ATTRITION IN COMPETITIVE SWIMMING IN KENYA: ASSESSMENT OF SELECTED PSYCHO-SOCIAL, DEMOGRAPHIC AND STRUCTURAL ATTRIBUTES

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DECLARATION

This proposal is my original work and has not been presented in any other university:

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DEDICATION

This work is dedicated to my late mother, Joyce Wangui Gathwe and sister Jane Wairimu, for having been there for me in my earlier education journey that set a stable foundation. This work also celebrates Kenyatta University students that have learned and continue to learn swimming at the University and become competent competitive swimmers representing the University. Indeed passion and consistent training is a perfect combination for continuous improvement.

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ACRONYMS

CANA- Confederation Africaine de Natation (Africa Swimming Federation)

FINA- Federation International de Natation (International Swimming Federation)

KSF-Kenya Swimming Federation

KUSA- Kenya University Sports Association

Abstract

Reasons cited by athletes, for attrition before reaching their full potential are varied based on the sports among other factors. This study sought to assess the perception of selected psychological, social and structural attributes on attrition in competitive swimming in Kenya. The target population included swimmers in the Kenya Swimming Federation database as of 2021 and swimmers participating in the Kenya University Sports Association Games. Forty-four coaches and 542 (394 active swimmers and 148 former swimmers) swimmers were sampled. Three sets of questionnaires were administered, one to coaches, another to active swimmers and another to former swimmers. Social attributes were ranked highest by all respondents, followed by structural attributes and then psychological attributes. The test of MANOVA found that there was a statistically significant difference between the three groups, active swimmers, former swimmers, and coaches on combined dependent variables (psychological, structural, social and gender factors) Pillai's $\Lambda = .613$, F (6, 1164)= 85.833, $p<0.001$, partial $\eta 2 = 0.307$, observed power = 1.00. MANOVA was then followed by ANOVA for each dependent variable (psychological, structural, social and gender) and tested at an alpha level of 0.05. The results showed that there was a significant difference in all three groups (active swimmers, former swimmers, and coaches) on their views on attributes leading to attrition among competitive swimmers in Kenya. A significant mean difference was established in all three groups on psychological, structural, and social attributes affecting swimming attrition. However, coaches and former swimmers had no significant mean difference on structural attributes leading to swimming attrition in Kenya. Mann-Whitney U test was used to establish if there was any significant difference for the three attributes across each of the three groups of respondents at $P\leq 0.05$. Psychological attributes were found to affect attrition among active swimmers most, followed by former swimmers and then coaches. The influence of psychological attributes was significantly different between coaches and former swimmers and between coaches and active swimmers. Social attributes influenced attrition among active swimmers most followed by former swimmers and viewed as least influenced by coaches. There was a significant difference between active and former swimmers, between coaches and active swimmers and also between former swimmers and coaches. Structural attributes influenced active swimmers the most, followed by views of the coaches and least among former swimmers. There was a significant difference between active and former swimmers. However, the difference in views of former swimmers and coaches and views of active swimmers and coaches' structural attributes was not statistically significant. Across gender, the Mann-Whitney U test showed gender had no significant influence on any of the three (psychological, social and structural) attributes. Comparing each of the four age groups among the swimmers, Mann Whitney U test results established there to be a significant difference only between the ≥ 16-year age group and the others. The study recommended the following: Kenya Swimming Federation and its affiliate county federations should look for sponsors to fund swimming competitions as this will make it more affordable and attract more competitors. There is a need to improve the incentive and reward system, to have more tangible and functional awards, especially among the swimmers aged 16 years and above as a way of motivating them to stay on in the sport. The federation in conjunction with the swimming coaches' body should invite swimming pool owners to be hosting swimming training camps within estates like other sports have, so as to increase the number of swimmers.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Competence in any activity leads to the aspiration to compete and exhibit a level of skill that can be assessed against another or against time (Mallet & Hanrahan, 2004). An athlete remains a competitor as long as there is progressive improvement, however, some athletes attrite before reaching their full potential (Cervello, Escartf & Guzman, 2007; Thomas, Cote & Deakin, 2008). Numerous studies have been done to assess the discontinuation motives of athletes dropping out before reaching their maximum potential to assist in designing appropriate sporting programs and creating an accommodative environment for the athletes (Rottensteiner, Tolvanen, Laakso & Konttien, 2015; Abdelghaffar et al., 2019). Where they may have sporting experiences that will enable them to persist in the sports and excel and not drop out before they reach their full potential.

These studies have discussed factors influencing attrition by athletes in different sports within varied geographical and economic backgrounds. These factors influencing withdrawal in sports have been categorized in varied ways. Some researchers have categorized these attributes as those revolving within the athlete (intra-personal) which include conflict of interest, not having fun and feeling a lack of adequate challenge, among others (Abdelghaffar et al., 2019; Gadient, Hawili & Strand 2020; Wetton, Radley, Jones & Pearce, 2013) and those outside the athlete's being (inter-personal) which include the influence of coaches, parents and peers others on the athletes (Kang, 2013, Karolina 2021; Abdelghaffar et al., 2019; Gadient, Hawili & Strand, 2020) which may also influence the intra-personal, thus having some overlaps. Some studies have categorized the factors as individual factors (that include enjoyment and perceived benefits by the athletes), cultural and

social, which include social support to the athlete (Abdelghaffar et al., 2019; Rotteinsteiner, Tolvanen, Laasko & Konttien, 2015; Jenkinson & Benson, 2010), environmental factors that include accessibility and availability of sporting infrastructure (Velasquez, Holahan & You, 2009; Abdelghaffar et al., 2019). Despite the various categories, there may be some overlap of the factors, as a factor categorized under social may also influence the way the athlete views their competence in the sport. To permit a better understanding of reasons for attrition in sports, an appropriate context of sports is necessary, hence the need for continued research considering various geographical and cultural backgrounds. For this study, the attributes that were assessed were categorized as psychological (those that revolve within the athlete like conflict of interest, and competence perception), social (revolving around the influence of significant others), and structural (revolving around funding and structures that oversee and manage sports, such as federations, government ministries, clubs, and educational institutions).

Psychological attributes that affect the way an individual perceives themselves which include competence and having other interests have been found to influence motivation to participate in an activity or drop out of an activity. An athlete who views their skill level as no longer improving or who never wins anything is likely to drop out of the sport, as they equate this to their competence level (Rottensteiner, Tolvanen, Laakso & Konttien, 2015; Pedreno et al., 2015). As one grows, other interests such as wanting to hang out with friends, interests in other clubs, and wanting to start making money among others may develop (Carlman, Wagnsson & Patriksson, 2009; Molinero, Salguero, Tuero, Alvarez & Marquez, 2009), this has been found to influence the level of participation in a sport, as one may eventually drop out of the sport they were involved in.

Social attributes include relationships with significant others (parents, coaches, and peers), who influence outcomes of sport involvement among athletes. When their influence decreases, there is

a probability of sports dropout (Vella, Cliff & Okely, 2014) There exist differences across ages as to how athletes view the influence of significant others, the 10 – 14 year-olds tend to be influenced by their parents and coaches more compared to those between 15- 22 years who tend to value their peers/teammates views, as they want them to notice their achievements (Mallet &Hanrahan. 2004; Crane & Temple, 2015). Significant others were assessed to establish if their influence on competitive swimmers is noteworthy. Perception and reactions to competition across gender are largely due to social and cultural norms (Dixon, Warner & Bruening, 2008; Nierderle & Vesterlund, 2008) as girls who are socialized by non-stereotyped views about sports are likely to persist longer in those sports (Niederle & Vesterlund, 2008). Whereas Cote, Baker & Abernerthy (2007) propose that studying sports attrition at a younger age (less than 13 years), may not be meaningful as sport specialization begins around that age. However, for sports like swimming and gymnastics, specialization begins at an early age. Most elite swimmers who swim for their country internationally are of school-going age and are mostly in academic institutions (Atkinson, 2001; Salguero, Gonzalez-Boto, Tuero & Marquez, 2004). Hence, the need to assess how age and gender influence attrition in swimming, as reasons cited for dropping or staying in sports, has been related to different age groups.

Structural attributes within institutions and clubs dictate the type and extent to which sports are taken up. Students within an institution tend to be more in a sport that is facilitated in terms of availability of facilities, maintenance of the facility and equipment, hiring of personnel to train the sport, and financing to participate in competitions hence increasing participation in the sports (Amusa, Toriola, Onyewadume & Dhaliwall, 2008; Hashim, 2012). Studies have found some institutions concentrate on the cognitive aspect in class, without regard to other aspects (Sirimba, 2015; Craike, Symons & Zimmerman, 2009). This has been found to have a negative influence on

their participation in sports, as the students select to concentrate on academics. Fundamentally, studies have found that non-monetary rewards are the best approach for younger athletes (Chan, Courty & Hao, 2009; Tshube, Akpata & Irwin, 2012), however, the more mature and elite athletes are motivated to stay in a sport if they know the awards at stake are more tangible (Tshube, Akpata & Irwin, 2012). Athletes' motivation to excel, depends on their expectation to receive desired rewards (Yavuz, 2004). The current study assessed if the awards the swimmers get during competitions in Kenya motivate them enough to make them persist in the sport. Some athletes who feel selection criteria to represent their team (in school, club, or at a national level) was unfairly done have been found to reduce their participation in that sport (Andronikos, Westbury and Martindale, 2019). These structural attributes were assessed to establish the extent to which these independent variables influence attrition in competitive swimming in Kenya.

Kenya has shown it has the potential to excel in other sports other than athletics, as evidenced by the cricket team (Kenya national cricket team, 2020); rugby seven's team (Kenya national rugby seven's team, 2020); volleyball team (Kenya women's national volleyball team, 2020); field events (javelin) and boxing (Commonwealth Games, 1970- 2010, 2014, 2018; Olympic Games - 1972, 1988, 1984, 2008) that have featured in regional and international championships and events and excelled. Swimming in Kenya has also had increased participation and improved performance both regionally and internationally (Commonwealth Games, 2010; Africa Games; Africa swimming championships, 2018). The country has had swimmer representation in educational institutional games held annually and bi-annually, locally and regionally at the secondary/high school and university levels. Five swimmers (3 males and 2 females) have been among the recipients of the country's Sports Man of Year Awards (SOYA) in different categories (Kenyan Sports Personality of the Year, 2019). Among the 17 African individual events swimming records,

Kenyan male swimmers have matched up to 8 of those events and posted faster times in 6 of them in varied swimming competitions internationally. Among the females, of the 17 events, 10 of those events, have been matched up with 6 among them being faster than the documented African swimming records. Kenya, therefore, has the potential to be a powerhouse in swimming (Kenya swimming records, 2019). From this performance, Kenya has the potential to excel more internationally.

However, from the Kenya Swimming Federation (KSF) database 2021, the majority of the competitive swimmers were below 13 years, with 66. 9% being male and 77.9 % being female (Mazazi V. KSF database, July 29, 2019). This indicates that the larger population of Kenyan competitive swimmers are admissibly in their teens, yet those who represent the country internationally are 16 years and above (Commonwealth Games, 2010; Africa Games; Africa swimming championships, 2018). Based on this, there was need to carry out a study to establish factors affecting attrition among competitive swimmers in Kenya and why many of these swimmers who were still performing well when they were younger (under 13 years), stop competitive swimming.

1.2 Statement of the Problem

Most elite competitive swimmers begin peaking after 16 years (Post, Koning, Vissher & Elferink-Gemser, 2019), due to physiological and anthropometric factors that affect performance. Similarly, World records in swimming are held by swimmers with an average age of 23 years (youngest breaking the record when 17 years and oldest at 28 years) for males and 25 years (youngest setting the record when 19 years and oldest at 32 years) for females. For African record holders in swimming, the average age of males was 25 years (youngest at 21 years and oldest at 30 years)

and 21 years for females (Youngest at 15 years and oldest at 31 years). The average age of elite male swimmers was 24 years and 23 years for females. However, from the Kenya Swimming Federation (KSF) database, the number of active swimmers aged above 16 years was much lower compared to the 13 years and below age group, particularly among girls. In view of this background that it was necessary to establish factors that may be causing swimmers to attrite from prevalent competition too early before they reach their full potential.

1.3 Purpose of the Study

The purpose of this study was to assess the perception of selected psychological, social and structural attributes on attrition in competitive swimming in Kenya.

1.4 Objectives of the Study.

The study was guided by the following objectives:

1. To assess the perception of psychological attributes on attrition in competitive swimming in Kenya.
2. To examine the perception of social attributes on attrition in competitive swimming in Kenya.
3. To investigate the perception of structural attributes on attrition in competitive swimming in Kenya.
4. To determine whether gender affects the perception of psycho-social and structural attributes on attrition in competitive swimming in Kenya.
5. To assess whether age affects the perception of psycho-social and structural attributes on attrition in competitive swimming in Kenya

1.5 Research Questions

The study sought to answer the following research questions:

1. Are psychological attributes perceived to affect attrition in competitive swimming in Kenya?
2. Are social attributes perceived to affect attrition in competitive swimming in Kenya?
3. Are structural attributes perceived to affect attrition in competitive swimming in Kenya?
4. Does gender affect the perception of psycho-social and structural attributes on attrition in competitive swimming in Kenya?
5. Does age affect the perception of psycho-social and structural attributes on attrition in competitive swimming in Kenya?

1.6 Significance of the Study

Children and adolescents develop physical skills which contribute to lifetime physical involvement, increased fitness and acquire a greater sense of self through increased perceived competence and confidence in the sport (Vella, Cliff & Okely, 2014). Motives that encourage children and adolescents to continue involvement in sports should be recognized to prevent discontinuation (Siesmaa, Blitvich & Finch, 2011). This study may assist identify attributes that contribute to participation and attrition in competitive swimming in Kenya and hence enable coaches to design sports programmes and athletic experiences for participants that fulfil the athletes'′ needs, thus helping to develop tools for predicting potential withdrawal from youth sport. The study may derive recommendations to various stakeholders in the sport to assist in retaining swimmers at their peak level. It may also provide data for future research and academic reference.

1.7 Limitations of the Study

The study was limited by the fact that some of the swimmers in the database were not traceable, however, through snowballing technique, swimmers who were captured in the sample and were not in the existing database were added to the sample. Most respondents were from private educational institutions, hence the findings may not be generalized beyond the specific population.

1.8 Delimitations of the Study

The study was delimited to swimmers who were in the Kenya Swimming Federation (KSF) database, with the exception of the Kenya National Paralympic Team. The Paralympic athletes in the database were left out as swimming competitions for Paralympic athletes are not regularly held and there is no calendar for their events, hence they are not consistent in competitions.

This study was further delimited to the swimmers who may not have been in the KSF database but had competed in the university under Kenya University Sports Association (KUSA), during national KUSA games or regional games (East Africa University Games) representing Kenyan Universities. The study was also delimited to the selected psychological, social and structural attributes.

1.9 Assumptions of the Study

The study assumed that the respondents would answer all questions honestly and that the researcher and research assistants would invariably present the interview questionnaire. The study used purposive sampling, hence the assumption that those included in the criteria have experienced the same or similar phenomenon of the study.

1.10 Definition of Significant Terms

Attrition- Exiting competitive participation in sports. In the case of the current study, this involved exiting competitive swimming.

Psychological Attributes- Intra-personal factors that affect an individual in their view about their abilities and interests. These include perceived competence, other interests, and conflict of interest.

Social Attributes-Factors that involve the relationships athlete have with significant others as concerns participating in sports, including friends, parents, and coaches.

Structural Attributes- Factors within institutions that affect an athlete's participation in sports which include access to sporting facilities (swimming pool), selection criteria to the national team, academic workload and schedules in educational institutions, financing of competitions, funding and sponsorship, awards, and incentives.

