarding their experiences with factors, which facilitated or limited

their participation in LTPA, as well as their general perception about physical activity. Most of the respondents offered multiple responses and, as a result, the number of responses exceeded the total number of respondents. The responses were recorded verbatim into SPSS version 23, and analyzed under relevant meaningful sub-themes.

5.4.5.1. Factors that motivate respondents to engage in LTPA

The several factors that motivate LTPA participation, as mentioned by the respondents, were categorized under the following sub-themes; health benefits, musculoskeletal benefits or physical appearance, psycho-social benefits, and others.

As illustrated in Table 5.4, the most common factors that motivated the respondents to engage in LTPA were captured under health benefits (274 - 32%), which included, preventing diseases, well-being and to keep healthy. The other commonly mentioned factors were related to musculoskeletal benefits (29%), such as physical fitness, strength and to manage weight, followed by psycho-social benefits (27%), such as, to prevent or relieve stress, reduce fatigue, or make friends. Lastly, 17% of the respondents shared other reasons, such as medical prescription, convenience (time & facilities at home), or no reason at all.

Table 0.1: Motivating factors to LTPA

Benefits	Frequency	Percentage
Health benefits - Prevent diseases, long life, good health/wellbeing, breathe well, good blood circulation	274	48.8%
Musculoskeletal benefits/ Physical appearance - Keep fit and strong, increase endurance - For flexibility and increased performance - Loose/manage weight, reduce fat, look & feel good	228	40.6%
Psycho-social benefits - Relieve/prevent stress, relax body & mind, reduce fatigue, improve concentration, cleansing/detox - Good company/motivation (friends, family, workmates) - Make friends, have fun/enjoyment	250	44.4%
Other -Medical prescription, reduce risk of injuries -Convenience (time, facilities at home), Motivate my children -Secure neighbourhood, street lights	99	17.6%
Total	*851	

*Note: The total exceeded the number of questionnaires administered (562) as a result of multiple responses.

5.4.5.2. Factors that limit LTPAP

The respondents mentioned various factors that hindered their participation in LTPA, and these were categorized under the following sub-themes: personal factors, environmental and social factors, and other factors, as illustrated in Table 5.5. Of the 562 respondents, 352 (63%) mentioned personal factors, such as, time and tight work schedules as the most frequent barriers affecting their LTPA participation. Environmental and social barriers, such as, lack of company and motivation, lack of facilities, lack of money for transportation, and/or to pay for gym services, were the least frequently mentioned, accounting for 13,2%. Of the 562 respondents, 242 (43%) respondents, had no reason, or other reasons, such as old age, fear for injuries, sickness and not knowing what sport to do.

Table 5.5: Factors that limit LTPAP

Barriers	Frequency	Percentage
Personal factors - Time, work schedules, fatigue after work - Domestic responsibilities, social activities	352	62.6%
Environmental & Social factors - Proximity to facilities, cost (gym & transport) - Lack of company, lack of motivation	74	13.2%
Other factors - No response, old age, sickness, fear for injuries, no sport for old people, don't know what sport to do, not a priority, boring & exhausting	242	43.1%
Total	668*	

*Note: The total exceeded the number of questionnaires administered (562) as a result of multiple responses.

5.4.6. Summary of findings

In this section, the various factors that motivated or hindered LTPA participation are assessed. The motivating factors were categorized under the following sub-themes: health benefits, musculoskeletal benefits or physical appearance, psycho-social benefits and others. The barriers were categorized under personal, environmental and social factors and other factors. Of the various reasons that motivated respondents to engage in LTPA, prevention of diseases, and to have good health, were the most prevalent

(32%), while time and tight work schedules were the most frequent reasons (53%) that hindered their participation.

5.5. Discussion

Using a customized questionnaire, the researcher, in this survey, sought to assess the respondents' levels of LTPA, through a recall period of one week, as well as the factors that contributed to, or limited, their participation. The results revealed that most of the respondents accumulated sufficient units of activity, to be classified as active, only when all the three categories of LTPA (Vigorous, moderate and mild) were computed collectively. However, Godin, the author of GLTPAQ, suggests that in order to classify individuals as sufficiently active, or insufficiently active, vigorous and moderate LTPA scores should be considered instead, excluding mild LTPA, which does not strongly contribute to sufficient health benefits (Godin, 2011). While the respondents mentioned various reasons that contributed to, or limited, their participation in LTPA, the most predominant ones were, to achieve the associated health benefits and lack of time, respectively. In relation to the socioecological framework, the findings in this chapter mainly reflected the three levels of influence for physical activity participation, namely, individual, social, and physical environments. Although only two demographic variables were significantly associated with LTPA participation, there were differences recorded between the levels of LTPA and the other variables.

5.5.1. Prevalence of LTPA

The results of this current study revealed that more than half of the respondents (61%) were not sufficiently active, with LSIs of 23 units, or less. Additionally, regarding the frequency of LTPA participation, 46% of the respondents did not engage in LTPA on most days of the week, particularly within the vigorous activity category, and only 4% participated three to five times per week. However, within the moderate LTPA category, more respondents (42%) participated three to five times per week, compared to those who did not participate at all (28%). Therefore, although these figures indicate that the respondents in this current study did not frequently engage in physical activity, as recommended by World Health Organization (WHO, 2010), the main aim of this survey was to only determine the prevalence of LTPA, separately.

The global recommendation for physical activity is to engage in at least 30 minutes of moderate-activity per day, for five or more days of the week, or at least 30 minutes of vigorous activity three times per week (WHO, 2010). However, this includes the accumulated time for all categories of physical activity, structured or non-structured. Compared to other categories of physical activity, LTPA is structured, objective and done voluntarily, depending on the individual needs. In addition, it is able to provide better health benefits, as well as increased fitness, depending on the amount applied (Amireault *et al.*, 2015; Hoffman, Kang, Faigenbaum & Ratamess, 2005).

Measuring an individual's level of physical activity and classifying them as sufficiently active, or otherwise, is complex, especially in African settings. Similarly, Wareham (2001) asserts that it is difficult to describe physical activity in the low income nations, particularly from an epidemiological perspective. In as much as there are standard guidelines for physical activity participation, the question lies in knowing whether these guidelines are applicable to African settings (Wareham, 2001). Allender *et al.* (2006) assert that large qualitative studies that seek to measure physical activity levels, are, instead, good for determining the strength of the various tendencies of individual physical activity patterns, and not the various factors that influence participation, or non-participation. Similarly, Starkey *et al.* (2002) suggest that promotional services should be aligned to the needs of the people, as well as their environments, in order to have a lasting effect. For instance, walking and cycling are some of the recommended physical activities people should do, to gain some health benefits. However, due to cultural differences and settings, neither of these are a common practice among the urban dwellers in most parts of Africa. This is especially true for Kigali City where this study was conducted, due to the available infrastructure that contribute to the ease of movement. There are countries where people take advantage of walking or cycling as a form of physical activity particularly in the Northern Europe and China (Horton, Rosen & Cox, 2007; Pucher & Dijkstra, 2003). This however may carry a different connotation in other settings or population groups, such as the less affluent who perceive it as old-fashioned rather than as a healthy lifestyle option (Horton, Rosen & Cox, 2007). For instance a study conducted in the United Kingdom [UK], revealed that majority of cyclists were from the well to do social economic class (Steinbach, Green,

Datta & Edwards, 2011). In Rwanda, although not formerly or overtly declared, people walking or cycling may be viewed as something done because of the lack of better options, such as owning a vehicle, or being able to afford the available public transport. In addition to having easy access to public transport, many people in the cities, especially the working group, take advantage of the cheap labour. Non-skilled domestic workers are readily available and are paid to do most of the domestic chores. This leaves most government office workers with fewer opportunities to engage in non-structured physical activities and thereby accumulate the recommended levels of physical activity. Hence the current study focused mainly on assessing structured physical activity among government office workers as they are at risk of physical inactivity due to their lifestyle and occupation.

Generally, Africa is perceived to have lower levels of LTPA, compared to the rest of the world (Guthold *et al.*, 2011), and this trend is further noted among urban dwellers. Regarding the results of this current survey, only 39% of all the respondents were sufficiently active, and the rest (a majority 61%) were insufficiently active. These findings are comparable to others, such as a study conducted among a group of Nigerian urban government employees, which categorized the majority (80%) of them as not physically active (Akarolo-Anthony & Adebamowo, 2014). Also, a Malaysian study reported a higher prevalence of physical inactivity (45.6%) in the urban settings, than in the rural (40.1%) (Ying *et al.*, 2014). It is noteworthy that all these studies are comparable, as they were conducted in urban settings.

In light of these findings, it is arguable that circumstances in the rural areas inadvertently expose its dwellers to high levels of physical activity. Such circumstances are the scarcity of transport, where walking is the major means of transport, and to some extent the use of bicycles. People have to walk long distances to access facilities, such as hospitals, trading centres, or schools. Other means of transport, such as bicycles are only owned by a few, particularly men, and owning one is considered prestigious (Starkey *et al.*, 2002).

5.5.2. LTPA prevalence in relation to demographic variables

In this current survey, among the physically active respondents, males demonstrated a higher prevalence of LTPA (73.5%) than females (26.5%), although this difference was not statistically significant ($p=0.11$). These findings coincide with several other previously conducted studies. For instance, among the government workers in Nigeria, women were reported to be less physically active, compared to men in both categories of physical activity, namely, moderate [28% for women compared to 72% for men] and vigorous [26% for women compared to 73% for men], with no statistical significance [$p=0.12$] (Akarolo-Anthony & Adebamowo, 2014). In a Malaysian study, women were less physically active [50.5%], compared to men [35.3%] (Ying *et al.*, 2014). A similar trend was found among Brazilians, where the prevalence of vigorous and moderate physical activities was twice greater in men [10.8%], than that in women [5.4%] (Azevedo *et al.*, 2007). In another survey, conducted across different countries of the globe, the prevalence of physical activity was determined to be lower among the older generation, the female gender and the affluent nations (Hallal *et al.*, 2012). In addition, results revealed a reversing pattern of physical activity with advancing age, as well as with more years of working, and these differences were statistically significant ($p=.004$) for age and ($p=.002$) for working experience. The prevalence of LTPA between individuals aged 21-30 years was higher (43%) than those aged 40 years and above (23%). Individuals with fewer years of working experience (1-9 years) had the highest level of LTPA (43%), compared to those (21%) with the most years of working experience (20 years and above). Based on these results, it can be deduced that physical activity levels tend to reduce as people get older. However, there are quite controversial findings regarding the stage of the physical activity decline. Sallis (2000) cited that the decline occurs at a much younger age (13-18 years), and the most decline occurs among the males, as opposed to females, specifically in vigorous, and non-structured sports activities. In another study, conducted among Serbian elderly men and women, aged between 60-80 years, decline was apparent as they got older, although it was equal among male and females (Milanovic *et al.*, 2013). Although aging is considered multifactorial and quite complex to be defined in a specific pattern, it is undeniably associated with various physiological changes, such as progressive degeneration of some body structures, which gradually affect one's functional capacity, as well

(Milanovic *et al.*, 2013; Nigam, Knight, Bhattacharya & Bayer, 2012; Sallis, 2000). Additionally, the human body begins to lose 30%-50% of muscle bulk and strength, between the ages of 30 and 80 years. However, this process can be slowed, or reversed, by physical activity practice, although advancing age is associated with reduced physical activity participation (Milanovic *et al.*, 2013).