1.11 Organisation of the Study

The study is comprised of five chapters. Chapter one comprises the background of the study, statement of the problem, objectives and research questions, significance, limitations, delimitation and basic assumptions of the study, and operational definition of key terms. Chapter two comprises of review of the literature on the study under the subtopics; Attrition in sports; the influence of gender and age, significant others, selected psychological and structural attributes on attrition in sports; theoretical and conceptual framework. Chapter three comprises of research methodology, including research design, target population, sample and sampling procedure, research instruments, validity and reliability of the instruments used, data collection procedures, analysis,

and ethical considerations for the study. Chapter four presents the findings and data analysis of the results collected for each of the stated research questions. Chapter five outlines a summary of the findings discusses the results of the study and suggests policy practices and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter outlines related literature review for the research under the following subheadings: Kenya in competitive swimming internationally, studies on, attrition in sports, the influence of psychological attributes (other interests and perceived competence) and sports attrition, the influence of social attributes (significant others) and sports attrition, the influence of structural attributes (academics, facilities and equipment, funding/sponsorship, selection process and incentives/awards) on sports attrition, the influence of gender and age on sports attrition. This chapter closes with the theoretical framework of the study and finally the conceptual framework of the study.

2.2 Kenya in Competitive Swimming Internationally

Kenya was first represented in swimming during the 1956 Olympics Games, held in Melbourne, Australia, by Margaret Northrop (female) then under the British colonial regime (https://wikimili.com/en/Margaret_Northrop). Thereafter, there was no other representation of swimming in Olympics until the 2000 Sydney Olympic Games in Australia where the country was represented by two swimmers (1 male and 1 female) (https://en.wikipedia.org/wiki/Kenya_at_the_2000_Summer_Olympics#Swimming). Since then there have been one or two swimmers representing the country in subsequent Olympics. The best performance in Olympics was in the 2008 edition hosted in Beijing, China, where a Kenyan swimmer managed to reach the finals and emerge fifth (https://en.wikipedia.org/wiki/Swimming_at_the_2008_Summer_Olympics_%E2%80%93_Men%27s_100_metre_butterfly). The Country has also had representation in swimming competition

during Commonwealth Games, with the first time being in 1966 in Kingston, Jamaica by Kenyans of European decent (https://thecgf.com/results/games/3036/32/all). Kenya did not have any other swimmer representation after the 1966 Games until the 1982 Brisbane, Australia edition, where Kenya had the first black African swimmer in the team (https://thecgf.com/results/games/3040/32/all). Kenya has participated in swimming in Commonwealth Games in subsequent editions, with the first female swimmer representation in the 2006 Melbourne Australia Games (https://thecgf.com/results/games/3026/32/all). The best performance in swimming during the Commonwealth Games was the 2010, Delhi, India edition where Kenya managed to win a gold medal (https://thecgf.com/results/games/3046/32/all). The highest number of swimmers represented in the Commonwealth Games so far was the 2014 Glasgow, Scotland edition with 13 athletes, 6 males and 7 females (https://thecgf.com/results/games/3052/32/all). In the 1st All Africa Games of 1965, held in Brazzaville, Congo, Kenya had a swimmer in the team, who won a silver medal (http://www.todor66.com/Africa_Games/1965/Swimming.html). The country has participated in subsequent All Africa Games, with the best performance so far being the 9th 2007 and 10th 2011 games held in Algiers, Algeria, and Maputo, Mozambique respectively. The best performance in swimming in the World University Games so far has been the 25th edition of 2009 held in Belgrade, Serbia where the country won 3 medals by one swimmer (https://en.wikipedia.org/wiki/Swimming_at_the_2009_Summer_Universiade). Kenya participated for the first time in the 1998 eighth edition of the FINA World Aquatic Championships -Long Course (50 meters swimming pool) being represented by one male swimmer, held in Perth, Australia. While a female swimmer (among the three swimmers) represented the country for the first time in the 7th edition of the 2004 FINA World Swimming Championship -Short Course (25

meters swimming pool) held in Indianapolis, USA. Though the country has been participating in the World Swimming Championships, both long course and short course, no medals have been won so far. For the Africa Senior Swimming Championships, Kenya has won several medals in various editions of the games since 2006. The younger swimmers have not been left out, having had representation in swimming in the first edition of the World Youth Games held in 2010, represented by two swimmers (1 boy and 1 girl). Kenya has also participated in Africa and World Junior Swimming Championships, managing to win medals for the first time in the sixth edition of the World Swimming Junior Championships, held in 2017 in Indianapolis, USA since its' debut in 2008. This outlines Kenya's gradual participation and performance in selected international events in swimming as detailed in Appendix 8.

2.3 Attrition in Sports

Participation in sports at whatever level, from novice to elite has been found to have numerous physical and psychological benefits (Wilson et al, 2022; Ruseski, Humphreys, Hallman, Wicker & Breuer, 2014; Silva, Monteiro & Sobreiro, 2020). Despite these findings, a large percentage (70% - 80%) of athletes prematurely withdraw from their sporting career before reaching their optimum performance levels (Thomas, Cote & Deakin, 2008; Cervello, Escarf & Guzman, 2007). The highest attrition rate is among adolescents (Wallace, 2016; Thomas, Cote & Deakin, 2008), some as young as 12- 13 years (Wall and Cote, 2007). Increasingly pushing children to specialize at an early age in an activity such as a specific sport has been found to contribute negatively to persistence in sports (Kumar, Rossiter & Olczyk, 2009). Children having to choose one activity at the expense of excluding other activities they considered interesting. Whereas most educational institutions provide children with equal opportunities for varied sports and other activities offered in the institutions. Increasingly though, institutions are encouraging outcome-driven sports, having

teams selected for each age group to compete for the school (Kumar, Rossiter & Olczyk, 2009). This has been found to discourage children from continued participation in school sports, as only those who excel are pushed to the next level. Children who are late developers in skill development may have been left out at an early age as they were never selected to represent their institutions hence dropping out despite probably having the potential to excel later (Van, Scheerder & Bracke, 2010). Attrition in sports among children and the youth has been a major concern because now more than ever there is an increased sedentary lifestyle with all the electronic gadgets and screen time spent in a day which are more readily accessible to the majority. (Dahlgren, Sjöblom, Eke, Bonn & Trolle, 2021; Sandercock, Ogunleye & Voss, 2012). The context of the sport enjoyment model established by Scanlan et al outlines the stages and components for an athlete to be committed to a sport to identify the sources of commitment to reducing sports attrition at an early age. Motivation is a key variable in predicting dropout and persistence in sports among children and adolescents (Carlman, Wagnsson, Patriksson, 2013; Guzman & Kingston 2012). The absence of motivation for participation contributes to sports dropout and withdrawal which is a gradual transitional process. However, a positive youth sports experience that enhances intrinsic motivation is a motivating factor that leads to continued participation in sports throughout life (Cervello, Escarf & Guzman, 2007; Salguero, Gonzalez-Boto., Tuero & Marquez 2004). Where the system of sports is more structured towards meeting the needs of competitive players, by having organized sports that have set rules and customs, most children tend to drop off from sports as they no longer have fun (Eime Payne & Harvey, 2009). They do not enjoy the sport because of the nature of organized sports that requires them to have structured training after school hours, on weekends and during school holidays. The current study sought to establish the causes of attrition

among competitive swimmers in Kenya, as attrition negatively affects the competitive advantage a country has at the international level.

2.4 Influence of Psychological Attributes in Sports

In the context of sports and physical activities, psychological attributes are variables that contribute to an individual's personality development that includes their behaviour as a result of their mental state (Tod, 2014). These are intrapersonal variables within an individual that they perceive as influencing their participation in an activity. These variables include the personal satisfaction an individual gets when doing the activity, training, and accomplishment. When an athlete rates the personal satisfaction they get from engaging in the sport high, they are more likely to engage in the sport for a longer time (Tod, 2014; Zimmermann-Sloutkis, Wanner, Zimmermann & Martin, 2010; Rotteinsteiner, Tolvanen, Laakso & Konttien, 2015). If the sport is viewed to provide sufficient personal satisfaction then the athlete does not feel that it interferes with other activities and may therefore not have a conflict of interest in what to choose to engage in. However, as children grow, their preferences and interests shift towards their friends' preferences or other engagements like academics (Wetton, Radley, Jones & Pearce, 2013; Rotteinsteiner, Laakso, & Pihlaja, 2013). Similarly, when athletes view their performance or outcome as not improving as they had hoped, they are likely to drop out of the sports, as they feel engaging in the sport no longer adds value to their accomplishments. These psychological attributes of having other interests and perceived competence are the two intrapersonal factors that were assessed in this study.

2.4.1 Athletes Having Other Interests

The phase of life and age when an individual is at their prime physically and should devote more time to train in the sport they may be engaged in to excel during competition mostly coincides with a phase in their life that other aspects that they may be involved in or pursuing such as work, education, and relationships (Nelson, Storey, Larson, Neumark-Szainer & Lytle, 2008). It is during this phase of their life that most potential elite athletes move to higher levels of their academics, sometimes moving schools or even moving to different areas away from home to pursue their academics. This influences the individuals in their choices as they may have access to more extra-curricular activities and clubs that they may not have had and now prefer to be engaged in (Battaglia, Kerr & Tamminen, 2021). At this age, individuals have some level of independence in terms of choosing activities they would be engaged in without much influence from their parents (Battaglia, Kerr & Tamminen, 2021). As social interactions at this age are strong, individuals prefer engaging in activities that their friends are engaged in, thus being swayed to other interests other than sports, thus contributing to the decline and attrition in sports participation. Having other interests has been found to influence sports attrition among athletes (Battaglia, Kerr & Tamminen, 2021; Siesmaa, Blitvich & Finch, 2011). Other competing interests contribute to withdrawal from sports as athletes transition from one stage of life to another. During adolescence, athletes have cited competing interests like school work, interest in other school clubs, and wanting to socialize more with their friends that they prioritize over sports. Athletes are a microcosm of society and are therefore no exception in the various phases of life as they grow. Despite their tight training regimes that lead to them excelling in sports, they are expected to balance with other activities and interests in their everyday life. As a result, where athletes have had several interests, they have often opted to drop the one they feel takes their time and where they do not have friends engaged

with them. In the study by Battaglia, Kerr and Tamminen (2021), among coaches, parents, and youth athletes based in Ontario Canada, the respondents felt engagement in sports did not allow time for these other interests as the training regimes were time-consuming and did not leave them with any time to do anything else they wanted to do, thus opting to withdraw from sports. Carlman, Wagnsson and Patriksson (2013) did a study to among other objectives examine dropout types and reasons among children in organized youth sports in Sweden. The participants comprised 1,176 pupils in schools in the Western and middle parts of Sweden of which 41% were female and 59 % male. The pupils participated in 45 different sports as follows, soccer (40%), equestrian (9%), ice hockey (6%), floorball (5%), and golf (5%). The rate of dropout was football (57%), handball (17%), floor-ball (14%), and martial arts (14%). A five-point Likert scale questionnaire was used to assess reasons for dropping out of sports. The findings showed that time-related reasons and having other interests (not having time to do other things- meet with friends, do other leisure activities) were the primary reasons for participants dropping out of organized sports.

In a study by Molinero, Salguero, Tuero, Alvarez and Marquez (2009) among young Spanish athletes in selected team sports to investigate reasons for attrition in sports, having "other things to do" was ranked first as the main reason for dropping out. The study respondents were 309 dropout athletes (150 males and 159 females) with a mean range of 14- 18 years. The athletes participated in soccer (n=127), basketball (n=122), and volleyball (n=60). The Questionnaire on reasons for attrition was adopted and used, resulting in a 29- item questionnaire on a 5-point Likert scale. Having other things to do (which was classified as other interests- which included wanting to be with friends to "hang out", go watch movies, do part-time jobs to earn pocket money and study) was ranked first among reasons for attrition with a general mean of $\bar{x}$=2.77. Molinero, Salguero, Tuero, Alvarez and Marquez (2006), comparing dropout reasons with gender, type of

sport and level of competition among young Spanish athletes aged 14 -24 years, found that having other interests and things to do was ranked as the main reason for dropping out on sports across gender at $\bar{x}$=2.82. The study participants were 561 (292 females and 269 males), who had participated in individual sports (n= 193) and team sports (n= 368). Four items on the questionnaire for attrition used were found to be significant for both genders with females placing "had other things to do" higher than males at $\bar{x}$= 2.95 and $\bar{x}$= 2.67 respectively. However, males placed items of the coach not being interested in them ($\bar{x}$=1.98), parents or friends no longer wanting them to compete ($\bar{x}$=1.72), and not being in good shape ($\bar{x}$=1.81), higher and more important factors influencing their dropping out of sports compared to females. Comparing type of sport across gender, three questionnaire items were found to be significant, with males in individual sports rating all three items higher than their female counterparts involved in individual sports (skills not improving, at $\bar{x}$=1.92 compared to females at $\bar{x}$=1.70; not being fun enough at $\bar{x}$=2.19 compared to females at $\bar{x}$=1.62; not exciting enough at $\bar{x}$=2.02 compared to females at $\bar{x}$=1.57). Among the respondents engaged in team sports, females indicated two of the items (skills not improving, at $\bar{x}$=1.83 compared to males at $\bar{x}$=1.65 and not exciting enough at $\bar{x}$=1.79 compared to males at $\bar{x}$=1.71) as being more important factors influencing their drop out in sports compared to males who ranked not having enough fun higher than their female counterparts at $\bar{x}$=1.86 and $\bar{x}$=1.84 respectively. Across gender, similar items were found to significantly influence attrition in sports; the difference was in the rating of an item given more emphasis. The aforementioned studies were carried out in European countries and swimming was not among the sports investigated, hence the current study assessed whether the reasons given by swimmers for attrition under "having other interests" and Kenyan context were different or similar.

2.4.2 Perceived Competence by Athletes

Competence is the state or quality of having knowledge, judgment, or skill that is sufficient to enable one to deal with a particular matter successfully and sufficiently (Merriam-Webster, n.d.). Physical competence relates to an individual's ability to perform motor skills, which involve movement. One can engage in a wide range of physical activities when their physical competence is enhanced. However, when athletes feel their skill level has reached a plateau and they are no longer improving despite training, they are likely to drop from the sport or switch to another sport.

The level of physical competence can be enhanced by physical training of self or input of significant others like coaches and parents. Feedback from these social agents that depict competence aspect of the athlete influences the participant to either withdraw or remain in the sport. Criticism from the coaches about the athlete's ability in a sport contributes to withdrawal as they feel inadequate in the skill set of the sport as their confidence in the sport diminishes. The criticism may be verbal or the athlete not being given chances or very limited chances to compete or play for the team. Playing time given to an athlete by coaches is perceived by the athletes as a way of measuring their competence, when given a longer time to play, the athletes interpret that as the coach's perception of their competence (Battaglia, Kerr & Tamminen, 2021). Enhanced competence through training has been found to increase high self-perception of competence, which contributes to increased participation in physical activities (Stodden et al., 2008). Individuals who perceive themselves to be competent in any activity are likely to participate in the activity to a high level which may include training and competition. Negative comparisons of athletes on their sporting ability contribute to athletes withdrawing from that particular sport or not participating in any other sport (Battaglia, Kerr & Tamminen, 2021). However, young athletes who do not get negatively affected by these comparisons can stay in sports.

LeGear et al. (2012); Crane, Naylor, Cook and Temple (2015), in their studies, outlined perception of competence across age, where children under 7 years generally had an inflated perception of their competence and were eager to be engaged in physical activities, regardless of their competence in the activities. As children grow between the ages of 7 and 10 years, the children begin to perceive their skills accurately and are able to compare themselves with their peers. After 12 years, their perceived competence is clearer to them as they continue to compare themselves with their peers and self asses themselves. At this age, they also begin to cognitively understand and store what they hear from their peers, parents, and coaches concerning their competence in the activities they engage in. They begin dropping out at this age if they perceive their competence is not adequate and do not get positive feedback from the "adults" around them, majorly the coaches and parents, about their abilities. However, Morano, Colella and Capranica (2011) in their study among adolescent boys aged between 12 and 16 years participants in soccer found that the players perceived their skill level lower than it was. This low perception of their competence affected their dropout rate from the game. Thus the self-perception of the athletes may not be accurate unless there is some level of measurement to establish the actual competence for the actual skill. Generally, competence perception whether accurate or not becomes more important to children as they grow older, as greater focus shifts to social comparisons and increased competitiveness in the sporting environment.

Rottensteiner, Tolvanen, Laasko and Konttien (2015) examined motivational factors that sustained participation among 1962 Finish young athletes (553 girls and 1409 boys) aged between 14 and 15 years, participating in basketball (293), soccer (958), and ice hockey (711). Three sets of questionnaires with a five Likert scale were used, the perception of success questionnaire, the Perceived Physical Competence Scale and; the Sports Motivation Scale. The study findings

indicated players with higher perceived competence reported higher levels of motivation which in turn influenced their persistence in the sport they participated in.

Pedreno et al (2015) in their study among 254 Spanish boys' soccer players aged between 14- 16 years, found that perceived competence by the player and relatedness positively predicted intrinsic motivation which sequentially presaged continuous commitment to soccer. The study aimed at contributing to the motivational processes proposed by the Self Determination Theory (SDT) and the Structural Equation Model (SEM) to explain sport commitment in adolescents. Five sets of questionnaires were used to assess the various attributes in the SDT and SEM. From the study findings, structural regression modelling results showed that perceived competence by an athlete was influenced by psychological mediators concerning the need for relatedness and praise for autonomous behaviour, which encouraged greater commitment in young soccer players.

To determine the existence and extent of the relationship of coaching styles to the tenets of Self Determination Theory (SDT) which include competence, autonomy, and relatedness on athletes, Brinton, Hill and Ward (2017) conducted a descriptive survey among competitive university students of Brigham Young University. The sample comprised 194 students (146 females and 48 males) in the department of recreation management and exercise science with an age range of 17 – 28 years. The study established that a coaching style that was authoritarian while also supporting the athletes' needs had a positive correlation with perceived competence. Coaches that offered athletes opportunities to play and give their input in-game situations made the athletes perceive a high level of competence in their skill abilities. Years of sport an athlete had engaged in was found to be a significant predictor of athletes' perception of competence level. This followed logically, as an athlete who engaged in a sport over an extended period was more likely to become more proficient in the sport, thus gain a sense of increased competence, hence stay in the sport. These

findings were replicated in a study by Berukoff and Hill (2010) among 143 (71 females and 73 males) young Latinos/Hispanics aged between 15-22 years, in an urban high school based in Los Angeles, United States of America. The study found that performance in swimming was strongly related to opportunities to learn how to swim in the early years. The earlier and more time an individual had for swimming, the more likely they would be highly proficient. The fewer the experiences and opportunities children had to practice swimming skills and compete, the less likely they would feel competent in the sport. The study findings showed males significantly scored higher than the females in swimming performance as their swimming efficacy and frequency of swimming opportunities rated higher than the females. Whereas these studies assessed athletes within European countries, the current study sought to establish how the perception of competence by the coach on the swimmer and by the swimmer themselves influence attrition in competitive swimming in Kenya.

2.5 Influence of Social Attributes on Sports

The various social environmental forces and contexts individuals experience has been theorized to affect and develop their behaviour and preferences (Bronfenbrenner & Morris, 2006). Children learn their habits and attitudes during early developmental stages by observing and imitating those they are in close contact with (Rogoff, 2014). The social learning process occurs through observation and imitating the behaviour of those in the immediate environment including parents, siblings, friends, teachers, and coaches. These are the significant others that an individual interacts with through the different stages in their lives. They are the role models of the individual (children) from whom they copy their behaviour and persist with the behaviour if they get satisfaction from engaging in a similar behaviour or stop the activity if they do not get any benefits from it. Positive influence from the social relations an individual has translates to the likelihood of consistency in

the activity whereas negative influence leads to dropping of the engaged activity. Parents are the first socializing agent of children that they encounter (Grusec & Davidov, 2015), other agents including teachers, coaches, and friends come into play as the children begin schooling and move out of the house. This study assessed the influence of these social attributes on attrition among competitive swimmers in Kenya by evaluating the interpersonal relationships the athlete had with these significant others specifically, coaches, peers, and parents.

2.5.1 Influence of Significant Others on Athletes

Family is the first and most influential socializing agent a child is exposed to during their early developmental years (Horn & Horn, 2007). Parents are the figureheads of the family and hold beliefs and value systems that they desire to pass on to their children. They have the task to teach and encourage the children's behaviour for basic survival, like how to feed and clean themselves. During the early stages, children majorly learn through observation and copying behaviour they see. If the behaviour is encouraged and even rewarded when they do it, the children maintain the behaviour. However, if discouraged or punished for engaging in the behaviour consistently, they are likely to stop it. Parents can influence behaviour by being role models or providing efficient support to promote the desired behaviour. This support may be emotional, technical, or tangible in terms of funding for facilitation to engage in the activity. As children grow, they begin to engage their thought processes and can decide to stop an activity if they feel the activity is not bringing adequate satisfaction as they had anticipated. Several studies (Wilson, Wilson & Baker, 2019; Fraser-Thomas, Strachan & Jeffery-Tosoni, 2013; Knight, Dorsch, Osai, Haderlie & Sellars, 2016) have found that parents who have been engaged and involved in sports earlier were more likely to encourage their children to be involved in sports. Children were 6.3 times more likely to be engaged in sports where at least one or both parents had been involved in sports (Zecevic,

Tremblay, Lovsin & Michel, 2010). Early parental support that children are given has also been found to contribute to maintenance and persistence in a sport later in their adolescence. Parents introduce their children to sports for varied reasons, most being with intentions of providing their children with the positive benefits associated with being physically active which include fitness and gaining life skills like discipline, teamwork, and leadership among others (Eime, Young, Harvey, Charity & Payne, 2013; Olds, Dollman & Maher, 2009). Parents enroll their children in structured sports programmes to inculcate in them a healthy lifestyle, as physical activity patterns formed at an early age have a larger impact through the adulthood of the children (Dagkas & Quarmby, 2012). A study by DeLuca (2013) among swimmers enrolled in a swimming club based in the United States of America, found that the parents enrolled their children in the swimming club for purposes of safety (learn to swim, thus not drown), to be able to exercise and gain the benefits of a healthy lifestyle by ensuring healthy weight and give their children opportunities for success in their future. The respondents were mothers of children aged between 6 – 10 years who trained in the swimming club for competition. The parents chose swimming for their children as they perceived it to be "safe" and less "aggressive" compared to other sports. As the parents were from a region of middle and upper middle-income economic status they wanted their children to maintain interactions with children of the same socio-economic status, as the parents also got an opportunity to network and socialize among themselves, thus retaining their social and economic capital networks. Some parents introduce their children to sports to maintain a privileged social standing as some sports like swimming, golf, skiing, and tennis are presumed to be for the affluent since they require more economic capital to pursue (Evans & Davies, 2010). Parents play a significant role in providing social and tangible support to their children; the social support may be in the form of encouraging words they give their children after a competition. It may also be in

the form of giving a listening ear and shoulder to lean to their child athlete when they do not perform well. Parents are also the biggest financial sponsors of their children in their sporting achievements as they facilitate their children's engagement by paying for their training sessions, providing transportation to the venues for competition and training, and buying equipment required for the specific sport. The value and extent to which parents assign their children's engagement in sports are also determined by the experiences the parents may have had previously in their involvement in sports or the perceived outcome their children will get by being engaged in sports (Knight, Dorsch, Osai, Haderlie & Sellars, 2016; Fraser-Thomas, Strachan & Jeffery-Tosoni, 2013). When parents do not have a pleasant experience, they may discourage their children to be involved in sports at all, or avoid the sport that they were previously engaged in. Where parents have had positive outcomes from being engaged in sports they will most likely encourage their children to take up sports and even towards the sport they were involved in (Knight, Dorsch, Osai, Haderlie & Sellars, 2016). The familiarity with the context and structure among parents who had previous sporting experience makes it easier for them to support their children effectively (Knight et al, 2016). Parents who have been involved in sports have been found to assist their children to develop in the sport and help them be able to manage the emotions and stressors that accompany competitive sports (Harwood & Knight, 2015). To evaluate parental sports involvement and eventual attainment levels of their children in sports, Wilson, Wilson, and Baker (2018) in their study involving 229 athletes (139 elite, 33 pre-elite, and 57 non-elite) found that the majority of parents of elite athletes had previously been involved in sports earlier in their life as they had pleasant experiences when they were athletes. Dixon, Warner and Bruening (2008) did a qualitative study among 17 American female coaches in the National Collegiate Athletic Association (NCAA) from different sports (soccer, basketball, rowing, gymnastics, lacrosse,

tennis and volleyball). While most (82.3 %) of the respondents indicated that one or both of their parents were involved in sports, all the respondents reported that their parents encouraged them to participate in sports, and were supportive by taking them for training and watching them play. This support created a strong base for involvement and commitment in sports, where they were players and later transitioned to coaches. Tam (2019) did a descriptive survey study to assess the relationship between the feeling that former youth athletes have about their sport and how their parents' influence played a role in their sporting experience. The study respondent was 94 (52 females and 42 males) undergraduate students at St. John Fisher's College in America who were involved in competitive sports in their pre-adolescent ages**.** A 5-point Likert scale questionnaire was administered via email. Parental influence was rated highly in terms of providing financial support ($\bar{x}$= 4.68); providing transportation to training or competition venues ($\bar{x}$= 4.61); attending competitions ($\bar{x}$= 4.45); giving feedback on performance ($\bar{x}$=3.76) and coaching ($\bar{x}$= 2.18). With the exception of coaching, the other variables were found to be significant in influencing a positive sporting experience for the respondents. Parental influence in sports has also been found to be negative (Fraser-Thomas, Côté, & Deakin, 2008a, 2008b; Fraser- Thomas, Starchan & Jeffery-Tosoni, 2013) leading to children dropping out of sports. The negative influence from the parents includes criticism for losses and excessive pressure on the children to excel and win. Children have cited some reasons for dropping out of sports due to their excessive parental involvement when they feel their parents take over the experience from them, as they pressurize them to excel and the children do not want to "fail" their parents. Some of these parents hope to live their dream lives through their children's excellence in sports as they compensate for opportunities they did not have when they were young (Battaglia, Kerr & Tamminen, 2021). This does not create a conducive environment for the children to want to be involved and stay on in sports. Some parents have

engaged and pushed their children in sports to use it as an expedient to get academic scholarships to prestigious institutions.

Parental influence on athletes declines over an individual's lifespan as other factors come about in their life like schooling hence interactions with others such as their peers, teachers, and coaches. Coaches are entrusted by parents and sporting organizations to help develop athletes in their sporting area, by providing technical skills and tactics associated with each sport. Coaches are inherently expected to provide emotional support and train the athletes on life skills like cooperation, perseverance, and inculcate acceptable values in the athletes (Gould, Chung, Smith & White, 2006; Gilbert & Côté, 2013; Wekesser, 2019). Coaches have the role of inspiring positive influence among children and athletes they interact with, through the behaviour they model and by being empathetic when communicating with the athletes. The positive climate created for children and athletes is determined by the way influential adults (coaches) interpret and define success. Consequently, this shapes how children construe their engagement and effort in sports. Studies (Vella, Oades & Crowe,2011; Curran, Hill, Hall, & Jowett, 2015; Wekesser, 2019) have shown that coaches who adopt a mastery-oriented environment as their coaching style where the emphasis is on self-improvement of athletes are likely to have athletes persisting in sports for a longer period. As the coaches evaluate athletes against themselves and not against others, the athletes work hard for self-improvement. Coaches allow the athletes to experience success even as they go through the challenges of losing as they support them to practice and continually improve their performance. Athletes who feel supported regardless of their outcome are more likely to engage in sports for a longer time (Falcao et al., 2012; Vella et al., 2013). Similarly, where athletes feel their interpersonal relationship with their coach is positive and the emphasis is on effort and

improvement, this is likely to have a positive impact on their sustenance in sports (Rocchi, Pelletier & Desmarais, 2017).

In a study by Meredith (2017) on coaches' impact on youth athletes' intention to continue sports participation, higher levels of sports persistence among athletes were related to a positive coach-athlete relationship. The study involved 125 athletes aged between 11 to 16 years from organized sports in Nebraska, United States of America. Coach-Athlete Relationship Questionnaire (CART-Q) and Interpersonal Behaviours Questionnaire (IBQ) were used to assess the quality of the relationship the athletes had with their coaches and the perception of their coach's interpersonal behaviour respectively. Athletes who indicated high intentions to continue participating in the sport they were engaged in were those who also indicated that they had a good interpersonal relationship with their coach. The athletes stated that their coaches emphasized effort and encouraged them to improve their skills, they related well allowing them to have some input and rest when they felt fatigued. On the contrary, coaches who adopt a performance-oriented environment in their training have a detrimental effect on the athletes, as success is defined by superior outcomes over others, where failure is avoided. Studies (Bailey, Cope & Pearce, 2013; Brinton, Hill & Ward, 2017; Carlman, Wagnsson & Patriksson, 2013) have shown that some athletes have dropped out of competitive sports because of the negative influence the coaches had on them. Rottensteiner, Laasko and Pihlaja (2013) conducted a study among Finish junior athletes (mean age range 15 to 16 years). The study comprised 535 athletes (Male= 286; Female = 249) who had terminated their participation in various team sports (Soccer=397; Ice Hockey= 88; Basketball = 50). A questionnaire of Reasons for Attrition (QRA) with a three-point Likert scale was used to identify reasons for withdrawing from sports. Among other reasons stated, the influence of significant others was also found to significantly influence withdrawing from sports.

The Coach was ranked as the most influencing person ($\bar{x}$=2.17) in deciding to withdraw from sports, teammates ($\bar{x}$= 1.87) and friends ($\bar{x}$= 1.79) were also found to play a significant role. Parents, siblings and boy/girlfriend were not so influential in the decision-making of whether to withdraw from sports or not. Whereas coaching is a profession where the coaches receive income from coaching athletes and higher income to coaches being associated with teams that excel. This has resulted in some coaches focusing on winning other than developing the athletes, where athletes are pushed to limits they can no longer handle, hence dropping off from the sport. This has been attributed to early burnout, especially among young athletes, as their bodies can no longer handle the strenuous training regime any more (Cassidy, 2008; Brenner, 2016). Negative feedback from the coach in situations where athletes do not excel has also led to some athletes quitting the sport (Martin, Rocca, Cayanus & Weber, 2009; Zach & Furman, 2022). Athletes being kept out of a game or for a season for a mistake they did in a previous game, may end up driving away the athletes from the sport (Chad, 2015). The focus by some coaches on sporting skills and tactics with holistic development of the athlete is given little importance and has been attributed largely to most coaching courses that focus on the skills and tactics of the sports. Coatsworth and Conroy (2009) did a study to explore the relationship between coaching climate as perceived by swimmers and how it affected their participation in the sport. The respondents were 119 swimmers (40 boys; 77 girls; 2 did not report their gender), in a community-based swim league with a mean age range of 10-17 years. A nine-item Coaches Autonomy Support Questionnaire (CASQ) was used to collect the information from the swimmers. The study found that coaches influence athletes' experiences and their self-perception about their abilities through the feedback they give the athletes. Coaches, who give praise for the effort and attitude of an athlete rather than solely for

performance, foster a supportive climate for the athlete, hence continued motivation and consequently continued participation in the sports.

As children grow, their circle of influencers also grows, including their friends whom they get acquainted with, prevalently in their teens and adolescence (Salvy, Roemmich, Bowker, Romero, Stadler & Epstein, 2009). Friends play a significant role in influencing choices of activities, with the influence found to be more among adolescents, who feel the need to "fit in" with their peers (Tome, de Matos, Simoes, Camacho & AlvesDiniz, 2012). They engage in activities because their friends do and also provide an opportunity for them to meet with their friends. Norms and behaviours of youth athletes are influenced greatly by peers (Graupensperger et al, 2018). Positive peer interactions in sports by athletes increases the likelihood of remaining in sports as an athlete will put in as much effort as they see their peer do (Crozier & Spink, 2018). Increased social connectedness that athletes get from their friends increases persistence in the sport as peers have a motivating influence. Companionship opportunities that sports offer provide a conducive environment for one to want to be around their friends. Athletes in a team with their friends are more likely to stay in the sport as their friends provide support, approval, and affection.