5.5.3. Factors that contribute or hinder LTPA participation

The factors mentioned in this study pertaining to LTPA participation, or non-participation, are not entirely new in literature. Several studies have been conducted among different population groups, and more or less similar findings have been reported. However, such factors have either not been identified among Rwandans, or are not documented. Generally, the most frequent reasons for engaging in LTPA, as provided by respondents in this current study, were directed at improving their health and gaining psychosocial benefits. As summarized in Table 5.4, a majority (32%) exercised to prevent diseases, have good health and long life, followed by 29%, who exercised to relieve stress, reduce fatigue, improve concentration, and socialise. In a comparable survey conducted among tertiary students in Rwanda, stress relief, better self-esteem, to gain strength and energy, as well as to enhance cardiovascular health, were the most perceived benefits of engaging in LTPA (Tumusiime & Frantz, 2006). While the benefits that contribute to physical activity participation are more or less similar, some are more influential than others in these two cohorts. However, this could be attributed to the methods used in extracting data. In this current study, the respondents provided their own responses, as they deemed fit, through open-ended questions. However, in the latter study, the respondents had to choose from the predetermined responses through close-ended questionnaires. Overall, the findings of both studies reveal that Rwandans appreciate the physical and psychological benefits of LTPA, more. Therefore, these can be applied as some of the strategies to promote health enhancing sport, at individual and public policy levels, based on the socio-ecological framework. Contrary to this current study's results, government workers in America reported social support and self-motivation as the best facilitators of LTPA (Fletcher, Behrens & Domina, 2008). Similarly, a systematic review of qualitative studies, conducted among UK children and adults, revealed that the majority of them engaged in physical activity more for weight management, enjoyment, social

interaction and support (Allender *et al.*, 2006). It is evident that respondents from similar settings are influenced by almost similar factors, indicating that the strategies to promote LTPA should be contextualized to the specific settings, in which people live.

On the other hand, the most predominant barriers to LTPAP were lack of time, heavy workloads, tight working schedules, domestic and social responsibilities, as well as fatigue, accounting for 53%. In line with other studies, lack of time seemed to emerge predominantly as a barrier to physical activity participation. However, lack of time cannot be solely regarded as an independent factor, but an indicator for other underlying reasons, such as, busy working schedules. Consequently, individuals find it hard to incorporate LTPA into their daily lifestyles, or they are merely tired after a long day's work (Rotich, 2014; Leslie, Braun, Novotny & Mokuau, 2013; WHO, 2003). However, it was beyond the scope of this study to further assess the actual underlying reasons for not engaging in LTPA. In a working Hawaiian population, for instance, the two reported common factors that contributed to physical inactivity, were workloads (61%), and lack of recreational facilities at work (44%) (Leslie *et al.*, 2013). Other factors that affected participation were lack of company and motivation from family and friends, as well as proximity to facilities and cost to access them. Similar issues, excluding low self-esteem and anxiety, were raised by respondents in other studies (Rotich, 2014; Azevedo *et al.*, 2007; Allender *et al.*, 2006).

5.5.4. Conclusion and implication for LTPA promotion

This current survey revealed that the majority of respondents were insufficiently active. Additionally, the results revealed that a majority of respondents engaged in LTPA for the health benefits, and that lack of time, fatigue and workloads were the major hindrances to LTPAP.

Physical inactivity is a multifactorial unhealthy behaviour, which is also modifiable, if jointly addressed, at all relevant levels. However, it is still perceived to be new, or not equally considered, as the other major risk factors, and therefore, has to gain substantial political awareness and backing (Kohl *et al.*, 2012). Consequently, much more has to be done if this is to be achieved, for instance, understanding that prevention rather than

treatment can have a quicker positive impact on lowering morbidity rates resulting from NCDs (WHO, 2003).

While there may not be hard and fast rules about how LTPA could successfully be promoted, understanding and considering the factors that influence participation, or non-participation, among individuals is crucial, in order to design better promotion strategies (Allender *et al.*, 2006). Therefore, the results of this survey could be used to serve as evidence that could influence the decisions of policy makers, to develop effective strategies with better outcomes (Brownson, Chiqui & Stamatakis, 2009; Sisson & Katzmarzyk, 2008).



CHAPTER SIX

DELPHI SURVEY: THE BEST PRACTICE STRATEGIES TO PROMOTE HEALTH-ENHANCING PHYSICAL ACTIVITY: OPINIONS OF PHYSICAL ACTIVITY EXPERTS

6.1. Introduction

In this chapter, the researcher presents and discusses the findings of the Delphi survey. The Delphi survey was the fourth phase of this current study, and it sought the opinions of physical activity experts, regarding the best practice strategies to promote health-enhancing physical activity. The responses of the physical activity experts are presented under four themes and discussed in detail. The demographic profiles of the experts are presented, and the methods used to conduct the Delphi survey, as well as literature around strategies for the promotion of health-enhancing physical activity, are highlighted.

6.2. Background

For many years, it has been documented that sufficient levels of physical activity are associated with a plethora of health benefits. Some of these benefits include, low risk of osteoporosis, through enhanced bone density (Warburton, Nicol & Bredin, 2006), low risk of morbidity and mortality, secondary to cardiovascular disease (Alves *et al.*, 2016; Lee, Hsieh, Paffenbarger, 1995), as well as other major NCDs (Macera, Hootman & Sniezek, 2003). In a review of epidemiological studies, conducted among male and female adults, those who were physically active, had a lower risk of developing colon cancer by about 30%-40%, and specifically for the active women, their risk of developing breast cancer was reduced by 20%-30%, compared to those who were not (Lee, 2003).

However, even with the compelling evidence, regarding the role of physical activity in contributing to health, inactivity has been, and still remains, among the key risk factors linked to high rates of NCDs, and mortality world-wide (Lachat *et al.*, 2013; Bull, Armstrong, Dixon, Ham, Neiman & Pratt, 2003). As reported by scholars, over 60% of the world's population did not accumulate sufficient physical activity to attain health benefits, more than

a decade ago (Bull *et al.*, 2003). Additionally, although NCDs were more prevalent in high income countries, valuable strides have been made to address the risk factors, such as physical activity (WHO, 2005a).

Non-Communicable Diseases is the leading cause of death and disability worldwide (WHO, 2014). In 2008, NCDs were responsible for 63% of global deaths (WHO, 2011a); in 2012 they accounted for 68% of global deaths, and the majority of all NCD premature deaths, approximately 80% occurring in low and middle income countries (WHO, 2014; Lachat *et al.*, 2013). Whereas strategies to address NCDs risk factors, such as physical activity participation, have been recommended, and agreed upon by WHO member countries (WHO, 2004; WHO, 2014), their implementation is still a challenge, especially in the low and middle income countries, which explains the increasing mortality and morbidity rate (Lachat *et al.*, 2013; WHO, 2014). One of the factors that hinder the promotion of physical activity in the low socio-economic countries, is ineffective policy interventions, which, in part, is due to the scarcity of published studies about the effective physical activity strategies, and their implementation (Pratt *et al.*, 2015). While the benefits of physical activity are similar across different populations, the causes of inactivity differ, for instance, the ability to adopt and maintain an active lifestyle depends of various factors. Therefore, interventions should be tailored to the specific settings and contexts of the people or communities. In addition, a multilevel collaboration is essential for successful promotion of physical activity strategies, in order to tackle all the associated factors (Reis *et al.*, 2016; Heath *et al.*, 2012). In Rwanda, there is a gap regarding strategies that specifically promote health enhancing physical activity. Therefore, this section comprises the opinions of experts, regarding the interventions that could be used to promote health enhancing physical activity.

6.3. Methods

A Delphi survey was employed as the fourth phase of this current study to garner the opinions of physical activity experts regarding the best practice strategies to promote health enhancing physical activity. In Table 6.1, the demographic profiles of the panellists are outlined. Seven (54%) were from South Africa, four (30%) from Spain, and one each (8%) from Rwanda and Belgium, respectively. Of the thirteen panellists, seven (54%) were females and six (46%) were males, all but one holding a PhD degree. A total of 12 (92%)

panellists were in the academic field/researchers, with one being (8%) a non-academic researcher. Their work experience ranged from 5 to 30 years, with the majority (six - 46%) having 15 to 20 years' experience.

Table 0.1: Demographic profiles of physical activity experts

Gender	Level of education & Occupation	Area of research/interest	Country	Years of Experience
Female	PhD, Sports scientist, Academics	Sport and exercise psychology	South Africa	25 to 30
Female	PhD, MD, Senior reseacher	Exercise physiology	South Africa	15 to 20
Male	PhD, Social Psychology, Academics	Sport and exercise psychology	Belgium	15 to 20
Female	PhD, PT, Academics	Sport and sports injuries	South Africa	15 to 20
Female	PhD, PT, Academics	Exercise physiology	South Africa	15 to 20
Male	PhD, Sports scientist, Academics	Physical education and science	South Africa	15 to 20
Female	PhD, Sports scientist, Academics	Community recreation programs	South Africa	15 to 20
Female	PhD, PT, MD, Academics	Cardiopulmonary physiotherapy	South Africa	25 to 30
Male	PhD, Academics	Sports and exercise science	Spain	10 to 15
Male	PhD, Academics	Sports and exercise science	Spain	10 to 15
Male	PhD, Academics	Sports and exercise science	Spain	15 to 25
Male	PhD, Academics	Sports and exercise science	Spain	10 to 15
Female	Msc, PT, Clinician	Physical Activity and exercise	Rwanda	5 to 10

6.3.1. Data collection procedure and analysis

A panel of physical activity experts were purposively identified, using a snowball approach, and invited to participate in the Delphi survey. The panellists included academics, researchers and clinicians. Mainly physiotherapists, and a few doctors, made up the panel, based on their expertise in physical activity promoting strategies. Their contribution, in terms of publications in the field of physical activity promotion, work experience, or academic qualification in this field, was considered. Electronically mailed invitations were sent to 25 identified experts, each with a consent form attached, as well as an information sheet, with details of the study, and what was expected of them. The survey was conducted between February and July 2016. A few weeks after the initial emails, reminders were sent to those, who had not responded (either accepting or declining) and finally 13 experts were selected. While there is no ideal number of participants for Delphi surveys, the size of the panel may range between 10-100 participants (Akins, Tolson & Cole, 2005).

Those, who agreed to participate in this study, responded with a signed consent form, yielding a 52% response rate (13 out of 25). Of the total, 5 out of 25 (20%), did not

respond, while 7 (28%) expressed not having sufficient knowledge about the promotion of physical activity, or *Sports for Health*, to make a meaningful contribution. The first round of the survey was a two part questionnaire, of which the first part assessed the demographic profiles of the experts (gender, level of education and years of working experience in the field of physical activity/sport). The experts were also asked to briefly state their expertise in the area of promoting physical activity for health. The second part comprised four open-ended general questions that required experts to provide their opinion about physical activity and health, to list the most cost effective and practical strategies for promoting physical activity, and how these strategies could be tailored to benefit people in different settings, such as rural versus urban, and, finally, to suggest ways of addressing non-compliance/non-participation in physical activity.

Data were analysed qualitatively and quantitatively. The first set of data, from round one of the survey, was analysed qualitatively, using thematic analysis, while the second round data set was analysed quantitatively, using descriptive statistics. The first round of the survey had many responses, as the panellists were not limited in providing their opinions. A thematic analysis was employed to generate themes and categories, and, subsequently, a final report of the findings was produced. For the second round of the Delphi survey, a five-point Likert scale, with 29 items, was used. The panellists were requested to rate their feedback on the Likert scale for a collective consensus.

6.4. Results and discussion of round one of the Delphi survey

The findings are presented under the four general themes, with sub-themes, where necessary. The themes include: health benefits of regular physical activity; cost-effective strategies for promoting physical activity; factors to consider when planning physical activity strategies; and how to address non-compliance to physical activity. These are further supported by corresponding quotes from the panellists' feedback.

6.4.1. Health benefits of regular physical activity

The panellists mentioned various benefits of physical activity participation, which were the presented under two sub-themes, namely, the prevention and cure of diseases, and the promotion of mental health, in general.