In a study by Raabe, Zakrajskek & Readdy (2016) among swimmers, the findings showed the value of peers in enhancing participation and not withdrawing from sports. Eight swimmers (5 females and 3 males) with a mean age of 19.75 years, were conveniently sampled from the university swimming team that participated in the National Collegiate Athletic Association (NCAA). The swimmers did not withdraw from swimming as they felt their teammates motivated praise and recognition that made them feel the need to enhance their competence and stay on in the sport. They indicated that their teammates also encouraged them through strenuous training

sessions and the peer coaching sessions made them have some explicit control that in turn influenced their commitment to the sport. The feeling of acceptance within the team and verbalized feedback from their teammates increased their desire to continue being in the team. Friends play the role of reinforcement and motivation through their collaborative behaviour and evaluative communication. Athletes have a feeling of greater competence from the views of their peers than any other source (Tome, de Matos, Simoes, Camacho & AlvesDiniz, 2012). Practicing together and learning from peers has been rated higher when an athlete receives advice and assistance from a fellow athlete in the team (Allender et al, 2006).

Whereas the aforementioned studies have evaluated the influence of significant others among European and American athletes, the current study sought to examine the influence of social attributes in the context of significant others, among them parents, coaches, and friends on attrition among competitive swimmers in Kenya.

2.6Influence of Structural Attributes on Sports

The structural factors assessed in this study include time set for sports versus academics, facilities, sponsorship and funding, incentives and the selection process of athletes into teams to represent the country.

2.6.1 Academic load and Sports Attrition

Children and learners who take up Physical Education (PE) classes and are engaged in sports for recreation at an early age consistently have been found to most likely take up a sporting or physical activity later even into their adulthood (Biddle & Mutrie, 2008). Similarly (Jurišin, Malčić & Kostović ,2017) observed that students in primary school have a positive attitude towards PE

classes and sports engagement in school due to their natural nature of wanting to play and the fact that PE does not impose pressure on the student to excel as it is not examinable.

Time constraint has been stated as one of the frequent causes of reduced participation and attrition in sports (Wetton, Radley, Jones & Pearce, 2013; Bauman, Reis, Sallis, Wells, Loos & Martin, 2012; Armentrout & Kamphoff, 2011). The respondents in these studies indicated that timetable schedules do not favour engagement in sports as adequately as they would like to, as lessons begin very early and also have evening and weekend classes scheduled. This was prevalent in higher classes in primary and secondary schools as students near national examination classes. Academic structural programmes within educational institutions have been stated by many athletes and students as a constraint for their decline in participation in sports. The starting and ending time of academic classes does not favour them to participate in sports as classes start as early as 7 am or earlier and end after 6 pm, hence not leaving any time for play as they have to travel home. Jago and Baranowski (2004) established that most schools were under pressure to raise academic performance thus time that would otherwise be devoted to sports and other extra-curricular activities that are done before and after school is redacted from the curriculum.

The constraint of time has also been cited by students at tertiary institutions, where lectures clash with training time, unstable academic schedules, and numerous assignments that have to be done within the stipulated time (Oyewumi, Dansu & Sunmonu, 2011). A study undertaken by Kimberly (2015), set out to establish reasons why female university students drop out of sports at the University of Wales (United Kingdom). This was a qualitative study (semi-structured interview) with 8 female student respondents with an age range of 18-22 years in the team (6 team sports) and individual (2 in individual sports) sports at the university. The academic workload was cited as one of the main reasons among other reasons (lack of financial support, access to sports

facilities, emphasis by the coach on winning, and no longer having fun) as to why the respondents withdrew from their sport, 88.5 % of the respondents found balancing academics alongside training in sports extremely difficult and opted to drop the sport as they viewed their academics more important for their future career.

Abdelghaffar, Hicham, Siham, Samira and Youness (2019) in their study of school-age adolescent Moroccans aged between 14- 16 years on barriers and facilitators of physical activity found time constraints to be a significant barrier for the adolescents. The study comprised two middle schools, one representing advantaged and the other disadvantaged socio-economic levels. There were 100 respondents, 56 of whom were students, 26 parents and 18 teachers; they were divided into 17 focus groups, 8 focus groups for students, 5 for parents and 4 for teachers. Time constraint related to academics was stated as one of the barriers to decline in participation in sports, the student respondents reported that they had private tuition classes scheduled especially among those from advantaged socio-economic levels as their parents could afford and preferred paying for their classes other than allowing them to remain in school and play or pay for them to be coached a sport of their choice. This was due to the emphasis being placed on academic performance compared to performance in sports.

Craike, Symons and Zimmerman (2009) in their research on why females drop out of sports and physical activities, found academic load as one of the conflicting reasons that deter them from participating. The study used a survey research design among schools in Melbourne, Australia. The study involved 10 schools representing different social economic statuses and also categories of religion-based, independent, and government schools. Ten teachers of physical education were interviewed and female students from year 7 (1st year of secondary) and year 11 (senior year of secondary) from each of the 10 sampled schools. A questionnaire and interview focus groups were

used. Year 11 students stated academics as one of the reasons they dropped out, as some cited their academic workload being too much to be able to fit in any other club or extracurricular activity. Others blamed it on their parents who forced them to reduce their participation in sports to concentrate on academics. The physical education teachers stated that schools were increasingly under pressure to produce high academically achieving students since the schools are ranked according to their academic achievement, therefore a decline in focus on non-academic related activities in school, leading to reduced participation in sports.

Many studies have shown engagement in sports has a positive influence on academic performance (Crutcher, 2018; Stucko, 2018; Bradley & Conway, 2016; Zayas, 2018; Foye, 2018; Dyer, Krisjansson, Mann, Smith & Allegrante, 2017). However, no causal relationship has been established as to whether the students already engaged in sports were already academically endowed and did not require much time to read or do assignments. Similarly, there are studies (Schultz, 2017; Yeung 2015; Ayers, Pazmino-Cevallos, & Dubose, 2012; Foster et al., 2015; Geisner, Grossbard, Tollison & Larimer, 2012; Fredricks, 2011) that have shown engagement in sports has a negative influence on academic performance and again no causal relationship has been established, as there may be other factors such as students were academically challenged and chose to take up sports for self-identity in the institutions or it is the intense level of training and frequent absenteeism from school to attend competitions that result in declined performance in their academics. Equally, some studies have found participating in sports not to have any influence on academic performance (Pickens, 2020; Chen, Mason, Middleton & Salazar, 2013).

Despite these contradicting findings on sports participation about academic performance, these studies have established the values that sports participation has the potential to impact students such as teamwork, respect, persistence and acceptance of failure or success modestly. Thus a

balance between sports and academics is important so that children have holistic development. Class attendance was higher among students involved in sports as they looked forward to going to school so that they could participate in the sports they liked or had been selected to represent the school. Sekambe and Bagaya (2012) study among university students of Ndejje University in Uganda, found that student-athletes had fewer days of absenteeism from school compared to non-athlete students. The study incorporated 90 students (44 male and 46 female) engaged in various both outdoor and indoor sports. A self-administered questionnaire was used to collect data from the respondents, where 82.2% of the respondents stated that their class attendance was good, with a mean score of 4.33 compared to the average index mean score for students' involvement in academic activities which was 4.1. Similarly, 77.8% and 64.7 % of the respondents agreed that their completion of class assignments and their course programmes respectively was timely, thus sports participation did not have negative effects on the students' academic activities as they were able to balance the two.

In Kenya, PE is a mandatory subject in primary and secondary school that should be taught and timetabled, with a set guideline of the number of hours per week for each year group (https://educationnews.co.ke/2021/06/28/pe-now-compulsory-and-examinable/). Physical education is a mandatory subject taught and examined in all primary teacher training colleges to ensure the teachers that go to teach in primary schools are equipped with the skills and knowledge in PE. A study undertaken by Gitonga, Andanje, Wanderi and Bailasha (2012) among 132 trainees in their final year of study from 17 public teacher training colleges, indicated that the majority (80.3%, n=106) of the respondents had a positive attitude towards the subject. Despite this finding, over the years the subject has not been given much recognition and neither do the education ministry officials monitor to ensure that the directive is followed. The study construed that this

was contributed by lack of promotion of PE teachers as it is not examinable and therefore difficult to demonstrate performance in the subject, thus teachers opting to concentrate on other subjects that can be evaluated. Despite studies (Tierney, 2013; Muriithi, Karuku & Nyaga, 2020) that have shown ranking students and schools based on academic performance, has a negative effect on other areas. The Kenyan education system has continued equating excellence only with academic performance as schools are ranked based on their mean score as this attracts more students and elevates the status of the school. This is evidenced by the attention that children and schools receive from the media every time national results for primary and secondary schools are released (Nerves, Pereira & Nata, 2014). Children and their parents are featured during prime time television to celebrate their excellent performance (Muriithi, Karuku & Nyaga, 2020), this exhibits the extent to which academics are prioritized in Kenyan schools over other co-curricular activities such as sports, drama, and music. Therefore teachers conveniently take up PE lessons and Games time to teach or do revision in other subjects. This in the long run has made learners not engage in PE sports and also not see its value. Despite the Ministry of Education banning tuition that was done on weekends and early morning or evening classes in 2008 (http://news.bbc.co.uk/2/hi/7558078.stm), this still goes on in many schools as parents are coerced to even pay for these extra classes (Thuo, 2013), leaving no time for the learners to engage in any sports as these are the times that they would otherwise be involved in participating in sports. With this background, it is therefore inevitable that most schools that follow the Kenyan educational curriculum would be inclined towards academic performance and neglect sports and other extra-curricular activities in the schools, more so among the students who are about to do national exams. Students are given enormous assignments that take up most of their time, leaving very little time for them to engage in any other extra curriculum activities such as sports. Schools continue denying

learners opportunities to take part in physical education classes and sports so that they spend time in “academic” subjects, thus their participation, time for adequate training and opportunities to compete decline (Sirimba, 2015).

Academic success is regarded widely as the major indicator of success in Kenya (Kamau, 2021; Ongonga, Okwara & Okello, 2010). This has been attributed to the societal culture that has elevated academic excellence with high grades as the only measure of a learner’s, teacher’s and school’s achievement. However, with the new curriculum that has been in implementation since 2018 referred to as the Competency-Based Curriculum (CBC), PE was made an examinable subject to make it more recognized (Hezron, 2021). Whereas most of these studies (Pickens, 2020; Crutcher, 2018; Stucko, 2018; Dyer, Krisjansson, Mann, Smith &Allegrante, 2017; Schultz, 2017; Bradley & Conway, 2016; Zayas, 2018; Foye, 2018; Yeung 2015; Ayers, Pazmino-Cevallos, & Dubose, 2012; Foster et al, 2015; Chen, Mason, Middleton & Salazar, 2013; Geisner, Grossbard, Tollison & Larimer, 2012; Fredricks, 2011) focused on athletes within European countries, where each country has one system of education, the current study sought to elicit views from former and current competitive swimmers on the influence of academics on attrition in swimming, across gender, within different academic levels and systems of education offered in Kenya.

2.6.2 Availability of Sports Facilities and Equipment

The level of sports participation is related to facilities and equipment that are readily available and accessible (Basterfield, Gardner, Pearce, Reilly, 2016; Lim, Warner, Dixon, Berg, Kim & Newhouse-Bailey, 2011; Boiche & Sarrazin, 2009; Haug, Torsheim, Sallis & Samdal, 2008). Though facility requirements differ from sport to sport, individuals tend to take up sports so that they have access to the facilities and equipment regularly, conveniently and affordably (Kumar,

2018; Hallmann, Wicker, Breuer & Schönherr, 2012). In addition to adequate provision of sporting infrastructure, the state and conditions of the sports facilities must be well maintained as unkempt facilities discourage potential users (Kumar, 2018; Anokye, Pokhrel & Fox-Rushby, 2014; Gallardo, Burillo, Garcıa-Tascon & Salinero, 2009). Casper, Bocarro, Kantes and Floyd (2011) examined perceived constraints of participation in sports by adolescents in schools, the study involved 4 schools in the southeastern United States in 6th- 8th grade. A total of 2,465 students (50% male; 50% female) completed a 5-point Likert questionnaire (5 = all the time; 4 = most of the time; 3 = sometimes; 2 = not really; 1 = not at all), where the respondents indicated level to which they agreed the constraints stopped them from participating in sports. Crowded, low-quality and unkempt sports facilities were ranked 3rd and this discouraged them from participating in sports.

The availability of these sporting facilities is influenced by space and funds available as some require more money and space to build compared to others, as constructing a swimming pool or indoor court would be more costly than preparing a soccer field, given the same space. Similarly, constructing a netball field would require less space than a standard running track field. Equipment required for the specific sport influences the participation rate of individuals as a game like golf would require equipment (golf clubs) that is generally more costly compared to handball which would majorly require the balls. Maintenance of the sporting facility contributes to the availability of facilities as where facilities are more expensive to maintain like swimming pools compared to open fields, they may be fewer. Some of the sports availed within the different sporting infrastructure require personalized training and payment to use the facility, this also has been found to restrict individuals who may want to be engaged in the specific sport. Sporting facilities that have restrictions on opening and closing hours like most swimming pools, golf courses, and tennis

courts do limit participation, as individuals can only patronize the facility within the time it is open or sometimes have to make reservations prior (Hallmann , Wicker , Breuer & Schönherr , 2012).

Insufficient sporting infrastructure is a contributing factor to the decline in sports participation (Lim, Warner, Dixon, Berg, Kim & Newhouse-Bailey, 2011). Mthethwa (2017) in his study among university students of Kwazulu- Natal (in South Africa), found structural factors (facilities) were a major constraint for non-participation in sports. The survey was descriptive research that targeted resident university students of Kwazulu- Natal University. The study sample was 199 respondents (68% male and 32% female), 40% of the respondents felt that the facilities were a major constraint, citing a lack of adequate and readily available facilities, as the few that were available were not well maintained or were congested, hence deterring them to use.

In another study done by Hashim (2012) among university students, the researcher found structural factors (facilities) as a major barrier that influenced participation in sports. This was a cross-sectional study that examined the difference in levels of perceived barriers to sports participation among American/local and International students in Spring Field College, United States of America. 50 respondents (32 local/American students and 18 International students) were randomly sampled. The convenience of facilities was placed highest among both categories of respondents, though slightly higher among international students than among American/local students as a barrier that influences participation in sports. Overcrowding in facilities was also cited among other reasons for discouraging participation in sports, being higher among international students compared to American/local students. Facilities were found to significantly influence the decision to participate in sports or not.

Jenkinson and Benson (2010) did a survey study to access perceived barriers to providing PE in secondary schools (years 7 to 12, which has an average age of 12 to 18 years) in Victorian State,

Australia. The study respondents were 115(Male = 62; Female= 53) PE teachers, from 115 schools (111 schools were co-educational and 4 were girls' only schools). The schools were from metropolitan areas (81), rural (29), and remote areas (5). A questionnaire was used where the teachers were asked to rank the most (10) to least (1) influential factors that they perceived were barriers that restricted their students from participating and being active in sports. The three highest-ranked barriers identified by the teachers were; access to facilities had a mean, $\bar{x} = 8.10$, suitable teaching space at $\bar{x}= 7.95$, and lack of adequate equipment at $\bar{x}= 7.37$.

Hallmann, Wicker and Breuer (2012) in a study to assess the influence of facilities on participation in sports within a community found that individuals preferred engaging in sports that had facilities within their proximities and were accessible. Access to sports facilities is related to geographical and economic proximity and is positively associated with participation in the respective sport within schools and communities. The economic aspect of proximity refers to the cost implication to access the facility in terms of any payment required. Economic accessibility has been found to influence an individual's choice of sport to participate in, especially among middle and low-income groups (Anokye, Pokhrel & Fox-Rushby, 2014). Where the cost to use the facility increases, the demand for the facility could decline, as participation is driven by pricing which plays an important factor.

Hallmann, Wicker, Breuer and Schüttoff (2011) analyzed the influence of geographical accessibility of sporting facilities, which is related to where the facility is located in terms of distance to the venue from where one is located. Time resource is associated with geographical proximity convenience, as time invested to travel to the facility has been found to influence the choice of sport, where an individual does not have to travel far, they are likely to choose the sports offered in the facility they can access conveniently. Hallmann, Wicker, Breuer and Schüttoff

(2011) related geographical proximity to security and safety of the area within which the facility is located, where an individual does not feel safe to go due to the crime in the area, they are likely not to. They prefer facilities that have adequate lighting and adequate security surveillance. There should be adequate various and safe modes of transport to the sporting facility which include walking, cycling, or driving to the venue. This encourages more participants as it is accessible to more people. Adequate and safe space for parking vehicles and bicycles at the venue of the facility also enhances the participation rate of individuals within a sporting facility. Hallmann, Wicker, Breuer and Schüttoff (2011) in their study to examine the interdependency of sports supply and demand found that the majority of residents engaged in sports that were accessible to them, both economically and geographically. The study respondents were inhabitants of four urban areas in Germany, from different economic statuses. Participation in jogging/running, swimming, soccer, and tennis was assessed within the four regions using a computerized telephone interview. The majority of the respondents (21%) indicated that they jogged/ran regularly as there were pathways within their home areas that they could access at no cost, similarly, participation in soccer was regular as use of the open fields was not restricted. However, swimming and tennis were done only once a week by 14 % and 4% of the respondents respectively with the respondents indicating restriction of opening hours of the swimming pool and tennis court limiting their frequency. The high cost required to patron the tennis court, prior booking, equipment required (racket and tennis ball), and playing partner/s also restricted many of the respondents from further participating in tennis.

Sports infrastructure development may be influenced by individuals' or community interest in an area, similarly availing of sporting infrastructure can influence community interest in a specific sport (Wicker, Hallmann & Breuer, 2013; Green & Collins, 2008). Having sports facilities that

are flexible to accommodate all ages and economic groups is likely to increase the sports participation rate as more people are catered for. A positive relationship exists between the number of sports clubs in an area and the participation rate of residents in the area, however, too many users in one facility have also been found to discourage potential users due to overcrowding, as would be the case in a swimming pool or a jogging track (Gallardo, Burillo, Garcıa-Tascon & Salinero, 2009). Schools and tertiary institutions play a role in increasing frequency and creating a culture of participation in sports for individuals as this is where children and young people spend most of their time. Institutions that provide adequate sports facilities contribute to increased participation in sports among learners (Eime, Payne, Casey & Harvey, 2010; Wicker, Breuer & Pawlowski, 2009). Schools with adequate sporting facilities ultimately influence the community around them, as some schools avail the facilities to the community at a minimal fee thus encouraging those around to participate in sports.

A study by Kumar (2018) assessed how the provision of sports facilities by the United Kingdom (UK) government impacted the physical and sport behaviour of individuals. The study examined the effect of the UK's sports policy that focused on increasing the population's participation rate in sports and physical activity by increasing the provision of sports facilities. The largest influence on the choice of sport undertaken was what was offered by the sporting facilities within the residents' access. The government has prioritized the sports sector due to the health benefits sports have on an individual and the nation at large, as has been accentuated by international organizations like the International Society for Physical Activity and Health (ISPAH). Governments have been implored to have public policies that emphasize the need for sports to improve on health and well-being of all. The UK sports strategy emphasizes the need to increase sports participation to achieve positive outcomes from sports participation. The UK government

has incorporated resources also from private, co-owned, and public entities to ensure sports opportunities are provided through sports infrastructure development in different regions. The government sports policies have enabled structured provision and management of sports facilities through bodies and agencies such as Sport England and UK Sport which are responsible for the development and provision of sports from grass root to the National level. Capital funding is provided to do need assessment, construct and maintain sporting infrastructure within educational institutions and sporting clubs. The bodies are tasked with advising educational institutions on how to manage and open up their facilities to the surrounding community and similarly, how the sports clubs can open up their facilities to educational institutions to promote and encourage participation in sports. The UK government has 46 Non-Governmental Bodies (NGB) with each representing a specific sport. The NGBs organize and promote the construction of sporting facilities as per the needs of the local community, thus avoiding having an over-concentration or under-representation of a sport due to a lack of facilities. The intentional government intervention in the provision of planned sports facility development saw the increase of 500 swimming pools and 450 indoor sports centres between 1971 and 1981. Thus the role the local government has played in investing in sporting infrastructure has contributed to making the UK one of the leading countries in participation rates of varied sports.

Geographical regions and institutions have been known to be the anchorage of players in certain sports (Sniderman, 2010), thus concentrating on facilities for that sport, however despite certain regions being known to excel or produce athletes of specific sports, the areas and schools do not have adequate or any facility that they can use for training of that particular sports, as is the case with athletics in Kenya, where only a few places have standard running track fields where athletes can train (Rutto, 2021). Similarly, because of lack of space and sometimes lack of planning policies

or corruption, some urban areas do not have space set aside with open fields where those interested in sports can participate (Rutto, 2021). In most third-world countries that are struggling economically, sporting infrastructure is not given much priority, thus denying many potential athletes opportunities. However, in Kenya, there has been a concerted effort since the 2013 general elections, where the government promised to build more standard stadiums (Magak, 2017).

The aforementioned studies focused on the availability of sporting facilities in general, the current study sought to educe views from the swimming coaches and athletes on the influence of availability of swimming pools and training equipment on attrition among competitive swimmers in Kenya.

2.6. 3 Funding and Sponsorship in Sports

Sports development avails opportunities for athletes to improve their personal quality of life and by extension the country's (Silva, Monteiro & Sobreiro, 2020). As sports are becoming more professionalized, athletes are taking up sports as a career to earn a living. This professionalization of sports is possible through adequate funding and sponsorship that various sports and championships receive, with more athletes being attracted to sports that have more sponsorship and funding (Sotiriadou & Shilbury, 2013). The national culture of sports in a country to some extent determines which sports attract more sponsors and funding as governments tend to concentrate more funds in areas they feel their chances of excelling are higher (Lee & Ross, 2012). This also attracts more sponsors as a way to market themselves as the sport is likely to have more viewership. This interest in specific sports more than others is measured by the fan base of the sports which is determined by the sporting culture and performance of the sport (Mastromartino, Qian, Wang & Zhang, 2020). Where athletes and teams have excelled, the media begins to give more coverage hence attracting a larger citizenry and equivocally attracting more sponsors.

Sponsors of sports are also selective as they may be targeting a specific demographic of the population when they sponsor a specific sport, for example, golf and tennis are generally played by high-income populations, hence the sponsors of such sports would be targeting that particular high-income end of the population (Hallmann, Wicker, Breuer & Schüttoff ,2011). Despite this intentional funding of some sports more than others, adequate funds allow for increased participation in sports translating to an increased number of athletes in the sports. Some sponsors choose to fund individual athletes while others sponsor teams in terms of providing finances to facilitate the individuals' train and participation in competitions. The finances include money to pay the training personnel, purchase training equipment, pay for the use of training facilities, and allowances to pay the players as a salary. There is a direct association between sports sponsorship and funding with increased participation as more people can pursue sports they would like to undertake (Mthethwa, 2017; Hallmann, Wicker, Breuer & Schönherr, 2012). Poor leadership in some federations has led to decreased input by sponsors to fund the sports which results in athletes being deprived of benefits associated with participating and competing in the sports at national and international levels (Musonye, 2017). Governments that do not have policies outlined on the national structure of sports funding risk a decline in sports (Giannoulakis, Papadimitriou, Alexandris & Brgoch 2017).

In Kenya, there exists the National sports fund enacted through the Sports Act 2013, the fund is encapsulated within the Ministry of Sports whose core mandate is to raise funds to facilitate the development and growth of sports in Kenya. The funds are to be utilized to train required sports personnel and boost the cash award scheme to enhance competitiveness among Kenyan athletes (https://sportsheritage.go.ke/sports/sports-arts-social-development-fund/). This government's initiative of funding is to elevate sports in the country as a result of the income opportunities that

sports have been seen to create for athletes, coaches, and related stakeholders. The government has also a budget set aside under the Ministry of Sports to develop and facilitate sports competitions (Ayodi, 2020). However, economic constraints in a country justify reduced funding as the country reduces the budget for sports to cater to other more crucial sectors like health or education, and sometimes most of the funding is focused on a few team sports, leaving other sports behind. (Abdelghaffar, Hicham, Siham, Samira & Youness, 2019). Soccer in Kenya has been known to attract and fill the largest stadium (Kasarani) with a sitting capacity of 60,000, which no other sport has ever done. In league matches played frequently, soccer attracts an average of 5,000-7,000 fans (Mutahi, 2019). With this large fan base, the country is bound to concentrate more funds on soccer compared to other sports. However, lack of transparency, alleged misappropriation of funds, and squabbles within some of the sporting federations has contributed to the government and even private sponsors, not funding and sponsoring the federations (Musonye, 2017). This has left the federations to look for sponsors to fund their sports, with most private sponsors opting to sponsor sports that have large crowds as this also markets them. "Minor" sports are therefore largely left to fund their competitions, resulting in making the sport expensive thus having fewer competitors and slow growth of the sport (Betway Kenya, 2018). In Kenya, swimming is among the sports that may be categorized as a minor sport as it is not a crowd puller, therefore does not attract many sponsors hence those who participate are only those who are self-sponsored. Similarly, due to a lack of sponsors, the awards are not as financially attractive as compared to other "major" sports this also does not make the sport attractive to many athletes, thus not having many competitive swimmers (Xinhua, 2013). Funding and sponsorship enable more structures to be set up that sufficiently equip running of the various sports thus increasing participation and transforming participants into competitive players and athletes. These structures may include

setting up sporting academies to enable athletes to train conveniently, coaching, and refresher courses for coaches to ensure they get the latest coaching techniques for their respective sports.

Development of sports is majorly left to the federations, which have to look for sponsors to be able to develop their sports at the local level to tap talent at the grass root. Without well-laid-down structures to be able to tap and develop sporting talent, the continuity, and improvement in the various sports decline. Soccer and rugby are among the major team sports in Kenya that have some form of structure to enable players and nurture them from junior teams to senior teams (Nes, 2022). The funding that the team receives, facilitates competitions by sponsoring the awards and equipment, thus attracting more players. These sports attract more sponsors due to the media coverage they also get which is a result of performance and general interest in the sports (Kim, Trail & Magnusen, 2013). Sports that do not receive much media coverage are not known to many and sponsors would not be easily attracted to sports that do not have a lot of viewership, which is the case with the sport of swimming in Kenya (Nes, 2022; Xinhua, 2013).

The few international swimmers that Kenya has produced have largely been a product of self-sponsorship, only getting recognition after they have made it to the international realm without government support earlier in their career (Xinhua, 2013). This largely tasks the sporting federations to incur all the costs of hosting competitions which are passed on to the athletes, hence reducing the number of participants because of its cost. Hence the need to have more sponsors in such sports to get increased participation translates to increased competition.

Kiraguri (2007) undertook a study to assess the extent to which sponsorship contributes to sports development in Kenya. This was a descriptive census study that targeted all the sporting federations registered under the Kenya National Sports Council (KNSC). At the time of the study, there were 53 registered sports federations, however, 47 responded. An administrator in each

federation responded to the questionnaire administered, of the 47 respondents, 34 were male and 13 female and the largest age group percentage (49%) was in the 40- 49 years. Most of the federations (89.4%) received sponsorship in cash, while 78.7% of the federations indicated they received sponsorship in form of value in kind (equipment, uniform, and transport). The study found that most sponsorships to federations were materially based whereas long-term sponsorship of having training programmes for athletes and coaches and maintenance or building sporting facilities was not catered for. Federations and clubs were left to fund themselves, leading to fewer athletes, especially in sports like swimming and golf which required heavy investment in terms of facility construction and maintenance. The study established that lack of funding led to a decline at the national and international level and that lack of availability of funds did not allow for adequate preparation by athletes and hence poor performance in competitions.

In a study done among selected sports federations in Greece by Giannoulakis, Papadimitriou, Alexandris and Brgoch (2017), the findings outlined the impact of reduced government funding on sports performance. The study sought to explore the implications of austerity measures on strategies and operations of national sports federations in Greece. Nine sports federations (aquatics, athletics, handball, rowing, sailing, volleyball, canoe kayak, cycling and table tennis) were sampled. Board members, administrative staff, and national coaches in the selected federations were sampled to respond to interviews that were probing intending to assess issues and challenges that were associated with decreased government funding for sports. From 2004 to 2014, government funding for sports declined by 68.2%. This reduction led to a reduced number of participants and medals won in international games, from the Athens 2004 Olympic Games (participants were 426- 16 medals) to London 2012 Olympic Games (participants were 103- 2 medals). The study found a positive correlation between investment by the government to sports

federations and subsequent performance and success at international games. Limited resources resulted in fewer athletes participating in fewer regional and international competitions. The effects of reduced funding were negative to sports as some sports had declined in international rankings as a result of repetitive absence from prominent competitions, and reduced opportunities for athletes to get international exposure and improve their ranking. As a result of the reduced budget to federations, these federations took up measures that left out athletes that were from low-income backgrounds, as they could not afford the extra costs that the federations were taking up. Some of these costs included having gate entry charges for spectators; athletes paying participation fees to compete in sanctioned events locally, regionally, and internationally. The federations had to support themselves and pay up an annual fee to the government. These costs were passed on to the athletes who had to pay to be members of clubs that were recognized by the various sports federations. The federations were forced to rely on volunteer staff for administrative and technical issues, as there were no funds to pay them. These challenges had a negative impact on sports as fewer athletes were able to participate in the competitions, hence reducing the performance of teams.

Bamidele and Abu (2020) study comprising 500 subjects who responded to a structured questionnaire to elicit information on the influence of Nigerian schools sports federation funding in secondary schools in Nigeria observed that the federation did not provide adequate funds. This resulted in having fewer sports teachers compared to the large population of students, contributing to not having effective sports development in secondary schools. Most schools were also not able to attend and participate in competitions as they lacked facilitation in terms of transport. From the findings, the respondents indicated that the school sports federations did not significantly contribute to the funding of sports in Nigerian secondary schools. The study confirmed that

inadequate funds negatively contribute towards the effective development of sports as there were insufficient funds to recruit enough well-trained sports personnel.

Mwisukha and Mukolwe (2013) suggested practical policy solutions to finance sports in Kenyan public universities as they noted that universities were not adequately funded in sports. They stated that universities have to find other sources of generating finances to run their sports programmes effectively other than sports departments only relying on budgetary allocations from the university management. The paper outlines the need for universities to be able to package sports as a product that is attractive to sponsors, hence getting more funds. They conclude that universities should move away from dependence on management and instead find innovative ways of financing sports programmes to increase sports participation and consequently enhance competition. The current study sought to establish if the factors related to funding and sponsorship in sports discussed in these studies are similar and how they influence attrition in competitive swimming in Kenya.

2.6.4 Incentives and Awards for Athletes

Incentive motivation has been defined as the value placed and attached to the award and rewards being received as a result of the outcome of the action of an individual or group of individuals, such as in a team or organization that they have chosen to engage in (Tshube. Akpata & Irwin, 2012). Behaviour and attitude of an individual or organisation may be influenced by incentives and this, in turn, determine the extent to which one is motivated to work. Quality and value placed on the incentives determine whether the effort will increase or decrease. Whereas sports provide psychological benefits such as national recognition and honour and avenues for socialization, there are economic benefits also associated with sports, such as being able to provide the athlete or team with finances to be able to meet their daily living needs such as housing and shelter (Ongalo, 2014). Every athlete engages in a sport intending to excel and win as they better their performance

(Miquelon & Vallerand, 2008). The athlete expects to be rewarded for their achievement, with awards commensurate to their performance. Hence the reason why professional athletes in various sports choose what events to compete in. These incentives play a key role in motivating the athletes' performance and persistence in a sport and have also been found to direct and energize performance (Ongalo, 2014; Yavuz, 2004). Whereas motives for involvement in competitive sports are varied, the reasons revolve around both intrinsic and extrinsic factors (Ongalo, 2014; Tshube, Akpata & Irwin, 2012). These motives act as incentives to motivate the athlete to do their best with intention of receiving the award and reward they had hoped for. The value which the athlete places on the incentives determines the extent to which they will exert their effort to excel. If the athletes view and rate the incentive highly, they are likely to increase their effort. Athletes require both tangible and non-tangible incentives, tangible incentives that include financial benefits and non-tangible incentives that include fame and recognition. An incentive that is satisfying and rewarding to an individual will depend on their needs, values and expectations (Ongalo, 2014; Tshube, Akpata & Irwin, 2012). These values and needs are dependent on one's nationality setting, the value and set culture system. Where one's patriotism is highly valued and with it has related financial rewards, the athletes are more likely to only participate majorly in international competitions where they can display their flag for excellent performance. Contrary to this, if the athletes do not relate their winning to incentives they can get from their government or institutions, they are likely to participate in events purely for financial reasons, where they can make money to meet their daily needs. This has been the case in some countries where athletes have switched citizenship as the incentives and rewards they get from their adopted countries are more satisfying than those they receive from their "original" country. In the case of Kenya, there

have been athletes who have switched nationalities over the years majorly for financial incentives (Koigi, 2017; Njororai, 2012).