6.4.1.1. Prevention and cure of diseases

Most of the panellists suggested that physical activity participation provides health benefits to the body, and is considered as *medicine* to most diseases. This is consistent with literature, as stated by Durstine, Gordon, Wang & Luo, (2013: p. 9), in their study, “Because of the many associated health benefits, PA and exercise should be viewed as a medication. As is the case for many chronic diseases, the health benefits of PA and exercise surpass those of conventional medications.” Below are supporting quotes from the current study:

“...one of the most cost effective ways to improve health. It can be used both for the prevention and the treatment of several conditions, e.g. non-communicable diseases, arthritis, etc.” (Ex: 4)

“Exercise can be seen as ‘medicine’ for certain conditions as it has been shown to reduce the risk for cardiovascular disease, stroke, type 2 diabetes, osteoporosis, hypertension, hypercholesterolemia, obesity, etc.” (Ex: 1)

6.4.1.2. Promotion of mental health

Physical activity participation is believed to enhance the well-being of the mind and to provide positive psychological benefits, thereby reducing feelings of depression, anxiety and stress.

“I strongly believe that regular physical activity should become a key process in reducing stress levels and burn-out.” (Ex: 3)

“Physical activity of any kind is very important to a healthy mind and body.” (Ex: 9)

“...it can also be useful and effective in the treatment of mental health conditions such as depression, schizophrenia, etc.” (Ex: 4)

In support of the above findings, there is a large number of undisputed evidence highlighting the positive association of physical activity and disease prevention. Some of the literature date back to 1953, when Morris, Heady, Raffle, Roberts &

Parks (1953) highlighted the benefits of physical activity in disease prevention. Their study, which was conducted among bus drivers and conductors in London, revealed that the risk of developing cardiovascular disease, was higher among bus drivers, because they were less active, and lower among the conductors, who were more active (Morris *et al.*, 1953). Physical activity and exercise are currently regarded as key strategies for the primary and secondary prevention of NCDs, in both young and adult populations; primarily to minimise the risk of developing these diseases, and secondarily, to prevent disease progression, as well as minimise the sequels attached (Durstine *et al.*, 2013; Sigal, Kenny, Wasserman, Castaneda-Sceppa & White, 2006).

Besides the prevention of NCDs, physical activity also contributes to the management of some conditions, such as rheumatoid arthritis (Cooney *et al.*, 2011), and HIV/AIDS (Mutimura, Crowther, Cade, Yarasheski & Stewart, 2008), by reducing the risk of cardiovascular disease and improving cardiovascular fitness among people with such conditions. According to Aadal *et al.* (2009), significant changes in diastolic blood pressure, weight, waist circumference, and serum lipids were noted among Danish individuals who actively engaged in physical activity levels.

6.4.2. Cost-effective strategies for promoting health enhancing physical activity

The suggested strategies to promote physical activity were categorised, and are discussed under two sub-themes, namely, recreation- and community-based approaches.

6.4.2.1. Physical activity as a recreation-based approach

Walking was one of the most suggested, inexpensive strategies for promoting health enhancing physical activity, although, in reality, it is not always successful, due to different barriers. The panelists highlighted that physical activity interventions should be fun and enjoyable, should go beyond merely providing health benefits, and create social interaction among community members.

“From a recreational perspective it is first and utmost important that participation in activities should be fun. Programs should be developed in communities attracting participants for the fun element. Participants might not even notice that they are physically active that way and will continue to participate because they enjoy the activity, socializing with other people, forming friendships.” (Ex: 7)

“Framing physical activity as a social activity, instead of solely or primarily focusing on the health benefits.” (Ex: 3)

6.4.2.2. Physical activity as a community-based approach

Programmes to promote physical activity participation that involved the community and community members, were the most frequently suggested by the panellists. These included the use of community halls, incentivizing and educating communities about the benefits of physical activity, as well as motivation from peers, leaders, family and friends. Below are supporting excerpts for the use of community-based interventions:

“Community based physical activity programmes that are incentivized may be the most effective way of promoting physical activity. Members of the community need to be educated on the benefits of physical activity, and then given the tools to promote it in their communities.” (Ex: 2)

“Make use of community-based approaches to encourage physical activity. Make facilities available such as church-halls, community centers, etc. to enable easy access to facilities in safe environment.” (Ex: 4)

“Successful programmes usually have some hands-on instruction from a leader who provides the external motivation, along with peer and family support of the individual.” (Ex: 1)

6.4.3. Factors to consider when designing health enhancing physical activity promotion strategies

When asked how physical activity strategies could be tailored, to suit people in different settings, the responses provided by panellists, were discussed as factors to consider, when designing physical activity promotion. Most factors mentioned were pertinent to the needs assessment, which is further discussed below; for example, to identify and consider factors such as age, gender, behaviours, internal motivation, daily lifestyles, cultural values and beliefs of individuals. Other factors mentioned included, but were not limited to, the socio-economic status, cost, safety and accessibility of sports facilities. Knowing these factors and acknowledging them, would influence the process of designing programmes in a positive manner that is more relevant to their context. Another important issue raised, was the sustainability of these programmes. Simply put, physical activity promoting programmes should be designed for long-term sustainability, rather than passing events.

6.4.3.1. Needs assessment

According to the panellists, conducting a prior assessment, to identify the people's needs, their lifestyle, how they perceive physical activity and the factors that influence their participation, is pivotal in guiding the development of intervention for specific populations. The panellists highlighted some factors that would hinder participation, and most of these factors were similar to those mentioned in the third phase of this current study, by the government office workers. These were the lack of time or having other obligations, fear for safety, lack of motivation from peers, family, friends or role models, lack of community programmes, and ignorance about how to integrate physical activity in their daily lifestyle, among others. The following are supporting quotations:

“Formative work needs to be done in the various communities to identify the most effective methods that suit that community, and then programs should be designed with the particular community in mind.” (Ex: 2)

“A process of planning and engagement should take place. Irrespective of the setting...” (Ex: 7)

“Design different programs to cater for different ages to be implemented at different times to accommodate working people and school going children.” (Ex: 4)

6.4.3.1.1. Cultural competence

Cultural competence is a widely documented topic with definitions provided by various scholars. However, only a few that are relevant to this study, are highlighted. In the health care setting, culture competence refers to how well systems are able to deliver services, which are pertinent to the different social cultural beliefs, values, behaviours and language of people (Betancourt, Green & Carrillo, 2002). Other scholars described cultural competence as the ability to acknowledge issues that are related to people’s cultural norms, as well as beliefs about health, prevalence of the disease, and the effectiveness of treatment provided (Lavizzo-Mourey & Mackenzie, 1996). Roberts *et al.* (1990) described cultural competence as the capability of a programme to recognize and consider personal beliefs, lifestyles, attitudes and behaviours for the recipient and the providers of services, as well as to incorporate them at three levels, namely, practice, administration and policy. In summary, strategies designed to promote physical activity should be tailored to the cultural contexts of the people, as well as the environments in which they live, or where physical activity is to take place. It is crucial to consider all the cultural components that may affect, or influence, the adherence to, and implementation of, these strategies.

Most of the panellists suggested that physical activity strategies should be culture-compliant and designed to fit into people’s daily lifestyles and norms. Simply put, strategies should be adopted to the different settings in which people live and work, to ensure their relevance, as stated in the quotations below:

“The main issue is to link the above mentioned strategies to the daily life of the participants (e.g., communicating social activities that are meaningful for them, that can be integrated with their social identity).” (Ex: 3)

*“Depends on the people you are dealing with and their internal motivation to undertake and stick with an exercise programme”
(Ex: 1)*

This idea concurs with Heath et al. (2006), who argue that effective interventions do not necessarily translate into feasibility. Instead, a prior assessment should be done before imposing interventions, to identify the priorities, available resources and cultural values attached to specific communities.

6.4.4. Addressing the challenge of non-compliance to physical activity

The panellists were asked their opinion on addressing non-compliance to physical activity. While they outlined various approaches to address this issue, most of the responses suggested adopting a multilevel collaboration, to successfully promote physical activity, within different settings, and using different approaches. These approaches included, but were not limited to, behaviour change, community awareness drives, physical activity programmes that were fun, attractive and enjoyable, as well as integrating physical education (PE) into schools, and environmental modifications.

6.4.4.1. Multilevel collaboration

In order to motivate ground level change among individuals, and motivate them to adhere to a physically active lifestyle, there are various factors involved that cannot be addressed only in the health settings. The key component, therefore, was to use a combined efforts strategy among the relevant stakeholders, to address such issues. Besides identifying and addressing the main factors that affect, or influence, physical activity participation, initiatives such as employing behaviour change theories like “ABC behavior change theory” and the “Self Determination theory” were suggested.

In addition, the aim was to motivate communities to engage in physical activities, through incentives, and to educate them about the benefits of physical activity, as well as how to make it fun and enjoyable. However, studies reveal that motivation alone, was not enough to bring about behaviour change. It is of paramount importance to have an action plan that outlines how the intended goals would be achieved, with all factors considered (Darkera, French, Eves & Sniehotta, 2010). According to Gollwitzer & Sheeran (2006), for individuals, who are already motivated to change towards adopting a physically active lifestyle, supporting them to plan how to attain their goals, increases their level of participation.

To achieve the proposed initiatives, the panellists directly, or indirectly, suggested the adoption of multi-level collaboration among sectors, such as, health, medical insurance companies, media, education, urban planning, safety and security, as well as community-based organizations. The following are supporting quotations:

“Collaboration with various team players are essential, e.g. Health, education, safety and security, community-based organizations. Make physical activity attractive and fun, Community drives and awareness campaigns.” (Ex: 4)

“One really needs to understand behavior. Consider the ABC of behavior-change - ie the antecedents, the behavior and the consequences. Using this model behavior change models need to be developed. It is in education and this should start at a school level-i.e. as children go into school. In addition the media and all institutions should be involved in making exercise part of everyday life. Government and local municipalities should be encouraged to make safe places to exercise eg in parks etc.” (Ex: 5)

“...sell activity through benefits and enjoyment it brings. Ensure that PE happens in schools. Redesign programmes to make it attractive and appropriate for people from diff backgrounds.” (Ex: 10)

The effectiveness of multi-level collaboration is supported in a research study that investigated ways of promoting active living through environmental changes in the cities (Corti *et al.*, 2015). In their study, these researchers assert that promoting physical activity for health should not be framed merely within the health profession spheres. For example, sectors such as urban design, transport planning, landscape and road engineers, finance, parks and recreation, energy, and environmental protection may collaborate with the health sector to create healthy communities that encourage physical activity (Corti *et al.*, 2015).

6.4.4.2. Environmental modifications

In order to increase the chances of people engaging in physical activities, the panellists suggested environmental strategies that encouraged people to perform physical activities. These strategies included the promotion of the use of stairs instead of elevators, creating safe neighbourhoods, as well as walking tracks to accommodate more walking, as per the following quotation:

“Environmental intervention that unconsciously seduce people to be physically active instead of sedentary (i.e., the nudging approach).”

(Ex: 10)

These suggestions concur with findings in literature that support the use of environmental approaches to promote physical activity. The authors argue that behavioural change strategies, aimed at promoting physical activity, are most likely to benefit more people, when coupled with environmental and policy plans. For example, creating tracks for pedestrians and cyclists, providing funding for public facilities, creating safe and user friendly community neighbourhoods, are some of the environmental and policy strategies that could be adopted to promote physical activity (Corti *et al.*, 2015; Hann, Kean, Matulionis, Russell & Sterling, 2004; Sallis, Bauman & Pratt, 1998).

6.4.5. Summary

The first round of the Delphi survey comprised four broad questions that were posed to the experts in the physical activity field of expertise, for their opinions. The questions and responses provided, pertained to the health benefits of physical

activity (and how to promote them, cost effectively), as well as the factors to consider when designing these strategies, and how to adopt them, successfully. Generally, the health benefits were more focused on the cure and prevention of diseases, as well as the enhancement of mental health. For the cost effectiveness of physical activity strategies, the experts suggested the use of community approaches. Conducting a needs assessment and aligning strategies to people's cultural, physical, socio and economic needs, were the main factors recommended for consideration, when planning. In addition, adopting a multilevel approach to ensure adherence and effective implementation, was proposed. Finally, all the responses were analysed and categorized under four respective scales, in the form of a Likert scale, to establish the second round of the Delphi survey, discussed in the next section.

6.5. Second round of Delphi survey

Presented below is the procedure employed to collect and analyse data for this round of the Delphi survey. The statistical reliability test for the Likert scale items are discussed, and the corresponding Cronbach's Alpha scores are presented and interpreted. Finally, the results of the survey are displayed as percentages in charts.

6.5.1. Data collection procedure and analysis

The second round of the Delphi survey comprised 23 items that the panelists were required to rate on a 5-point Likert scale. The items were responses from the first round that were analysed and classified under four constructs, corresponding to the questions in the first round. Subsequently, these items were emailed back to the experts in physical activity, who were requested to rate their feedback on a scale of one to five, where 1=strongly Agree, 2=Agree, 3=Neutral, 4=Disagree, and 5= Strongly Disagree. Most of the experts had a general agreement on all the variables, which negated the need for another round.

6.5.1.1. Reliability test for round two Delphi Likert scale items

According to literature, the consistency of the scale, as well as its ability to measure the same composite, is crucial, and should be determined prior to being

employed in research (Sullivan & Artino, 2013; Tavakol & Dennick, 2011). Using the Cronbach Alpha test, reliability was measured for each set of the items. The Cronbach's Alpha measures an estimate of the internal consistency, in relation to the scores of the construct, and exists between 0 and 1 (Tavakol & Dennick, 2011; George & Mallery, 2003). The acceptable Cronbach's Alpha test scores are those that are greater, or equal, to 0.7. Scores that are between 0.7 and 0.6 are considered questionable, while those less than 0.6 are considered poor, and calls for a review that would require removing some variables, which, when omitted, would increase the Cronbach's Alpha test score (Tavakol & Dennick, 2011; George & Mallery, 2003).

Table 6.2: The Cronbach's Alpha scores and their interpretation

Cronbach's Alpha Score	Value
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Source: George and Mallery (2003)

Table 6.3: Reliability test results for internal consistency of the scales

Measures	No of items	Cronbach's Alpha
Benefits of Physical Activity	5	0.806
The cost effective strategies for promoting physical activity	8	0.652
The factors to be considered when developing physical activity strategies	8	0.695
How to address the challenge of non-compliance to physical activity	8	0.844

A presentation and interpretation of the reliability Cronbach's Alpha test scores for the four scales that made up the Likert scale are presented in the following section, as illustrated in Table 6.3 above.

6.5.1.1.1. Benefits of Physical activity participation

The level of internal consistency within the items of this scale was high, as indicated by the Cronbach's Alpha score (0.806), and, consequently, there was no need to delete any items, as suggested in the corresponding column of 'Cronbach's Alpha if item deleted'.

6.5.1.1.2. The cost effective strategies for promoting physical activity

The Cronbach's Alpha score for this scale was 0.652, which lies within an acceptable range, to determine the level of internal consistency. The corresponding 'Item-Total Statistics table', which presents the 'Cronbach's Alpha if item deleted' in the final column, show items that, when deleted, would slightly increase the alpha score. However, this was not considered, as the difference was very minimal: therefore no big change was expected.

6.5.1.1.3. The factors to be considered when developing physical activity strategies

Regarding this scale, the Cronbach's Alpha score was 0.695 that was still within the acceptable measure range, which indicates a significant level of internal consistency. Therefore, no item was deleted in the column of 'Cronbach's Alpha if item deleted', since the suggested scores were more or less equivalent to the final one.

6.5.1.1.4. How to address the challenge of non-compliance to physical activity

The Cronbach's Alpha score for this scale was significant (0.844), indicating a high level of internal consistency. Since the score was good, no item was considered for deletion in the 'Item-Total Statistics table' which presents the 'Cronbach's Alpha if item deleted'.

Table 6.4: Results for round two Delphi survey

Benefits of regular PA	SA %	A %	N %	D %
Overall improvement of health of the mind, body and soul	67	33		
Reduction of the risk factors for NCDs	67	33		
Reduction of stress levels and burn-out	50	50		
Social, psychological and economic benefits	58	42		
Prevention of childhood obesity		51	41	8
The most cost-effective strategies for promoting physical activity				
Walking	75	25		
Support from peer and family	42	58		
Established goal setting and feedback mechanisms	58.3	33.3	8.3	
Attractive community recreation programmes	33	50	17	
Educate & encourage community members on PA benefits/active lifestyle	33	42	17	8
Including sport and physical education in all school curriculums	67	33		
Introducing breaks into the workplaces where people exercise	50	42	8	
Develop attractive programs in the community for enjoyment and socializing	42	58		
Factors to be considered when planning PA promotion strategies				
Conducting a needs assessment	83	17		
Programme implementation to be carried out by the community members	8	92		
Role models/ Hands on instruction from leaders	33	58	8	
Intervention programmes could be generic but consider factors such as age & gender	58	25	8	8
Accessibility to facilities	58	42		
Cost and marketing strategies	17	75	8	
Safety	58	33	8	
Regular evaluation plan	25	67	8	
Options of addressing non-compliance to physical activity				
Reinforcing inter-sectoral collaboration	67	25	8	
Educating individuals about the benefits of PA starting from childhood using schools as a setting	67	33		
Making physical activity attractive and fun	75	25		
Including community drives and awareness campaigns to promote PA	25	67	8	
Linking PA promotion strategies to the daily lives of participants	58	42		
Using programmes such as health insurers to incentivize people to participate in PA	58	25	17	
Using behaviour change models to educate people such as the ABC approach	50	50		
Using the media to promote exercise as part of everyday lifestyle	50	33		

6.5.2. Presentation and analysis of round two Delphi survey results

The results of round two Delphi survey were analyzed quantitatively. Quantitative data analysis converts data into numerical form to give it meaning (Babbie, 2007). Overall, 13 panelists took part in this survey, and the results, generally, demonstrated a high level of agreement among the panellists for all the scales. The recommended levels of consensus ranged from 51% to 100% (Powell, 2003). For this current survey, the level of consensus was relatively high, with almost all the items displaying a consensus that was above 70%, except for one item, under the *benefits of physical activity*, which had the lowest (51%) level of agreement. The analyzed data is presented in a table (Table 6.4) and the individual scales presented under charts, with corresponding percentages for response rates, as demonstrated in the respective figures below.

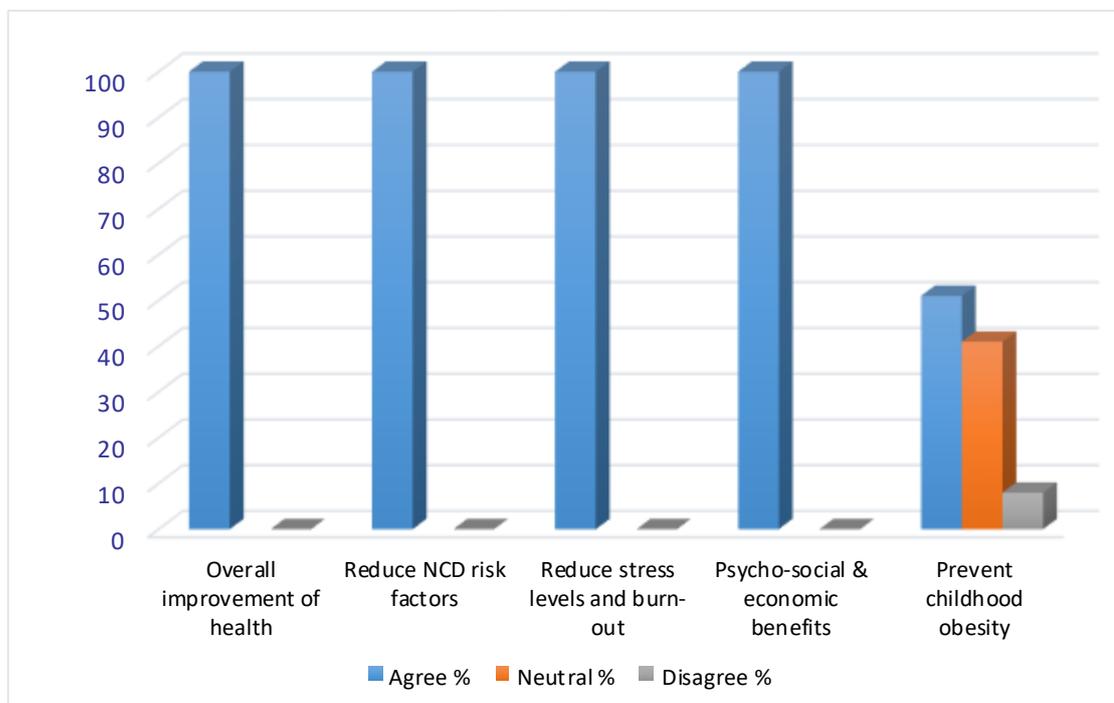


Figure 0.1: Benefits of regular physical activity

In the above figure, at least all panelists agreed to all the benefits of physical activity. Only 41% and 8% of the panelists were neutral and disagreed to prevention of childhood obesity, respectively.

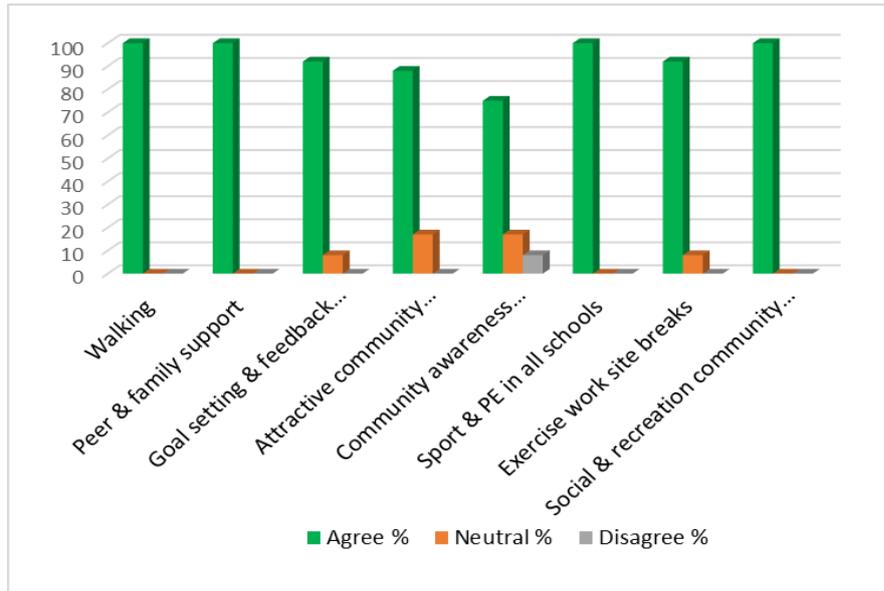


Figure 0.2: Strategies of promoting physical activity

The most cost effective strategies, suggested by the panellists, are illustrated in Figure 6.2. Most of the panellists agreed on all the suggested strategies, with a consensus of, at least, more than 70%. Walking was the most highly rated form of strategy to promote physical activity, of which 75% of the panellists *strongly agreed* and 25% *agreed*. Only 8% *disagreed* on one of the variables, *community awareness campaigns*.