Ongalo (2014) in his study among male athletes in Kenya, found that incentives elicit some level of motivation for sports participation and performance. The purpose of the study was to analyze how the athletes valued selected incentives (employment opportunities, public recognition, monetary and material incentives, academic scholarships, medical care and insurance cover). The study was a descriptive survey that sampled 120 male athletes in six different sports, categorized as individual (swimming= 40; athletics =40), team (field hockey= 40; soccer = 40) and combat (karate= 40; boxing = 40), with their mean age 23.49 years. An extrinsic reinforcement value-rating questionnaire with a 5-point Likert scale was used to get responses from the athletes, on each of the selected incentives. Monetary reward was rated highest on incentive value (m=20.65, S.D = 2.83) followed by public recognition (m= 18.20, S.D. = 2.93) and employment opportunities (m= 13.5, S.D. =2.48). This indicates that a majority of the athletes were in the sport majorly for financial gain (monetary and employment). Across each of the three groups, the rating was different with team sports rating monetary rewards highest, followed by public recognition and least was free medical cover. For athletes in combat sports, they rated public recognition highest followed by employment opportunities and the least being free medical cover. Among athletes in individual sports, they rated public recognition highest, followed by employment opportunities and the least being free medical cover. The fact that the athletes did not value medical cover was of concern considering that injuries are prone in sports. However, the study related that finding to the fact that probably most may not have encountered serious medical conditions that warranted expensive medical attention. Though not found to be of significant value, academic scholarship scored highest among athletes that participated in team sports at $\bar{x}$= 9.62, followed by individual

sports at $\bar{x}$= 9.22, and ranked lowest by athletes in combat sports at $\bar{x}$= 8.85. The other five incentives were however found to be significant across the types of sports. The athletes valued incentives as a reinforcement of their performance.

Tshube, Akpata and Irwin (2012) examined the extent athletes are motivated by social and tangible incentives. The study respondents were 370 athletes (190 females and 180 males) comprising junior athletes (13-18 years) and elite athletes (19 years and above) from sports clubs in Botswana. The athletes were in various sports. A 4-point Likert scale questionnaire was used to assess the athletes' perception and the extent to which they valued and were motivated by these incentives, which included cars, scholarship awards, media coverage, and praise from leaders. Both social and non-monetary awards were found to be significant influencers in motivating the athletes across gender and age, however, the junior athletes had a lower mean compared to the elite athletes. Across the different types of sports, for social non-monetary incentives (media coverage), volleyball players reported the highest mean value at $\bar{x}$= 2.80 while boxing reported the least with a mean of $\bar{x}$= 1.85. For tangible non-monetary incentives (cars, uniform) basketball athletes reported the highest mean at $\bar{x}$= 3.21 while netball had the least at $\bar{x}$= 2.33. This study found that the athletes placed significant value on these incentives and they motivated them to continue being in sports and want to excel and win.

In a descriptive study survey done in Nigeria by Ekuri (2018) to investigate factors influencing high sports performance among athletes, the study respondents were 344 (156 athletes and 188 sports personnel) from Cross River State that participated in the National Sports Festival in Nigeria. From the findings, the student-athletes (92.3%) ranked academic scholarship as their preferred incentive followed by employment opportunities (78.2%) for their performance in sports. 55.1% of the student-athletes indicated that nothing was given for outstanding performance when

they excelled in sports and this made them feel not appreciated adequately. The sports personnel ranked promotion in their places of job (85.3%) and increment of salary (81.2%) as incentives for assisting teams and athletes to excel in their sports. The study however revealed that the lack of the stated incentives did not have a significant influence on the performance of the athletes.

Institutions, sports federations, and associations have structural frameworks in place that govern the different sports, setting out what is allowed and what is illegal (International Federations, 2022). These frameworks outline the structures within which the athletes are to operate in, defining their choices and implications. These structures include the rewarding and awarding schemes set out for the players and teams. The incentive schemes differ from one institution to the other and the laws that govern these institutions. Soccer being the most popular sport worldwide has well-laid-out structures that the public is made aware of that concern the players. These include the allowances or salaries that the international players receive monthly, sponsorship they receive from companies, and the "sale" of athletes from one club to another, all these being a form of incentive to the players (Muckle, 2020). Other sports that have well-laid-out structures that motivate and induce their athletes include basketball and American Football.

In Kenya, the incentive scheme is discriminatory and does not have laid-out structures and is left to individual clubs to motivate their players (Kipchumba & Chepyator-Thomson, 2015; Ongalo, 2014). Clubs and federations that are not able to get adequate sponsorship are in turn not able to adequately award and reward their players. This has resulted in some teams folding up as players stop playing for the team or players moving to other sports where they feel they may get better rewards. The Sportsman Of the Year Award (SOYA) started in Kenya in 2004 was the first organized form of an award scheme for Kenyan athletes, though the award does not have large cash rewards, it was the beginning of public recognition and honour being given to the athletes

(https://en.wikipedia.org/wiki/Kenyan_Sports_Personality_of_the_Year). Private companies in Kenya also have monthly awards to teams, individual athletes and even coaches, these awards are in the form of cash awards and tangible items that the companies promote like television sets and other gadgets. It was in 2019 that the Kenyan government started awarding athletes with cash prizes for each medal won in these games all athletes who had represented the country in the continent (Africa Games), Commonwealth, Olympics, and other sporting events since 2010, (https://www.the-star.co.ke/sports/2019-06-01-state-awards-athletes-after-nine-year-wait/; https://www.president.go.ke/2019/05/31/president-kenyatta-honours-kenyas-elite-athletes-with-shs-181-million-cash-award/). It is imperative to establish the value the athletes' place on the awards and rewards they receive so that they are not abused by the recipients if they do not like them. Preference for the various kinds of incentives has been found to have some correlation with the age of the swimmer, with younger athletes (below 12 years) being content with parental approval and peer recognition, especially in institutional setups (Perlus, 2009). Whereas the need for public recognition does not disappear with age, as evidenced in a study by Ongalo (2014), the emphasis shifts to peer recognition within the adolescent athlete and having tangible rewards. The young adult athlete where most elite athletes fall under the age bracket of 18 to 27 years, in addition to public recognition, now prefers longer-term tangible rewards like some form of income, employment, and academic scholarships that can accommodate their studies and sports training. This has played a key role in maintaining Kenya's dominance in athletics as the defence force institutions (military, police and prisons) in Kenya hire athletes who excel, this way ensuring they cater to the financial needs of the athletes while still allowing them to train and compete. Athletics (running) is the only individual sport in Kenya where athletes have an incentive of employment opportunities and hence a source of income (Ongalo, 2014). Similarly, the international athletic

federation has organized structures of events that attract many sponsors and thus attract huge sums of money and athletes can compete for the cash rewards, such as marathons and the diamond league (Njororai, 2012). This has contributed to the persistence of elite Kenyan athletes as they value the incentives they will get if they perform well. As a result, the athletes get public recognition because of the airtime they get as most local television and radio stations will have sports news about the athletes. Similarly, soccer in Kenya attracts large crowds and hence the players get public recognition for clubs that have sponsorship and can maintain and attract players with a monthly allowance. These are incentives that attract athletes to the sport and drive them to perform well. On the contrary, swimming in Kenya is seen as a recreational activity and is frequented by those who can afford to pay to access use of a swimming pool, similarly, those who take up swimming as a competitive sport are few (Xinhua, 2013). The sport does not attract a huge crowd, hence limited sponsorship and awards recipients receive are in form of medals. Because of the minimal number that watches the competitions, the media coverage is equally not much, hence swimmers do not get public recognition like other athletes in other sports. With this in view, the current study sought to establish the views of Kenyan competitive swimmers, former competitive swimmers, and coaches, on whether the awards they receive or received motivated them to continue competing. The value they placed on the awards they received and if the awards motivated them adequately to continue performing well.

2.6.5 Selection Process into National Sports Teams

The desire to win and gain from excellence attained in competitions at different levels of sports and game championships necessitates that the best athletes are selected for these competitions. This task of selecting athletes to represent a team, institution, or country is mandated to personnel who include sports managers, coaches, and federation officials (Mwisukha & Mukolwe, 2013).

The personnel are expected to select athletes who rightly deserve a place and are accorded a chance. However, the process of selecting athletes is challenging as various stakeholders have their interests (Transparency International Report, 2015). The parents want their children selected as this will provide their children with more opportunities academically through education opportunities and scholarships. Similarly, the coaches would like the athletes they coach to be selected as this will give them recognition of their competence in coaching ability, thus publicizing themselves and probably being selected as the team coach. The government officials in various federations would benefit financially from the allowances they receive for travelling, therefore dropping off or reducing the number of athletes or technical officials so that they get opportunities to travel (Mwisukha & Mukolwe, 2013; Mwisukha, Omotayo & Rintaungu, 2003). These factors have contributed to non-deserving athletes and government officials being included in teams resulting in some athletes discontinuing sports due to the unfair selection process.

Mwisukha, Omotayo and Rintaungu, (2003), cited corruption through bribery as one of the reasons of having undeserving athletes and officials being called up to some national teams. The flawed selection process has prompted conflicts and even legal tussles involving concerned parties and has resulted in denying teams/countries chances of victory. Related adverse effects due to a flawed selection process have resulted in athletes losing interest in the sports they were engaged in. It is therefore crucial that the selection criteria used be objective, fair and unbiased. Regardless of the format used, which may include meeting set standards, ranking, or issuing wild cards, the athletes left out should feel that the format used was genuine and gives them a fair chance of being selected. If the athletes feel that they were unfairly left out, they may discontinue the sport as they view their effort and performance as not recompensed. Objectivity should prevail with personal interests

being put aside so that only the best and most deserving athletes are selected as this translates to the best performance by the teams.

Andronikos, Westbury and Martindale (2019) in their study that investigated factors contributing to unsuccessful transitions of athletes from junior to senior athletes found environmental and individual factors, which included early success, win-focused environment, challenges of combining studies with sports; lack of support and negative impact of different stakeholders. The sample consisted of 6 Greek participants (3 males and 3 females) who had competed at the junior level and dropped out within the first 18 months of their senior year in school. The age range of the athletes was 23-27 years. The athletes were from various sports; basketball, swimming, and soccer. A qualitative approach was used through probing questions linked to the research objectives. The participants reported that the negative impact of the stakeholders was partly in the manner athletes were selected to be part of the national youth teams. They reported that some of the athletes were not selected on merit but instead depending on their coach's or parent's connection and network with the national federation. They were of the view that people who made decisions for the athletes had personal agendas, like promoting their public relations and facilitating their networks without facilitating equal opportunities for the athletes. They reported that the influential people in making decisions about athletes were bribed so that they could put aside talented athletes and instead choose others from specific clubs. This made many athletes feel unmotivated and withdrew from sports.

Johansson and Fahlén (2017) evaluated the selection process of top-level skiing and soccer athletes, the respondents were 14 head coaches from different countries, with six in skiing and eight in soccer. All the skiing coaches were in charge of the national teams while those in soccer were either club coaches or national team coaches. They responded to a questionnaire interview

session to establish the criteria and process of recruitment, the outcome, and the reaction of players after the selection. The selection process among soccer players posed more challenges as players play different roles in the field, unlike skiing which is largely based on an individual's performance. Though the soccer coaches considered soccer skills of the players when selecting the players, they also observed the character and behaviour of the players, which was a subjective criterion that could be disputed. They also articulated outside influence by other stakeholders on their selection of players. Results-based criteria (ranking) was used majorly to select players in skiing with age being generally used as a criterion to allow for younger players to be selected. However, experienced players were often selected over younger less experienced players. Some of the coaches found the ranking system biased towards those who were not financially privileged, since, for one's ranking to rate high, they had to compete in several recognized competitions to get points, with the international-based championships having higher ranking points. The skiing coaches also stated that they were under no pressure to select certain athletes due to the wishes of the federation officials or other stakeholders. Their decision of the players they selected was usually not disputed, majorly only financial reasons resulting in the players they had selected being dropped, as the federations alluded to lack of funds. This effectuated in some athletes opting to transfer and play for other countries or clubs. To avoid athletes discontinuing sports or opting to relinquish their citizenship to other countries due to discontentment in the selection process, the study concluded that the selection process of athletes and players to various teams should be evaluated from time to time. This will improve the process so that athletes and coaches perceive that the most competent, qualified, and suitable athletes were selected.

Transparency International (TI) in their global corruption report of 2016 focusing on sports, outlines corruption cases in sports globally and how this has affected development in sports in

various countries. Among specific cases that have discussed the unfair selection of athletes has been in African countries (Kenya, Nigeria, Togo, Ghana, Zambia, Cameroon) among football players, where players were asked to part with some money to be selected in their national youth team. Corruption within federations has also been reported, with the discretion of selecting athletes for international games like the Olympics in category B (for athletes who do not meet qualifying times). Specifically, Malaysia has been mentioned for unfairly selecting athletes under wild cards, where the athletes selected are in most cases related to the selectors. This has left out better athletes, hence failing to motivate them and not giving new talent a chance to excel. The report cites bribery by parents of athletes, to federation officials so that their children are selected for academic sports scholarships overseas. This impedes talented athletes from a low economic background without an opportunity to further improve their skills.

The mechanism of selecting the best athletes should be effective, efficient and unbiased, to give equal opportunities to all who are capable of being on the team. The current study sought to establish if the selection criteria of competitive swimmers to represent Kenya regionally and internationally influences attrition of the swimmers.

2.7 Influence of Gender on Attrition in Sports

Physical activity rate and sports participation among females generally lag behind those of men and this has been attributed to among other factors, the way sport culture values and frames competition (Warner & Dixon, 2015). The sports culture assumes a masculine stereotypical approach that females should be aggressive and assertive to succeed. This view is seen to limit the attraction of females to competitive sports and dropping out, as they place greater importance on the social aspects of sports rather than the competitive aspect. It is the team orientation, cohesion, and social support that attracts females and makes them consistent in sports. Salguero, Gonzalez-

Boto, Tuero and Marquez (2004) undertook a survey study among 62 (22 females and 40 males) Spanish swimmers whose age range was 14-30 years, to identify reasons young competitive swimmers dropped out of swimming. Questionnaire on reasons for attrition was administered to the respondents. Across both genders, having other things to do was cited as the main reason for attrition. Other reasons cited included lack of fun, perception of failure, or low skills. Females placed greater emphasis than males on the following reasons that made them drop out of sports; excessive pressure, training too hard, dislike of competition, not winning enough, and not feeling important enough.