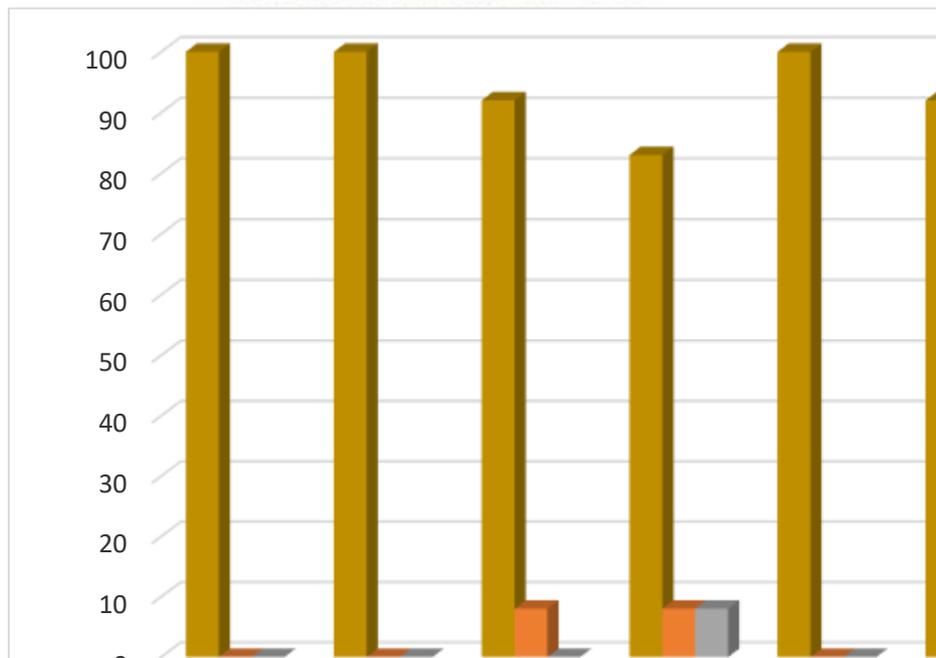


Figure 0.3: Factors to consider when planning physical activity promotion strategies

While panellists had a high level of agreement on all the variables for factors to be considered when planning PA promotion strategies, conducting a needs assessment had the highest percentage of *strongly agree* (83%). Only 8% disagreed with considering factors, such as age and gender, when planning physical activity promotion strategies.

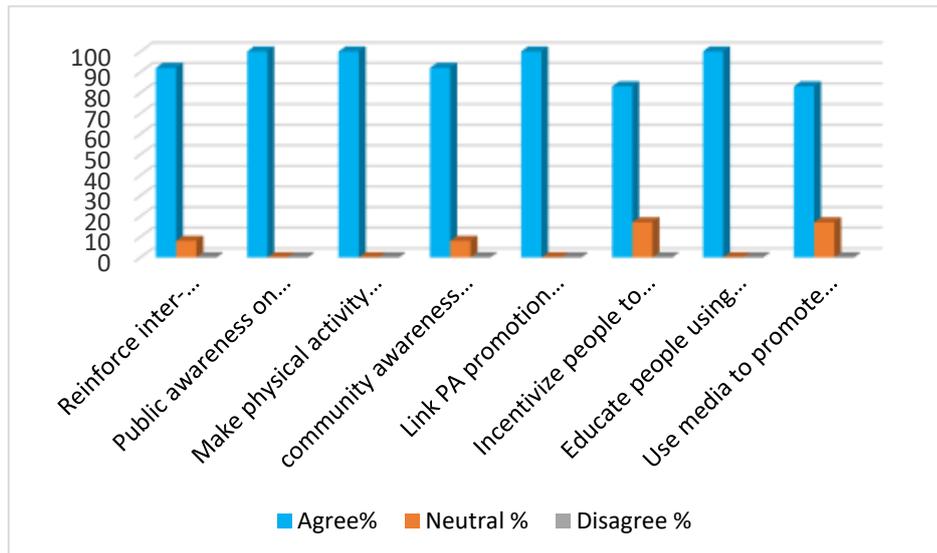


Figure 0.4: How to address non-compliance to physical activity

Finally, among the options of addressing non-compliance to physical activity, the level of agreement on all the variables was more than 80% with both *strongly agree* and *agree* combined. Making physical activity attractive and fun was rated the highest, with 75% of the panellists selecting *strongly agree*.

6.6. Summary of results of round two Delphi survey

The overall results revealed a high level of agreement on, at least, most of the variables in all the four scales that were assessed, as most of the panellists *strongly agreed* or simply *agreed*. In the first scale, only one item out of the five had the lowest level of consensus 51%, while the rest of the items were highly rated. In the second scale with eight items, the lowest item rated had a consensus of 75%, the other items had more than 80% agreement. Both the last two scales, with eight items each, had a consensus of more than 80% on all items.

CHAPTER SEVEN

SPORTS POLICY BRIEF

7.1. Introduction

In this chapter, the sports policy brief is presented, which will be used as means to communicate the major research findings of this current study, as well as their implication to practice. A Policy brief is one of the measures used to communicate the research findings to the wider community, or to a specific target audience, for example, policy makers. Ideally, policy briefs are summarised documents that contain research findings and recommendations, aimed to inform a non-research audiences (Jones & Walsh, 2008). Researchers and policy makers are usually in conflict because they have different goals and perspectives in their respective fields of operation (Lin, 2004) For instance, researchers aim to provide evidence that should impact decision making, while practitioners, like policy makers, are more inclined towards addressing public emergencies, within in a specific time-frame, and in line with political objectives (Choi *et al.*, 2005). Consequently, this creates a disparity between research findings and how they are adopted into a policy perspective (Jones & Walsh, 2008). Therefore, a policy brief is one way to bridge the divide between researchers and practitioners, by providing relevant scientific evidence, as endorsed by the majority (79%) of the respondents of the 2007 Overseas Development Institute/Science and Development Network (ODI/SciDev Net) survey (Jones & Walsh, 2008).

SPORT POLICY BRIEF

TO FACILITATE THE SPORTS POLICY IMPLEMENTATION IN PROMOTING HEALTH ENHANCING PHYSICAL ACTIVITY

From: Lela Mukaruzima

To: 1. Minister of Sports and Culture and Minister of Health, Rwanda
2. Rwanda Biomedical Centre (RBC)

Executive Summary

Sport has the potential to influence health enhancing physical activity participation across all ages, specifically, “Sports for All”. Physical inactivity is now regarded as the fourth leading risk factor for death, due to the potentially life threatening illnesses linked to it. Globally, its prevalence was estimated to be 23% for adults above 18 years of age, and 81% for school-going children in 2010 (WHO, 2015), and on a country level, Rwanda’s physical inactivity prevalence was about 15% for adults (WHO, 2015). This study aimed to ascertain the responsiveness of the Sport Policy to health, the physical activity levels of adult government workers in Kigali City, as well as the experiences of the Sports Policy stakeholders, regarding its implementation. The disparities thereof were identified and possible solutions suggested.

Introduction

Rwanda’s human resource capital needs to be protected, as it plays a crucial role in realizing the country’s economic development goal of Vision 2020, and one way of doing that is promoting their health. There are a number of health promotion initiatives in Rwanda that have had success stories, such as: increased membership from 3% in 2002 to 73% in 2006 with Mutuelle de Santé, a medical cover that aims to facilitate inclusive access to health for all Rwandans; reduced infant and child mortality below the age of 5 years, through immunization; general low prevalence of HIV/AIDS, from 14% in 2000, to 3% in 2005, achieved through the promotion of condom use; and health education, improved recommended nutrition from 41.3% in 2000 to 36% in 2006 (Logie, Rowson & Ndagije, 2008). All these achievements were driven by the need to attain the three health related Millennium Development Goals (MDGs). Presently, the global priority is to minimize the risk factors of Non-communicable diseases, which are now on the rise world-wide, Rwanda included. This is seen through the third goal of the Sustainable Development Goals (SDGs), as well as the WHO global target, established in 2008 by the World Health Organisation member states, to reduce physical inactivity, which is one of the NCDs risk factors (WHO, 2008, 2015).

The Identified Gap

While Sports for Health is acknowledged in Rwanda, strategies to promote it are still quite a challenge. This is attributed to the various factors that are associated to physical activity promotion. Some of the factors, highlighted by this study, are linked to the absence of national physical activity guidelines in Rwanda, as well as to the Sport Policy process from its inception to implementation. There are disparities between policy and practice, as well as between policy and stakeholder commitment. The Sports Policy, which intends to develop sport, and promote it to the entire population, is more biased towards professional sports, and less towards non-professional sports. The consequence thereof is that only a few people benefit from the policy and the majority of Rwandans, who are definitely non-sport professionals, are exposed to physical inactivity, which is a risk factor for NCDs. Government office workers in Kigali City are part of the non-professional sports people, and therefore, at a higher risk of developing NCDs, including hypertension, stroke, diabetes, and certain cancers, partly due to the nature of their work, which is more sedentary and less physical, for example, prolonged sitting, facing their computers. While the participants were well aware of the health benefits of exercising, they also mentioned their main hindrances to engage in physical activity.

Supporting Evidence

This current study conducted a survey among government office workers, who were assessed for their leisure time physical activity participation, and the factors that influenced or affected their participation. The results revealed that the majority of them did not engage in sufficient physical activity. Among the barriers to participation, mentioned by the participants, were the lack of time, tight work schedules, heavy workloads, unplanned social activities, lack of company and motivation, financial constraints and proximity to the available sports facilities. While the motivators were their knowledge of the health benefits associated with physical activity participation, as well as motivation from family and friends, among others. However, the lack of time was not considered an independent factor. Every person has other conflicting priorities that may affect his/her choice of engaging in leisure time physical activities, and therefore, external motivation was required.

Regarding policy and practice, the findings of this study revealed a discrepancy between policy and practice, as well as stakeholder commitment. A clear framework, delineating the process of implementation, in terms of who should be responsible for what; the time frame; resource allocation; and the review plan was clearly absent. Most of the stakeholders were consciously, or unconsciously, unaware of the existing policy, yet they were expected to implement it, which was problematic, as it hindered implementation. Specific guidelines and an implementation framework was vital, to promote health enhancing physical activity.

Policy Recommendations

Having sound policy strategies is one thing, and implementing them is another. It is crucial to contextualize physical activity strategies for promoting health to the local settings that surround individuals, in order to create favourable and enabling environments, as referred to in the socio-ecological framework.

- a. Since government office workers spend most of their waking time at work, worksite physical activity initiatives are more likely to benefit them, such as introducing breaks into the workplaces for people to exercise.
- b. The physical activity strategies and their implementation should be culture compliant, bearing in mind that most Rwandans do not have a sporting culture, especially females.
- c. Strategies should be designed in ways that are attractive, fun and enjoyable. Programmes, such as health insurers, may be used to incentivize people to participate in LTPA.
- d. Institutional policies should facilitate physical activity participation by creating sports departments that are run by qualified staff, and providing them with resources to run their activities.
- e. Guidelines designed to promote health enhancing physical activity, should consider public awareness campaigns, and a social marketing strategy that aims at changing peoples' perceptions and behaviours toward physical activity. Individuals are more likely to adopt healthy behaviours, with the correct information, compared to intricate interventions (Madajewicz *et al.*, 2007).

Other specific policy actions required

Reinforcing implementation of the existing strategies, as well as stakeholder collaboration may be a start. Clear communication of a policy, and active participation in the decision-making process are likely to contribute to its effective implementation. Stakeholders need to be well acquainted with the policy which they are expected to implement, and their competing priorities need to be considered, when assigning tasks to them. This should be a participatory *bottom-up* approach, where implementing stakeholders are part of the decisions made, regarding their various roles. Importantly, a functional evaluation plan would help to identify successes and failures, while adjusting accordingly. As quoted,

“If you can’t measure it, you can’t manage it.” (Peter Drucker)

A comprehensive policy with excellent implementation strategies may only be beneficial theoretically, until it is implemented and evaluated to assess whether it provides or achieves the intended outcomes.

Finally, increasing physical activity participation should not only be an individual responsibility but a combined collaboration. Employers, respective policy makers, as well as other relevant stakeholders, ought to facilitate this cause, to save unnecessary costs and promote a healthy workforce that is more productive and efficient. Institutional leaders should take a lead in being role models, by adopting physically active lifestyles. With leaders owning the initiative of increasing physical activity participation, their subordinates, or staff, are most likely to be motivated, and follow suit.

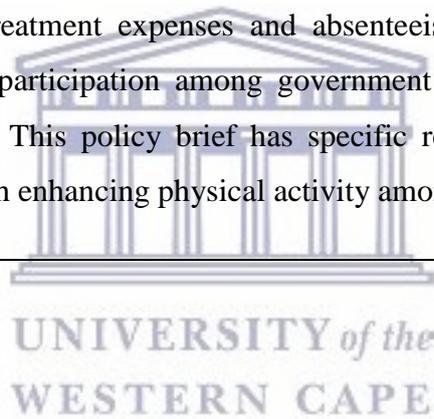
Implications of the Policy Brief

Although the Sports Policy is not necessarily a physical activity policy, it may influence population-based, health-enhancing, physical activity. Promoting Sports for Health programme is undeniably beneficial, at individual and national levels, considering the health, as well as non-health benefits attached to sports participation.

While physically inactive individuals are primarily at risk, their employers, as well as the government at large, also suffer the sequels, to some extent. Examples are: the poor quality of life of the affected individuals, the reduced productivity of staff members, most probably

absent from work, on sick leave, or even present at work, but ineffective. In addition, the nation's economy is negatively affected, indirectly due to the increased expenditure on treatment through medical insurance, of which government, or the employer, covers the larger percentage, while these funds could have been channelled to other essential developmental projects.

There is empirical evidence that supports the positive benefits of physical activity for office workers. For instance, lowering blood pressure levels among individuals with high blood pressure, and those at risk (Eng, Moy & Bulgiba, 2016); minimizing sedentary behaviour and a reduction in waist circumference by 1mc (Puig-Ribera *et al.*, 2015); an increase in the work productivity of employees, as well as a reduction in the health risk factors (Mills, Kessler, Cooper & Sullivan, 2007). Baicker, Cutler and Song (2010) report that work place wellness programmes significantly saved employers an amount of 3.27 USD and 2.73 USD for every dollar spent on treatment expenses and absenteeism, respectively. Therefore, increasing physical activity participation among government office employees in Kigali City is of great importance. This policy brief has specific recommendations that would contribute to promoting health enhancing physical activity among Rwandans.



CHAPTER EIGHT

SUMMARY, CONCLUSION & RECOMMENDATIONS

8.1. Introduction

In this chapter, the researcher provides a summary of the overall findings that emanated from the study, as well as the implications thereof for practice, in respect of the theoretical framework adopted. In addition, the conclusions drawn from the study are presented, while recommendations are offered for future tailor-made policies and strategies to promote leisure time physical activity in Rwanda.

8.2. General summary

Rwanda has one of the fastest growing economies in Africa, as it aims to gain middle-income status. The country has experienced a 12% poverty reduction in five years, specifically, from 57% in 2005, to 45% in 2010 (Republic of Rwanda [RW], 2014). With an improved economy, comes increased urbanisation, better standards of living, as well as enhanced service delivery, including health care. This is perceived through the key health indicators, such as improved child and maternal health, and higher life expectancy, among others (RW, 2014).

Consequently, in Rwanda, a change in the disease pattern has occurred. Similar to other sub-Saharan African countries, Rwanda is experiencing an epidemiological transition, from communicable to non-communicable diseases and injuries (Marais & Petersen, 2015; RW MINISANTÉ, 2015). Therefore, it has become vital to protect the human capital, by creating enabling and favourable environments that encourage people to make informed healthy life style choices, as better healthy life styles will eventually curb the risk factors of NCDs, such as physical inactivity, poor diets, drugs, and alcohol consumption. This study, however, focuses on ways to promote *leisure time physical activity* [LTPA], as one of the healthy lifestyles for Rwandans.

The overall aim of this current study was to identify the responsiveness of the Rwanda Sports Policy to the promotion of the Sports for Health programme, as well as to assess the LTPA levels of government employees and the factors that contribute or hinder their participation. Public policy, as one of the four core underpinnings of the socio-ecological framework, the Rwanda Sports Policy, was reviewed, and its stakeholders interviewed to ascertain how it facilitated health enhancing sports, or physical activity. The other three core constructs of the framework, namely, the individual, the social, and the physical environments, were mirrored through the factors that influenced leisure time physical activity participation, or non-participation, among government employees in Rwanda.

8.3. The Rwanda Sports Policy and its influence on leisure time physical activity

In order to ascertain whether, and how, the Rwanda Sports Policy contributed to promoting health among Rwandans, data were collected by reviewing the Rwanda Sports Policy and interviewing its stakeholders. The review, in combination with the opinions of the policy stakeholders, provided information on the development process of the policy, its adoption and implementation strategies. The aim of formulating the policy, the steps that were taken to formulate it, as well as the stakeholders who participated in this process, were also identified. Additionally, the implementation process of the policy and the roles of its various stakeholders, were highlighted. In the absence of a physical activity policy in Rwanda, the Sports Policy, generally, guided the development of all sport activities in Rwanda (RW MINISPOC, 2012). However, the Rwanda Sport Policy, as with most other sports policies in Africa, emphasised the advancement of professional sports, at the expense of the Sports for Health programme (Keim & de Coning, 2014).

As much as the policy and its stakeholders, undoubtedly, acknowledged the health benefits of sport, the findings revealed that promoting the Sports for Health programme was not the primary motivation for the development of the Sports Policy. Instead, the aim was to develop sports among Rwandans, in order to facilitate the development of Rwanda into a sporting nation. Ultimately, individuals participating in sports activities would automatically achieve the health benefits attached. The Sports Policy identified three categories of sports that had to be developed, namely, Professional sports, Mass sports and Sports for all. However, of the three categories, professional sports gained more attention, as opposed to the other two that

were linked closer to health. These current findings concur with literature reports, in which researchers highlight that elite sports attracted greater popularity than other sports categories did, as the perception was that people were more likely to engage in sports activities, when they observed others excelling in professional sports. This phenomenon is further discussed under two theories, namely, *the virtuous cycle*, and *the double pyramid* (Grix & Carmichael, 2012). Basically, as described in these two theories, the primary reason for engaging in sports was not to achieve the health benefits, but to either create a wider base for talent detection, or become successful sports professionals, at some point. The former begins with championing in professional sports, which becomes an inspiration to the general population to increase their engagement in sports activities. Consequently, the latter begins with mass participation in various sports, in order to establish a wider base of talent detection for future elites in sports (Grix & Carmichael, 2012).

More profound, however, was a lack of congruence between policy and practice, specifically, with the implementation framework. It was noted that the stakeholders' participation in the policy development process had a positive bearing on their knowledge and commitment towards its implementation. The stakeholders, who were directly involved in the development process of the Sport Policy, had a better understanding on how it functioned. These stakeholders were also actively involved in its implementation, compared to their counterparts, whose contribution to the development process was not on an individual level. In part, this could have been attributed to the development process and implementation framework of the Sports Policy, with which most of the stakeholders were not actively involved. Apparently, a combination of two approaches of policy development were followed, namely, the top-down and bottom-up approaches. However, more bias was seemingly towards the top-down approach. With the top-down approach, the point of departure for formulating the policy was with the decision-making authorities. This approach gives precedence to decision-makers, over both the implementers and the implementation process, in the formulation of rules and regulations (Meslin, 2010; Matland, 1995; Sabatier, 1986). In addition, the implementing institutions were deliberately selected, based on their support of the current policy. Specifically, Sabatier (1986: p. 27) refer to them as "sympathetic institutions". Therefore, the implementing stakeholders acquiesce to the inclinations of the decision-makers. On the contrary, the bottom-up approach does not neglect

the contribution of policy implementers/stakeholders in the initial stages of the policy development. Since most stakeholders are normally adjacent to the general public, they are able to provide more contextualized strategies (Matland, 1995). The bottom-up approach acknowledges the fact that street-level bureaucrats are more informed of the real issues on the ground, than the top level bureaucrats, and therefore, stand a better chance of enacting the formulated policy directives (Palumbo, Mynard-Moody & Wright, 1984).

The cultural-beliefs of Rwandans towards sports participation resonated among the stakeholders as a major challenge that affected the promotion of Sports for Health. In this case, both the stakeholders/implementers and the beneficiaries of the Sports Policy were implicated. From the socio-ecological perspective, cultural norms are derived from the social environments of the individual. As defined earlier in literature, people's cultural norms and values influence their choices of action, which determine how they live. The manner in which the community regards sports, or recreation activities, has the potential to impact, positively, or negatively, on how individuals will perceive it. Cultural values, in most cases, are inherited from one generation to another, and influence the individual's moral obligations towards achieving what is perceived to be important in life (Idang, 2015; Igboin, 2011). In consonance with Saavedra's study on female soccer in Africa, sporting culture is perceived to be a postcolonial culture that clashes with the traditional African cultures (Saavedra, 2003).

Rwandans, like many other populations outside the western culture, have some controversial connotations linked to sports, or leisure time physical activity, as a non-indigenous practice. Some of these include, sport being a masculine activity, only for people who are fat and want to lose weight, or *a thing for the rich*, as commonly referred to locally and informally in Rwanda. While there are indigenous sport activities that are peculiar to Rwandans, such as high jumping, running and spear throwing, most of them are still mainly male dominated and for special occasions (Bale, 2002). Rotich (2014) concurs that the culture of the Montagnard refugees in America discourage girls from engaging in physical activities, under the pretext that it would make them lean and masculine. Instead, girls are advised to stay at home and perform feminine duties, such as domestic chores and taking care of the family, while their male counterpart had to provide for the family (Rotich, 2014).

From this angle, some of the stakeholders of the Rwandan Sports Policy noted that people's cultural perceptions were more of a hindrance, than the scarcity of resources were, regarding their engagement with LTPA. They were of the view that, while insufficient resources are a hindrance to developing Sports for Health, adequate resources, coupled with a wrong, or poor attitude, would still be futile. Therefore, besides the need for specific guidelines to promote Sports for Health, as well as the need for sufficient resources, peoples' perceptions on, beliefs about and values regarding sports, should be addressed. Individuals need to appreciate sport in its entirety and all its benefits. This can be achieved by disseminating the proper information to the public, through relevant social marketing strategies.

In summary, the Rwanda Sports Policy can influence LTPA among Rwandans, if effectively implemented. However, in order to attain this, it is important to address the identified issues that hinder its effective implementation, as discussed, at length, in the Chapter 4 of this study.

8.4. LTPA levels and factors that influence participation among a group of government employees in Rwanda

From the socio-ecological model perspective, human behaviour is influenced by multiple factors, as discussed, in detail, in the preceding chapters. These include the individual factors, the physical and social environments surrounding the individual, as well as public policy (Stokols, 1992; 1996). Therefore, the researcher sought to understand some of these factors, from a local context, by assessing people's perceived motivators and restrictors to engaging in LTPA. In addition, the leisure time physical activity levels and the demographic profiles of the study participants, were assessed. This finding helped in determining the factors that influence LTPA participation, among government employees in Rwanda, at the individual level, as well as the physical and social environment levels.

Generally, the prevalence of inactivity levels in Rwanda vary according to the reporting source. For example, World Health Organization (2015) reported a prevalence of 15%, while the STEP survey observed a prevalence of 38% inactivity among Rwandans (RW MINISANTÉ, 2015). These figures, generally, indicate that Rwandans exhibit high levels of physical activity. However, these results are mainly a representation of the combined physical

activities from the different categories, of which the major contribution is from work and transport related activities, and less from leisure time activities.