Dusko (2009), in his study among 160 (79 females and 81 males)former athletes from Bosnia &Herzegovina, found similar reasons given for dropping out of sports across gender, the difference being the order in which they were placed. The females placed other interests as the major reason they dropped out of sports, while males placed other interests as the second reason after financial constraints. A reduced sense of accomplishment was found to be a more significant factor that contributed to sports attrition among females than males. Other reasons cited were dissatisfaction with the coach and club and financial constraints. Warner and Dixon (2015) undertook a study among 76 (37 former athletes and 39 current athletes) college athletes in the United States of America to establish their sporting experience. A semi-structured interview was used at an individual level among the former athletes and focus group interviews were used among former athletes. From the findings, a majority (21 out of 36) of the female respondents across both categories expressed the view that they did not enjoy the internal competition during a training session and stated that this contributed to some of the teammates they knew, dropping out. They however, did not mind the external competition, against other teams as that brought them together for a common goal. On the contrary, majority of the males (31 out of 40) indicated that they

enjoyed the internal competition as it fostered mutual respect among them and demonstrated a person's commitment to the team and sport. Similarly, where there were no competitive situations during training, males' performance did not improve where there was no competitive situation in training, whereas, for the females, the performance declined or did not improve where there were internal competition situations in training. The research attributed this to the way boys and girls are socialized into sports as it impacts their view on competition. Males have a strengthened sense of togetherness in any type of competition while the sense of togetherness is diminished among females with internal competition during training sessions. To retain more athletes, the study concluded that a creative approach concerning internal competition during training in sports should be undertaken to accommodate both males and females to ensure continuity in sports. Body image has been identified as a critical factor influencing sport participation among female adolescent athletes (Koulanova et al, 2021; Sabiston, Pila, Vani & Thogersen-Ntoumani, 2019). During this pubertal phase, adolescence undergo physical transition that may include an increase in body weight and a change in body composition. For females, there may be an increase in adipose tissue which tends to be concentrated around the hips area and the growth of breasts. Girls in sports and institutions that have mixed genders, may begin to feel shy about these changes and would not like to participate in sports as they become more self-conscious (Vani, Pila, Willson & Sabiston, 2020). Fear of negative evaluation about their bodies due to social comparisons and experiencing appearance-based teasing about their bodies has been cited as a factor contributing to a higher decline in sports participation by females during this age (Brown, Patel & Darmawan, 2017). Similarly, generic sporting attire that did not fit had to be worn in a certain way (tuck in t-shirt in shorts), was too tight, or exposes parts of their bodies that they were not comfortable exposing has been found to negatively influence the sporting experience adolescent girls have and are likely to

drop out where they have no option of modifying their sporting attire (Koulanova et al, 2021 Tiggemann & Andrew, 2012; Berukoff & Hill, 2010; Main, 2009).

Related to appearance is hair upkeep which has also been found a factor of concern influencing participation in sports. A case study by Norwood (2010) among African American University students assessed hair as a constraint to swimming among females. The respondents were female university students enrolled in a prominently black college university and were aged between 18 and 25 years, 77.8% of the respondents only did swimming as it was a requirement for the course they were undertaking. The findings showed that personal hair care was a factor that made African American female students not choose to engage in swimming. Hair concern was cited frequently as the major constraint to swimming, as access and cost were not an issue, since the facility and training were provided by the institution at no extra cost. They cited that swimming made their hair wet and thus "ruined" their hair, as natural hair was "coily "and "kinky" and becomes hard to comb when wet. Even those with "chemical" hair, felt that the chlorine in the water damaged their hair, and the upkeep of "smart" hair was expensive and bothersome. The respondents indicated that they had many friends who dropped the course and took up other courses that did not have swimming mandatory, due to the "hair constraint" as they did not have the money to keep "fixing" their hair after swimming sessions. Similarly, Irwin, Irwin, Martin, and Ross (2010) in a survey of respondents (among them adolescents aged 12-17 years) from metropolitan areas in 6 states in the United States of America, found that 19.7 % of the African American female respondents indicated that they did not like swimming as it "messed" their hair compared to 9.8 % Caucasians and 7.3 % Latinos/Hispanics. Thus, personal hair challenges was a factor that affected African American females in swimming participation, negatively. In addition to body image and hair appearance that females have cited as a negative factor influencing their active participation in sports, they have

stated facial and skin appearance as another factor influencing them to drop out of sports. They indicated that sweat interferes (spoils) with their make-up, and chlorine in the swimming pool water affects their skin appearance "negatively", making it darker. While these studies have been done within European countries, the current study sought to establish whether the reasons given by the different age groups and across gender are eccentric to the particular region or may be similar among competitive swimmers in Kenya.

2.8 Influence of Age on Attrition in Sports

As children age, the participation rate in sports declines (Basterfield et al., 2015) and the level of influence of factors that contribute to dropout in sports changes as children develop and grow socially and physically (Woods, Tannehill, Quinlan, Moyna & Walsh, 2010). Developmental models of sports participation have encouraged younger children to sample as many sports as they can so that they play typically different sports and focus their attention and specialization at around 12 and 13 years (Côté & Hay, 2002). At this age, they can then specialize and be involved in organized competitive sports. This is also the age when they choose to be involved in competitive training regimes or drop out of sports completely (Cote & Vierimaa, 2014). However, the apparent engagement at an early age in organized sports programmes has been stated as a potential risk that causes increased early dropout in sports (Kirk, 2015). This early engagement may lead to boredom as children have a longer period in organized sports other than spontaneous play. Similarly, pressure and temptation to transition the children while at a young age to competitive standard forms have been found to likely lead to early dropping off. This pushes the children to competition before they reach their physical and mental capacities to adapt to the concept of elite competition, hence they drop out when they do not excel, despite the potential to excel had they been given the time. The increasing trend of having organized sports programmes for children at a younger age

has increased their participation, with children as young as 4 years old being in the programmes. This has however raised issues of children not having chances to be creative in play that may lead to children dropping out of these programmes at a relatively early age, as young as 12 and 13 years. Eime, Casey, Harvey, Charity, Young, and Payne (2015), in a study among Australian children of Victoria State to assess their transition from organized sports programmes to competition, established that participation in non-organized sports among those aged 15 years and over, was more popular compared to participating in a non-organized sports training regime. The majority of organized sports participation within these sports programmes was by children aged 10–14 years, peaking at ages 10–11. Late maturing and "promising" children were likely to be excluded from being selected if they were not seen to have acquired the competency at that early age when in the organized training regime (Vaeyens, Lenoir, Williams & Philippaerts, 2008). The proportion of individuals engaged in these sports declined rapidly during adolescence. The study found that most participants in the study seemed to drop off in sport participation during adolescence, moving towards non-organized sports training regimes. Unfortunately quitting at an age when people would be entering the elite sport pathway. This makes the pool available for the identification of talent for progression into an elite pathway to be smaller, as fewer individuals choose to participate in organized sports programmes.

Basterfield et al. (2015) did a longitudinal study among a cohort of children based in Gateshead located in northeast England to establish changes in perceived influences of their participation and dropping out of sports. The study cohort consisted of 1,029 respondents, 50.8 % (n= 523) male, and 49.2 % (n=506) female when they were aged 9-11 years and after three years when they were aged 12- 14 years. At a younger age, the reasons stated for withdrawing or failing to consistently participate in sports were situational factors related to the physical environment in terms of

parental support, such as not having transport to go to the venue for practice or not having money to pay to facilitate their training or competition. At the adolescence age, the responses to stopping participation predominantly revolved around intrapersonal factors and peers. They no longer had an interest in the sports or had other things they preferred to do other than sports and they felt they were not competent enough in the sport, shy, or both and therefore opted out of the sports. They also no longer wanted to be engaged in sports where their friends were not, as peer acceptance and fitting in was an important dimension at this age compared to when they were younger. Thus, specific concerns of each age group should be considered to reduce the dropout rate in sports for any age group.

Kang (2013) conducted a qualitative (interview) study among Young Koreans (9- 25 years) leaving in Australia to establish perceived constraints to participation in sports, comprising 20 (17 males and 3 females) respondents. The females cited the reasons for their non-participation in order of ranking as having no interest, lack of access to sporting facilities and lack of freedom through parental restrictions. The males ranked lack of information, facilities and lack of adaptive skills (not easily integrating with the inhabitants) as their constraints to sports participation in that order. However, the wide age gap difference in this study may have had some implications on the ranking of factors influencing dropping out of sports across gender, as children as young as 9 to 10 years have different cognitive and adaptive capabilities with older youth aged 18 years and above. McCabe (2013) evaluated attributes that influence engagement and or dropping out from physical activities among young adults aged between 18 and 25 years. The target populations were students and the neighbourhood of Dublin Business School in Ireland. There were 181 respondents (94 females and 87 females). The findings of the study show that though more males were regular in their involvement in sports and related physical activities than their female counterparts, 50% of

both genders indicated spending an average of 6.5 hours and 7.5 hours sitting and sedentary among males and females respectively. Nelson, Storey, Larson, Neumark-Szainer and Lytle (2008) observe that this age group is a unique developmental stage, as during this age, though there are those still undergoing formal education in tertiary institutions, there are those also beginning their engagement in employment or both and also romantic relationships. These engagements influence the level of involvement of individuals at this age in sports and physical activities. During this age, some young adults move away from home to attend college or university, and this separation from family to a different neighbourhood and sometimes culture, influences the individual's choices. The decline in intensity and frequency of participation in sports and related physical activities during this age is notable across both genders (Zimmermann-Sloutkis, Wanner, Zimmermann & Martin, 2010) as participation is no longer structured like it was in primary and secondary school, but is voluntary and those who rely on social support of family and friends within their home neighbourhoods' drop out due to lack of extrinsic motivation from others. Those who find an adequate social support system in their new environment to participate in sports programmes are likely to pick up and retain their engagement for the time they are in the institution. Variance in consistency in participation in sports and related physical activities is not a biological attribute but rather a psychological, social, and economic attribute. Social support is a major determinant for consistency in the participation of females in sports compared to males with females requiring more encouragement from their friends and peers than males (Molloy, Dixon, Hamer and Sniehotta, 2010). Similarly, neighbourhoods that are more accommodative for participation in sports have been found to influence females more than males (Velasquez, Holahan & You, 2009).

Eime, Harvey and Charity (2016) investigated age profiles of sports participants in Australia, across gender and residential locations. Seven popular sports (Australian football, basketball,

cricket, hockey, lawn bowls, netball and tennis) were analysed. There were 520,102 participants in the survey study, 64.1% were less than 20 years, with the largest age group (27.6%) in the 10-14 years, followed by the 5-9 years age group (19.9%). The participation rate was found to decline considerably during adolescence (15-19 years), with the decline among females being higher among females than males. A higher proportion of metropolitan participants were engaged in sports between ages 4-13 years and 19-29 years, whereas in the non-metropolitan areas, more participants were engaged in sports during their adolescence (14-18 years) and throughout their adult life (30 + years).

The influence of the age of coaches is a variable that is not often considered when assessing factors influencing attrition and participation in sports. Most studies assess the type of coaching behaviour and philosophy and how it influences sports participation and coaches' views on factors influencing attrition and participation in sports (Gilbert & Côté, 2013; Falcao, Bloom & Gilbert, 2012; Dimec & Katjna, 2009).

The current study sought to uniquely find out if the age of the coach influences their views of attributes influencing attrition among competitive swimmers. The stages of career development have been categorised into five phases (Chourasiya & Agrawal, 2019). The first phase (up to 14 years) is the stage of growing up during which an individual's attitudes, interests, and abilities begin to appear. The second phase is the research phase (15-24 years) during which the individual experiments with different roles as they look for their professional orientation. The phase of enforcement (25-44 years) is the period during which individuals are very active in their careers and lack of improvement or promotion may result in the individuals changing careers. The maintenance phase (45-65 years) is the stage where individuals want to hold onto their career and rarely change their career. The phase of decline (above 65 years) also referred to as the retirement

age is the time when most individuals retire from being actively involved in their careers. These phases have been challenged by other researchers such as Veldhoven and Dorenbosch (2008) who are of the view that age may not be used to define these phases as individuals can pick up a profession at whatever age and therefore be in any of these stages of career development at whatever age, thus having individuals retiring earlier than 65 years and having others in the early stage of career development when they are older than 45 years.

Acet, Gumusgul and Isik (2017) carried out a study among Turkish football coaches to investigate leadership characteristics across age, experience, certification and level of education. The study respondents were 144 coaches with most (77.8 % n= 112) being distributed in the above 36-year age bracket. The study results found no statistical difference in leadership styles based on the age of coaches but found significant differences in leadership characteristics, based on years of working experience and the level of education of coaches.

A study by Dimec and Katjna, (2009) among Slovene coaches also found no significant difference in psychological characteristics between younger and older coaches. The study respondents were 274 coaches (237 male and 37 female) that responded and they had a mean age of 38.87 years. Eight sets of questionnaires were used to measure the coaches' attitudes in sports, leadership adaptability, emotional intelligence, internal motivation, achievement motivation, social skills, and personality traits. However, there were specific characteristics that were found to be significantly different between young and old coaches, as regards personality traits, young coaches were found to be more open to experience, agreeable, friendly and conscientious. This was attributed to the younger coaches being most likely in a stage in their career where they are willing to experiment with new ideas to improve and succeed in their career, whereas the older coaches did not like experimenting with new things and preferred keeping things as they were. The younger coaches

were found to be better at managing their emotions, compared to older coaches who were found to be more expressive and stated having more problems than the younger coaches. This was attributed to the fact that older coaches have been in the profession longer and had been faced with more problems than the younger coaches. The older coaches were found to score high on both autocratic and democratic types of leadership, though seeming contradictory, it was ideal as having been in the profession longer than the younger coaches, knew when to use the democratic type of leadership, mostly during training sessions and autocratic style, during competitions, when definitive decisions have to be made. Older coaches were also found to delegate roles and duties more often than the younger coaches, this was attributed to the younger coach still being "new" and did not want to delegate so as not to be seen as not knowing their duties. On the other hand, the older coaches delegated as they felt they had mentored individuals in the teams to assist within their duties. Getting views from the coaches on factors influencing attrition in competitive swimming was significant as it was twofold; as they get to interact with the swimmers and also may be more aware of other factors that may influence attrition not related to the swimmer.

2.9 Theoretical Framework

This study used the Social Exchange Theory (SET) and the Self Determination Theory (SDT) as the two theories focus on the social and individual factors that influence motivation to participate, engage, or be committed to an activity. The SET supported by George Homan (Delaney & Madigan, 2015) postulates that human behaviour is governed by the desire to minimize negative experiences and maximize positive experiences. Participants are in an activity as long as the outcomes of participation are sufficiently favourable. A balance between rewards and costs

determines favourability, when benefits outweigh costs, individuals experience satisfaction and the greater the satisfaction, the greater the commitment (Murphy, 2012).

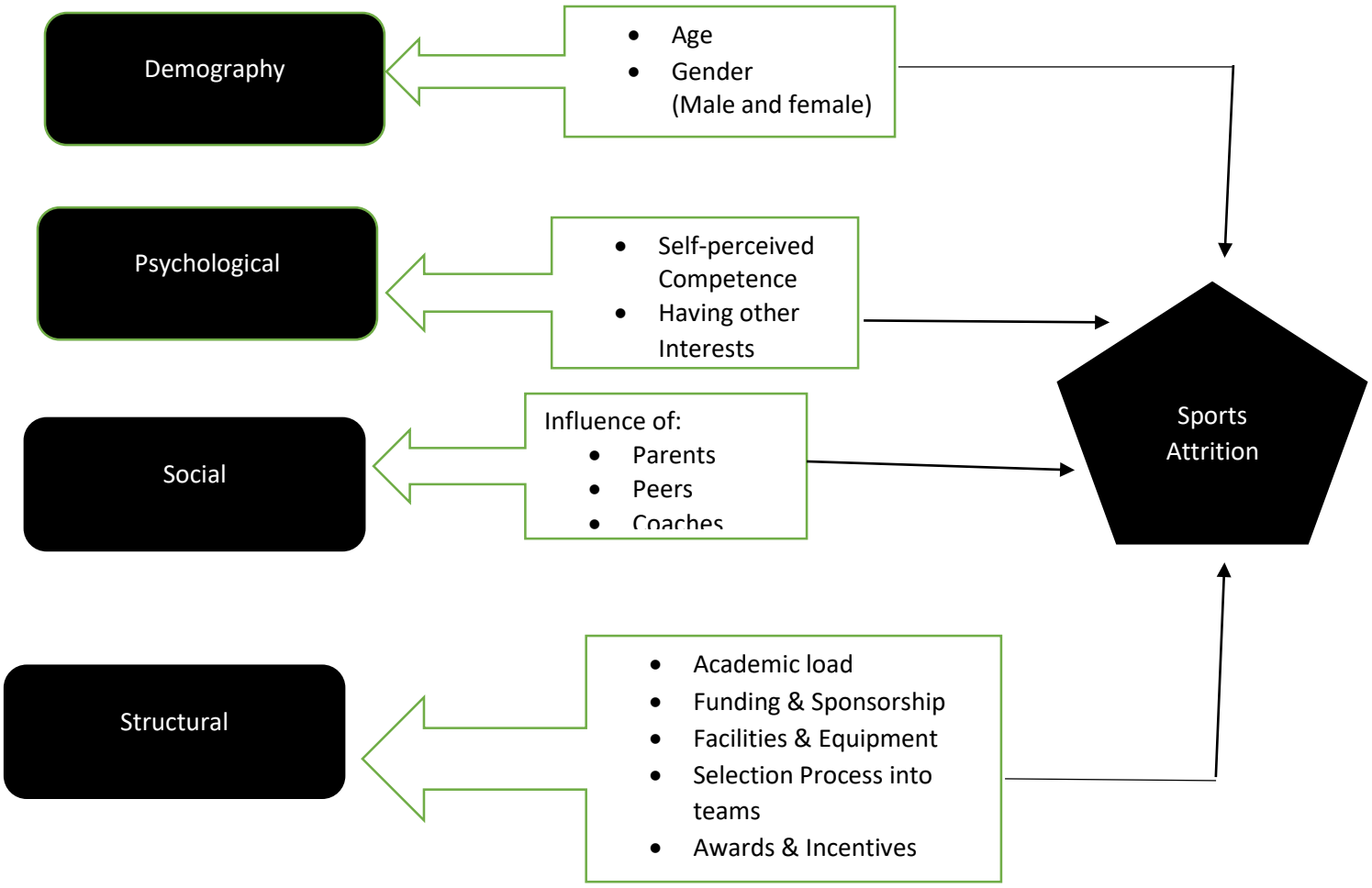
The Self Determination Theory (SDT) advanced by Deci and Ryan (2012) focuses on an individual's behaviour and attitude towards sport which is determined by their personal psychological needs. These psychological needs in the SDT are classified into three broad categories; the first are those that revolve around autonomy; the second revolves around competence and the third revolves around relatedness. When individuals perceive autonomy (have some level of independence - can choose event/s to participate in), competence (improved times, get medals/certificates, gets selected to represent institution/country), and relatedness (feels attached to the teammates, has friends in the team), they are likely to be committed to the activity.