The above results demonstrate the overall physical activity prevalence among the general Rwandan populace, while results of the current survey are more specific to one category of physical activity, and to a specific target group. Specifically, the survey sought to identify the leisure-time related physical activity levels of employees from the stakeholder institutions. The results revealed that the majority (61%) of the participants were not sufficiently active. Comparatively, the descriptive statistics revealed that activity levels among respondents differed, in respect to their demographic characteristics, such as age, gender, marital status, education levels and working experience. In line with the socio-ecological framework, these can be categorized as some of the individual factors that influence participation in LTPA. For example, with gender and age, males were more active (41%) than females (34%), while younger participants, between the ages of 21-30 years, were more physically active (43%) than those above 40 years (23%). Pursuant to previous literature conducted in Africa and beyond, males are reported to be more active than females, while younger individuals have higher physical activity levels, as opposed to their older counterparts (Akarolo-Anthony & Adebamowo, 2014; Ying *et al.*, 2014; Hallal *et al.*, 2012; Sallis, 2000). However, although higher physical activity levels are generally linked to younger individuals, Hallal *et al.* (2012) noted a different pattern among older adults, aged 60 years and above, from South East Asia, who were not only more active than their peers from the rest of the world, but also more active than most youth in developed countries.

Additionally, physical activity levels corresponded to factors such as marital status, working experience, as well as education level. The participants, who were single or without partners, were more physically active (41%), as opposed to the married ones (37%). Higher activity levels were observed among respondents with less working experience between 1-9 years (43%), and lower levels (30% and 21%) among those with more working experience between 10-19 years and above 20 years, respectively. Respondents with secondary level education were more active (43%), than the university graduates (37% and 41% for bachelor's and postgraduate degrees, respectively). However, this trend was not linear, as individuals with a graduate degree had lower levels of activity, than those with a post graduate degree. While

the physical activity levels were relatively different within these groups, not all the differences were significant, as revealed by the Chi-square tests. The statistical test for significance revealed a significant difference, only between LTAP and working experience ($p=.002$), as well as with age groups ($p=.004$).

Regarding the factors that influenced physical activity participation, the respondents of the study were asked to provide reasons for the factors that motivate or limit their engage in LTPA. Open-ended questions were used to allow the respondents to express themselves, without any biases, in form of guided answers. Although the majority of the respondents were inactive, they acknowledged the health benefits of being physically active. Therefore, those who engaged in LTPA, were likely to do so because of their knowledge of the benefits of being physically active. Gaining health benefits, such as the prevention of diseases and having good health, to increase physical fitness and strength, endurance, flexibility and better performance, were the major reasons that the respondents engaged in LTPA. They also cited psycho-social benefits as contributors to their participation in LTPA. These included; to relieve/prevent stress, improve concentration, relax body & mind, and to reduce fatigue, among others.

However, the lack of time, fatigue and not being motivated, emerged as the major individual related hindrances to LTPA. Only a few participants alluded to factors such as old age, sickness, fear for injuries, no sport for old people, or not knowing what sport to do, as barriers to engaging in LTPA, which are also categorized under individual factors. The rest were associated with the physical and social environments. The environments that surround people either encouraged or discouraged physical activity participation. For instance, the subjects in this current study associated inactivity with heavy workloads, proximity to sports facilities, cost of accessing them, and the lack of company.

Therefore, based on these findings, it can be argued that subjects in this current study had the willingness to engage in LTPA, since most of the motivating factors were related to the individual. However, they lacked external stimulation, or influence, such as social or organizational support. It was, therefore, of paramount importance to assess the factors that

influence LTPA participation among government employees, in order to suggest context specific strategies.

8.5. The Delphi Survey Results regarding promoting health enhancing physical activity

As a last phase of the study, the opinions of physical activity experts, concerning strategies and interventions that promote health enhancing sports or physical activity, were sought. The findings were also aligned to the social-ecological framework, and supplemented the development of the Sport Policy brief, as the main outcome of the study.

The Delphi study sought the opinions of experts in the field of sports and or physical activity, regarding the best practice strategies to promote sports or LTPA for health. The questions that were posed to the experts pertained to; 1. The health benefits related to sports or LTPA participation, 2. The cost effective strategies for promoting health enhancing physical activity, 3. The factors to consider when designing/planning health enhancing physical activity promotion strategies, and 4. How to address the challenge of non-compliance to physical activity. Some of the health benefits cited by the experts were pretty much the same as those provided by the respondents in phase three of the study, which sought to identify the levels of LTPA and factors that hinder, or motivate, participation in LTPA. These included: to cure and prevent diseases, such as NCDs; to enhance mental health; to reduce stress, as well as to gain the socio-economic benefits. However, it was noted that some of the benefits not mentioned by the experts, were the important factors that motivated the respondents to engage in LTPA. These factor, specifically, emphasised the physical benefits, such as enhancing their physical appearance, as well as increasing their strengths and performance.

As for the cost effective strategies to promote health enhancing physical activity, the experts mainly recommended the use of community approaches, with community members as the primary implementers. Additionally, social support, awareness campaigns, breaks at work places and compulsory school sport could be introduced. Regarding the main factors to consider, when planning health enhancing physical activity strategies, the experts suggested that a needs assessment should be done, in order to align such strategies to people's cultural, physical, social and economic needs. In addition, factors such as age, gender, accessibility to

facilities, safety, cost and marketing strategies should be considered. The question of how to address the challenge of non-compliance to physical activity, most of the proposed strategies were pertinent to adopting a multilevel approach to ensure awareness, adherence and effective implementation. These strategies included linking physical activity to people's daily lives, as well as marketing and branding physical activity in a way that it would attract many participants. Besides, the experts suggested using health insurers to incentivize people to be physically active, and to educate people about the benefits of physical activity via a variety of means, such as the media, community drives and awareness campaigns, as well as behaviour change models.

8.6. Strengths and limitations of the study

While this current study had some limitations, it yielded some important findings, based on the type of study design. The study used a mixed methods design to collect and analyse data. The combination of qualitative and quantitative methods permitted the researcher to gain a better understanding of the research problems. Research reveals that the triangulation of methods and data sources increases the strength of the study findings (Given, 2008; Patton, 2001). Consequently, this study applied a variety of approaches to collect and analyze data from multiple sources.

However, the limitations encountered in the study were linked to self-reported data, population sample, as well as time and resources.

- **Self-reported data** is data taken at face value, which may have some degree of bias. The findings of this current study are interpreted based on what the subjects reported, both quantitatively and qualitatively. For example, the subjects may have attributed their incompetence, or inability, to achieve certain goals, such as sufficient physical activity levels, to other factors. This was minimized, though, by buttressing the findings with previous related literature.
- **The population sample** for the survey may not be generalised to the whole Rwandan population, as it was only peculiar to government workers. However, it was large enough to be generalized to population groups, working in similar settings in Kigali City. Another challenge was selecting a well-balanced sample for the Delphi survey

panel. Most of the participants were rather from a sports/physical activity background alone. While a number of experts were contacted from some African countries, the majority of those who responded were from South Africa, or outside Africa, and only one responded from Rwanda. Therefore, their opinions regarding the strategies of promoting physical activity may be considered with a degree of caution, since settings differ, although they could be customized to the Rwanda settings.

- **Time and resources.** The results are theory based and not experimental. While an experimental study would have provided more evidence regarding the causality of physical inactivity among government employees, the researcher was confined to a specific time frame and resources to complete the study. The findings, however, may be used to inform a bigger intervention study on different population groups.

8.7. Implications of the study

The Rwanda Sports Policy does not primarily promote the Sports for Health programme, but rather elite sports, on the premise that health benefits are automatically achieved when people participate in sports activities. The majority of government employees were observed to have insufficient levels of activity, which they mainly attributed to lack of time and motivation, and not being able to afford, or easily access sports facilities. Despite the foregoing, they still demonstrated knowledge of the health benefits associated with being physically active. Physical activity promotion requires multilevel intervention because, although it is an individual behaviour, it is influenced by factors, other than the personal factors. Such factors positively, or negatively, reinforce their behaviour, and are linked to the social and physical environments surrounding the individual, as well as to public policy (Tehrani, Majlessi, Shojaeizadeh, Sadeghi & Kabootarkhani, 2016).

Additionally, although physical activity participation may be influenced by almost similar factors, it is important to have an understanding of the context-specific factors, in order to develop customized strategies. For instance, in an American study, social support and self-motivation were the two main enablers for participants to engage in worksite physical activity programmes (Fletcher, Behrens & Domina, 2008), unlike this current study, where gaining health benefits was cited as the major motivator associated with engaging in LTPA. Therefore, it was of paramount importance to identify such factors among the government

employees in Kigali City, in order to design context-specific strategies that are more likely to create a positive impact. Besides, the individual alone, as the main actor in adopting a physically active lifestyle, cannot overcome the wider social and physical environmental factors that surround them, which reiterates the importance of applying the socio-ecological framework in identifying and addressing the different factors that influence LTPA participation among government employees. The socio-ecological framework for physical activity promotion, in general, transcends the narrow lens of primarily focusing on an individual as the main culprit of their behaviour, to a multilevel approach, which considers all the other levels of influence (Green & Kreuter, 2005).

This current study highlighted important individual, social, physical and policy related factors that affect physical activity participation. Additionally, these findings also contributed to the development of the current Sports Policy Brief, which has recommendations for physical activity promotion initiatives. The Policy Brief was further buttressed by suggestions from experts in the sports, or physical activity fields. This document aims to advocate for tailor-made strategies to promote LTPA among government employees in Rwanda.

Finally, to the researcher's knowledge, this is the first study in Rwanda, which assessed the role of the Sports Policy in promoting the Sports for Health programme. The study findings, therefore, provide significant implications for practice, and offers a contribution to the body of knowledge in the area of sports and health in Rwanda. The recommendations provided herein, could contribute to inform policy makers in developing evidence-based strategies to promote health, comprehensively.

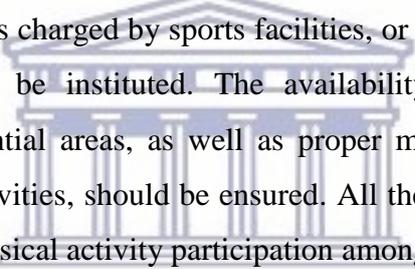
8.8. Recommendations of the study

In alignment with the socio-ecological framework, the study endeavoured to suggest possible ways in which to address the identified disparities. These were made, based on all the study findings, including the opinions of experts in the physical activity area, as well as previous literature, relevant to this current study.

- a) There is need, not only for context-specific health-enhancing physical activity strategies, but also for strategies that consider individual and environmental factors, which positively influence physical activity participation among individuals. For

instance, designing specific interventions for women and older population groups, conducting awareness campaigns to educate community members on the benefits of being physically active. Initiatives that encourage people to adopt active lifestyles should be prioritised, as well as those that reinforce inter-sectoral collaboration in this regard.

- b) It is important to consider the individuals, whom physical activity promotion initiatives are targeting, as well as the implementers, by allowing them to play an active role in the development process of such initiatives, from inception to execution/implementation. This provides an insight into the different needs of the people, as well as all the possible ways of addressing them, and eventually increasing the chances of adherence.
- c) The importance of policy decisions in reinforcing the adoption of healthy behaviours is plausible and should be applied. For instance, policy interventions can be applied to regulate, or revise prices charged by sports facilities, or a tax exemption on sports and gym equipment could be instituted. The availability of sports facilities within communities or residential areas, as well as proper marketing strategies for health enhancing physical activities, should be ensured. All these recommendations serve as enabling factors for physical activity participation among community members.



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APPENDICES

Appendix A: UWC Ethics Clearance Letter



OFFICE OF THE DEAN
DEPARTMENT OF RESEARCH DEVELOPMENT

15 September 2014

To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape approved the methodology and ethics of the following research project by:
Ms L Mukaruzima (Physiotherapy)

Research Project: Development of a policy brief to facilitate the implementation of the physical activity policy in Rwanda.

Registration no: 14/7/8

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

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

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

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

Private Bag X17, Bellville 7535, South Africa
T: +27 21 959 2988/2948 . F: +27 21 959 3170
E: [pjiosias@uwc.ac.za](mailto:pjosias@uwc.ac.za)
www.uwc.ac.za

A place of quality,
a place to grow, from hope
to action through knowledge

Appendix B: MoE Research Permit

REPUBLIC OF RWANDA



MINISTRY OF EDUCATION
P.O.BOX 622 KIGALI

Kigali, 19/02/2015
N° 0522/12.00/2015



Re: Permission to Carry out Research in Rwanda - No: MINEDUC/S&T/288/2015

The Permission is hereby granted to **Ms. Lela MUKARUZIMA**, Ph.D student, University of the Western Cape, South Africa to carry out research on: **"Development of a Policy Brief to Facilitate the Implementation of Physical Activity/Sports Policy in Rwanda"**.

The research will be carried out in Kigali City. The researcher will need access to the health Sector Policy and the sports development policy. She will need to interview officials from the key stakeholders institutions of the Rwanda Sports Development Policy, namely the Ministry of Sports and Culture, the Ministry of Health, the Ministry of Education, the Ministry of Local Government, the Ministry of Defence, the Rwanda National Police, the National Olympic Committee, the Private Sector, Civil Society Organizations, and other National Sports Bodies.

The period of research is from **18th February, 2015 to 16th February, 2016**. It may be renewed if necessary, in which case a new permission will be sought by the researcher.

Please allow the above mentioned researcher, any help and support she might require to conduct this research.

This research clearance certificate replaces the research clearance No:0308/12.00/2015 issued on 04/02/2015. The Later is therefore no longer valid.

Yours sincerely,

A handwritten signature in black ink over a rectangular stamp. The stamp contains the text 'MINISTÈRE DE L'ÉDUCATION' and 'RÉPUBLIQUE RWANDAISE' around a central emblem. To the right of the stamp is a circular seal, the seal of the Ministry of Education of Rwanda.

Marie-Christine GASINGIRWA, Ph.D
Director General,
Science Technology and Research
Ministry of Education

Appendix C: NHRC Approval, MoH

Republic of Rwanda



MINISTRY OF HEALTH

National Health Research Committee
Ref: NHRC/2015/PROT/009

To: Mukaruzima Lela

Scientific Review Approval Notice

Dear Lela

With reference to your request for approval of the Research Protocol entitled; **“development of a policy brief to facilitate the implementation of the physical activity policy in Rwanda as means of prevention of NCDs”**, We are pleased to inform you that, following a thorough review and critical analysis of your proposal (NHRC/2015/PROT/009), your Research Protocol has been approved by National Health Research Committee.

However,

- 1) Changes amendments on approach and methodology must be submitted to the NHRC for review and approval to validate the changes.
- 2) A submission of quarterly progress report is mandatory
- 3) Submission to NHRC of final results before publication is mandatory
- 4) Failure to fulfill the above requirements will result in termination of study

Once again National Health Research Committee appreciates your interest in research and requests you to submit this proposal to the National Ethics Committee or IRB and then share a copy of the approval letter from them.

Your final approval reference number is **NHRC/2015/PROT/009**.

Sincerely,

Dr. Parfait UWARIRAYE
Chairperson of NHRC

Signature:.....
Date:..... 06/03/15

Appendix D: Information Sheet



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-9592542, Fax: 27 21-9591217

E-mail: leighla09@gmail.com

INFORMATION SHEET

Project Title: “Development of a policy brief to facilitate the implementation of the physical activity/sports policy in Rwanda”

What is this study about?

This is a research project being conducted by Lela Mukaruzima at the University of the Western Cape. We are inviting you to participate in this research project because you work in the ministry/institution that participated in the development of the Sports policy which is our target population.

The purpose of this research project is to develop an implementation policy brief that describes implementation strategies for promoting physical activity participation in Rwanda in order to combat the increase of Non Communicable Diseases

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

You will be asked to answer a set of few questions about yourself like age, gender, level of education and your experiences about exercise. The survey will take you about 10-15 minutes and this will be done in your office/place of work. The interview will take 15-30 minutes and some of the questions that will be asked include; how the Sports Policy was developed, when it was developed, what were the reasons for developing it?

Would my participation in this study be kept confidential?

We will ensure that your personal information is kept confidential. To help protect your confidentiality, your name will not be included on the surveys and/or interview, a code will be used for identification. All data collected through questionnaire or interviews will be kept and locked up securely for five years after which it will be destroyed. If we write a report or article about this research project, your identity will be protected to the maximum extent possible.

What are the risks of this research?

There are no known risks associated with participating in this research project.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about your experiences regarding physical activity participation/your opinion about the current sports policy. We hope that, in the future, other people might benefit from this study through improved understanding of health promotion policies/common experiences related to physical activity or inactivity and how they can be associated to primary prevention of chronic life style diseases

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

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

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

In case you are negatively affected by the study, you will be referred for further care as need be

What if I have questions? This research is being conducted by Lela Mukaruzima at the University of the Western Cape. If you have any questions about the research study itself, please contact Lela Mukaruzima at: University of the Western Cape, Physiotherapy Department, Private Bag X17, Bellville, 7535, South Africa, Cell; 0734540927, Email; *leighla09@gmail.com*

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

Prof Rhoda A.
Head of Department: of Physiotherapy
University of the Western Cape
Private Bag X17
Bellville 7535
Telephone: (021) 959-3647
Fax: (021) 959-1217
E-mail: arhoda@uwc.ac.za

Prof Frantz J.M
Dean of the Faculty of Community and Health Sciences:
University of the Western Cape
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Telephone: (021) 959-2755
Fax (021) 959-2755
E-mail: jfrantz@uwc.ac.za

Appendix E: Consent form



UNIVERSITY OF THE WESTERN CAPE

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CONSENT FORM

Title of Research Project: “Development of a policy brief to facilitate the implementation of the physical activity/sports policy in Rwanda”

The study has been described to me in language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

Participant’s name.....

Participant’s signature.....

Date.....

Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact the study coordinator:

Study Coordinator’s Name: Mukaruzima Lela

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Appendix F: Interview confidentiality binding form



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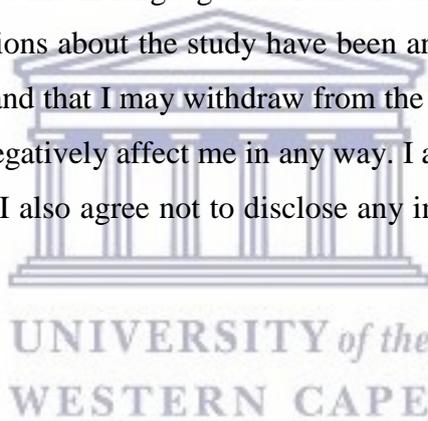
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INTERVIEW CONFIDENTIALITY BINDING FORM

Title of Research Project: “Development of a policy brief to facilitate the implementation of the physical activity/sports policy in Rwanda”

The study has been described to me in language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way. I agree to be audio-taped during my participation in the study. I also agree not to disclose any information that was discussed during the interview.



Participant’s name.....

Participant’s signature.....

Date.....

Appendix G: Interview question guide for policy makers/stakeholders of the Sports Policy

1. Do you know about the Rwanda Sports Policy?
2. What was your role in the development of this policy?
 - Did you directly participate in the development of this policy?
 - (Who were the other participants in its development, how were they identified?;
specific to the policy owners)
3. When did this policy become a priority?
 - What was the main aim of its development?
 - Which documents were consulted in developing the policy?
4. According to the sports policy, the proposed strategy for implementation is to use joint efforts of all stakeholders and the population to make sure that the policy is implemented.
 - Has this strategy been successful?
 - Has the policy been reviewed to evaluate its implementation strategies?
 - If yes, how often has it been reviewed?
5. Besides promoting professional athletes/sports persons, how does this policy facilitate the promotion of sport participation as a healthy life style for the general population of Rwanda as far as its mission states?
6. As a stake holder, how has your ministry facilitated the implementation of the sports policy to promote sport participation for health?
7. Are there any challenges that have been encountered during the implementation of this policy?
8. If any, how have they been addressed?

Appendix H: Adapted Godin Shephard LTPA Questionnaire

INSTRUCTIONS

1. Please complete the following questions to the best of you ability
2. Please explain in short words where you are required to
3. Thank you for your co-operation

SECTION A

SOCIO-DEMOGRAPHIC INFORMATION

1. Gender	-Female -Male
2. Age	-Below 20yrs - 41yrs - 50yrs -21yrs-30yrs -51yrs – 60yrs -31yrs - 40yrs -Above 60yrs
3. Marital status	-Married -Single -widowed -Divorced/separated
4. Level of Education	-Secondary certificate -Vocational training/Advanced diploma -Bachelor's degree/PhD
5. Work experience	-1-9years -10-19years -20 years and above
6. Place of work	-Ministry of sports and culture -Ministry of health -Ministry of defense -Ministry of education -Ministry of local government -Rwanda National Police -Private Sector Federation -Rwanda National Olympic Committee/ National Sports Bodies

SECTION B

THE GODIN-SHEPHARD LEISURE-TIME PHYSICAL ACTIVITY QUESTIONNAIRE

1. During a typical 7-Day period (a week), how many times on the average do you do the following kinds of exercise for more than 15 minutes during your free time (write on each line the appropriate number)

STRENUOUS EXERCISE (HEART BEATS RAPIDLY) e.g.,	Times per week
Running	
Jogging	
Football/soccer	
Basket ball	
Cross country	
Vigorous swimming	
MODERATE EXERCISE (NOT EXHAUSTING) e.g.,	
Fast Walking	
Tennis	
Easy bicycling	
Volley ball	
Badminton	
Easy swimming	
Folk dancing	
MILD EXERCISE (MINIMAL EFFORT) e.g.,	
Yoga	
Bowling	
Golf	
Easy walking	

SECTION C

FACTORS AND BARRIERS TO PARTICIPATION IN LEISURE TIME PHYSICAL ACTIVITY/SPORTS

1. Please state the different factors/reasons that motivate you to participate in any sport activity.....
.....
.....

2. Please state the different factors/reasons that limit you to participation in any sport activity?
.....
.....
.....

3. Do you think it is important to participate in sport activities? Yes/No

4. Please give reasons for your answer

.....
.....
.....



End of questionnaire, thank you for your participation

Appendix I: Editorial Certificate

28 May 2018

To whom it may concern

Dear Sir/Madam

RE: Editorial Certificate

This letter serves to prove that the thesis listed below was language edited for proper English, grammar, punctuation, spelling, as well as overall layout and style by myself, publisher/proprietor of Aquarian Publications, a native English speaking editor.

Thesis title

DEVELOPMENT OF A POLICY BRIEF
TO FACILITATE THE IMPLEMENTATION OF THE RWANDA
SPORTS POLICY IN PROMOTING HEALTH ENHANCING PHYSICAL
ACTIVITY AMONG GOVERNMENT EMPLOYEES

Author

Lela Mukaruzima

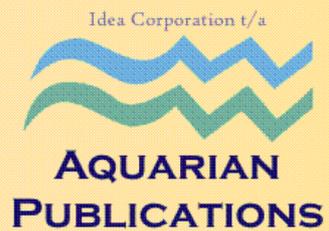
The research content, or the author's intentions, were not altered in any way during the editing process, however, the author has the authority to accept or reject my suggestions and changes.

Should you have any questions or concerns about this edited document, I can be contacted at the listed telephone and fax numbers or e-mail addresses.

Yours truly



E H Londt
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