The two theories focus on commitment which signifies the motivational force behind persistence. Participants are motivated and get committed to an activity when they perceive the benefits outweigh the costs and alternatives.

2.10 Conceptual Framework

This study adapted the Scanlan model of sport commitment which represents the causal conditions for sport commitment that are broadly categorized as social, structural, and psychological factors. Inversely, sports attrition (dependent variable) results when the causal conditions of sport commitment are not favourable to the athletes and are viewed as constraints, which have been illustrated in the conceptual framework. In figure 2.1, factors that have been used to assess swimming attrition were measured through pathways of psychological, social and structural attributes as indicators of the likelihood of swimmers' attrition from competitive swimming.

Figure 2.1: Conceptual Framework



Adapted from Scanlan's Model of Sport Commitment

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter outlines, the methodology used for the research under the following subheadings: Research design, target population, sample and sampling procedure, instruments for data collection, validity and reliability of the instruments to be used, data analysis, collection procedures and ethical consideration.

3.2 Research Design

The study was a descriptive survey and therefore no treatment was required of the participants**.** Cohen, Manion, and Morrison (2007) assert that prevailing practices, conditions as well as held attitudes and beliefs are best studied using descriptive surveys**.** Descriptive surveys describe and examine the existing phenomenon of attributes under study. The design is flexible in nature in terms of methods that can be used to collect information which includes, questionnaires or interviews that may be administered electronically or face-to-face. This allows for access to a larger audience, anonymity in case of use of questionnaires online or face to face and respondents completing the surveys at their convenience thus a larger volume of data.

3.3 Target population

The target population was swimming coaches of clubs and institutions and competitive swimmers in Kenya. The Kenya Swimming Federation (KSF) database as of 2021, was used to get the bulk of registered swimming teams. The KSF data had 174 teams/clubs (excluding the Kenya National Paralympic team that was not considered for this study) and 2,454 swimmers (db@kenyaswimmingfederation.org). Swimmers under the Kenya National Paralympic team were excluded as the athletes were not consistent in competitions organized by the Federation and only assembled when there were events for selection to participate in Paralympics events. Swimmers

who compete in universities under the Kenya University Sports Association (KUSA) body and do not participate in any of the KSF events were also included in the study. With the assistance of the coaches and their friends, those who stopped competitive swimming and were competing at an earlier age were traced and given a questionnaire to fill out to establish why they are or are no longer competing.

3.4 Sample Size and Sampling Procedure

Purposive, stratified, and proportional random sampling was carried out to capture swimmers from varied clubs, institutions, and age groups. Snowball sampling technique was also used, to capture swimmers who had competed but were no longer competing.

Figure 3.1 Swimming Teams Distribution in the KSF Database

<table>
<tr><td colspan="4">174 Teams</td></tr>
<tr><td colspan="3">94
(Educational)</td><td>80
(Clubs)</td></tr>
<tr><td colspan="2">88
(Private)</td><td colspan="2">6
(Public)</td><td rowspan="2"></td></tr>
<tr><td>4
(Universities)</td><td>84
(Primary/Secondary</td><td>2
(Universities)</td><td>4
(Secondary)</td></tr>
</table>

(Mazazi V. KSF data base, July 29, 2019)

The 174 teams in the KSF database were categorized as educational and clubs. The educational institutions were further categorized as private and public (government funded). All the clubs were run privately and hence were not categorized any further. The six educational institutions under the public educational category and the four universities under the private category were sampled to get varied responses from the swimmers. Sampling of the private educational institutions (primary/secondary) and clubs was done, using the formula: *(Z-score) 2 X Std. Dev X (1-Std.Dev) / (margin of error)2* at $\alpha = 0.05$ was used to get the sample size. Where 17 Primary/Secondary

schools were under the category of private educational institutions and 20 clubs were sampled. A total of 47 teams were sampled and 47 coaches, each for the team sampled

Table 3.2: Distribution of swimmers in the KSF National Database as per age group

Age Group	7& under	8 & 9	10 & 11	12 & 13	14 & 15	16 & over
Male	162	248	272	192	164	268
Female	163	235	285	235	116	114
TOTAL			557	427	280	382

(Mazazi V. KSF data base, July 29, 2019)

Distribution of competitive swimmers from the KSF database as per age group was categorised as is used in competitions in Kenya, as shown in figure 3.2. Only swimmers above 10 years (1,646) were sampled, as children below 10 years are still developing cognitive skills and generally give "satisfying" responses, especially for questionnaires with a Likert scale(Mellor and Moore 2013). From each of the 47 clubs sampled, all swimmers who were 10 years and above were sampled. There were 417 swimmers from the 47 clubs sampled who were over 10 years, this included the 43 representing various universities, all of whom were part of the sample. All swimmers who competed in the KUSA games and did not participate in KSF galas were included in the sample. The research captured swimmers at university who had attended the last three preceding editions of the KUSA games as at the time the research was done. Those who may have participated in both KSF galas and KUSA games were only captured once through the assistance of the team coaches and managers.

3.5 Instruments for Data Collection

Qualitative and quantitative data were collected using different sets of questionnaires and a semi-structured interview guide for the different groups identified. An adapted version developed by Molinero, Salguero, Tuero, Alvarez and Marquez (2006) of the Questionnaire for Reasons of Attrition (QRA) developed by Gould in 1982 was used. Three sets of this questionnaire were used, targeting to get information from active swimmers, swimmers who stopped competing and coaches. The questionnaire for active swimmers (Appendix 2) comprised three parts, the first part of the questionnaire captured demographic details of the swimmer, their swimming history, the current extent of their involvement, their training regime, and competition attendance. The second part comprised a 5-point Likert scale with two sections, the first section had items where swimmers ticked the reasons that would make them stop competitive swimming. The other section had items that assessed the frequency of the swimmers' training and competition facilitation. The questionnaire for former swimmers (Appendix 4) had two parts, the first part captured the demographic details of the swimmer, their swimming history, their training regime, and competition attendance. The second part was a 5-point Likert scale that had items where swimmers ticked the reasons that made them stop competitive swimming. The questionnaire for coaches (Appendix 6) captured demographic details of the coach and their coaching history. The second part of the questionnaire was a five-point Likert scale where the coach ticked reasons the swimmers they have coached stopped competing. Scoring of the Likert scale involved assigning a score between 1 and 5, where 5 indicated that the attribute and items being assessed least influenced the respondents while a score of 1 indicated that the items and attribute under study influenced the respondents most. There were semi-structured interview guides (Appendix 3 and 5) that allowed for probing and exploring interviewees' answers (Gratton & Jones 2010). The answers from the

interview guides were matched to the questionnaires administered (to the active swimmers and former swimmers) to compare the responses and be able to conclusively establish reasons that affect attrition in competitive swimming.

3.6 Validity of Research Instruments

Content validity for the open and close-ended questionnaires section for the active swimmer, former swimmer and coach was done with the assistance of supervisors who are experts in the area, to ensure all the study variables and objectives of the study are evaluated. The face validity in the first section of the questionnaire for the active, former swimmer and the entire questionnaire for coaches was upheld by removing and restructuring vague, irrelevant or ambiguous words and statements during the pilot study.

3.7 Reliability of Research Instruments

The internal reliability for the section of open-ended questions for the active swimmers, former swimmers, and coaches was independently assessed using exploratory factor analysis where items that score a factor load < 0.3 were omitted after the pilot study. For the Likert scales in each of the three questionnaires, internal reliability was assessed using Cronbach alpha and accepted at $r > 0.7$ after a test-retest of the questionnaires.

3.8 Data Collection Procedures

After seeking permission from the relevant authorities, which included the National Commission for Science, Technology, and Innovation (NACOSTI), school heads, and swimming coaches. The researcher made appointments with heads of schools, heads of sports in institutions, swimming coaches and individual swimmers was made. With the assistance of research assistances, the questionnaires were issued and a date of collection was agreed upon with the respondents at a time

convenient to them, during which a follow-up interview was done. For the respondents who were available to respond on the spot, a follow-up interview was made immediately after they returned the questionnaires. Those between 10 to 13 years were given an oral version (interview) of the questionnaire after getting consent from their parents/guardians through their coaches. Those between 14 and 17 years were given the questionnaires and asked to fill independently after getting consent from their parents/guardians. The 18 years and above were given the questionnaires to fill out at a time convenient to them. The research assistants included competitive swimmers and were able to access former competitive swimmers who were in the country and outside the country, where they sent them the questionnaires online. The coaches and swimmers sampled also assisted in identifying former competitive swimmers they knew and how to access them.

3.9 Data Analysis

Data from the questionnaires was coded and processed using the statistical package for social sciences (SPSS) version 20. Descriptive characterization of standard deviations and means was calculated for the items representing the dependent variables on the questionnaire and presented in tables. For further analysis, multivariate analysis of variance (MANOVA) was used to establish if there was a significant difference in mean between the three groups (active swimmers, former swimmers, and coaches) on the combined dependent variables, psychological, structural, and social factors. MANOVA was then followed by analysis of variance (ANOVA) for each dependent variable (psychological, structural, and social) and tested at alpha level 0.05. To establish if the differences between the groups were statistically significant, the Mann-Whitney U test was used as the data violated assumptions of normality and homogeneity of variance

3.10 Ethical Considerations

Permission was sought to carry out the study from the National Commission for Science, Technology and Innovation (NACOSTI), school heads and coaches of selected schools and clubs. All respondents signed a consent letter and permission from parents was sought through school heads and coaches for swimmers under-18 years who had been sampled. The respondents were assured of the confidentiality of their identities and research data and informed that participation is voluntary and were free to withdraw at whatever point if they so wished.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter outlines the result and analysis of the data collected, presented in tables. A demographic overview of the participants and their responses to the variables tested precedes answering the research questions. Variables influencing attrition in competitive swimming have been identified if significant at $p < \alpha = 0.05$.

The study's primary objective was to establish if the selected psychological, social, and structural attributes influence attrition in competitive swimming in Kenya. Data from active swimmers investigated the attributes that would make them stop competitive swimming, while data from former swimmers and coaches got views on attributes that influenced attrition in competitive swimming in Kenya. Each variable tested ends with a summary of its influence in relation to attrition in competitive swimming in Kenya in comparison to other related studies.

4.2 Demographic Characteristics of Respondents

The data was collected from 586 participants out of an expected 623 giving the study a 94.1% participation rate. As shown in table 4.2.1 there were 394 active swimmers where 218 were males and 176 females; 148 former swimmers with 82 male participants and 66 females. Forty-four coaches participated in the study, where 33 were males and 11 were female.

The average age of the active swimmer was 16.44 ±4.32 years and they started competitive swimming at an average age of 10.38 ± 4.44. The age of the active swimmers was slightly below the peak age of most elite swimmers in the world which was 20 to 25 years (Raleigh, 2011). The average age of former swimmers was 23.91 ± 5.25 years and they started competitive swimming

at the age of 9.52 ± 2.88 years and stopped at age 18.13 ± 3.23 years. Former female swimmers stopped competing at 17.96 ± 3.04 years while the males stopped at 18.33 ± 3.39 years. The average age a swimmer spent as a competitor was 8 to 9 years. From the demographics, it is evident that former swimmers in Kenya were exiting the sport at an age when most elite swimmers in the world were at their peak. The age that swimmers in Kenya started competing was within the recommended age bracket of about 10 years by the Long Term Athlete Development (LTAD) Programmes, when more structured training and competition should be done, (Raleigh, 2011; Swimming. Natation Canada, 2008)

For coaches, their average age was 40.98 ± 9.68, this age bracket was not so far off in comparison to countries known to excel in sports, with the average of swimming coaches being 34 years in the US (https://www.zippia.com/swim-coach-jobs/demographics/) and more than 90%of coaches worldwide being above 35years (https://www.statista.com/statistics/816307/share-of-coaches-worldwide-by-age-and-type/), as coaches are known to acquire expertise with a minimum of 10 years experience.

Table 4.2. 1-Demographic Characteristics of Respondents

Participants	Gender	Frequency (n)	Percent (%)	Mean Age by gender	Mean Age	Std. Dev.
Active Swimmers	Male	218	55.3	16.6		
	Female	176	44.7	16.3	16.44	4.32
Former Swimmers	Male	82	55.4	23.7		
	Female	66	44.6	24	23.91	5.25
Coaches	Male	33	75	39.9		
	Female	11	25	44	40.98	9.68
TOTAL		586				

4.3 Respondents' Perception of Psycho-Social and Structural Attributes on Attrition in Competitive Swimming in Kenya.

The study's primary objective was to establish perception of psychological, social, and structural attributes on attrition in competitive swimming in Kenya. Views from active competitive swimmers, former competitive swimmers, and swimming coaches were collected and analyzed. The results from all the respondents as shown in table 4.3.1, indicated that structural attributes had the highest influence with a mean of 2.65 ± 0.55 followed by social attributes at 2.66 ± 0.67, and psychological attributes at 2.80 ± 0.55.

Table 4.3.1 Means and Std. Deviation of Psychological, Social and Structural Attributes Affecting Attrition in Competitive Swimming in Kenya

Participants	Psychological		Social		Structural	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
All Respondents	2.80	0.55	2.66	0.67	2.65	0.55
Active Swimmers	2.47	0.43	2.32	0.35	2.32	0.39
Former Swimmers	2.97	0.69	3.23	0.62	2.75	0.67
Coaches	3.15	0.76	3.57	0.62	3.03	0.83

Table 4.3.1 indicated that social attributes would affect attrition of active swimmers the most with a mean of 2.32 ± 0.35 followed by structural attributes at 2.51 ± 0.39 and psychological attributes at 2.47 ± 0.43. However, among former swimmers, psychological attributes were ranked highest with a mean of 2.97 ±0.69, followed by structural attributes at 2.91 ±0.67 and social attributes at 3.3 ±0.62. The results from coaches' views indicated that structural attributes affected competitive

swimmers' attrition most with a mean of 2.98 ±0.83 followed by psychological attributes at 3.15 ±0.76 and social attributes at 3.57 ± 0.62.

One-way multivariate analysis of variance (MANOVA) was used to establish if there was a significant difference in mean between the three groups (active swimmers, former swimmers and coaches) on the combined dependent variables, psychological, structural and social attributes. There were no univariate outliers as assessed by examining the box plot. Kolmogorov-Smirnov for the three levels of independent variables for the dependent variables (psychological, structural and social) indicated that the assumption of normality was violated $p < 0.05$. However, Tabacknick, Barbara and Fidell (2007) demonstrated that MANOVA remains effective and robust to modest violations of normality. The assumption of the homogeneity of variance was not tenable based on the results of Box's test M= 127.432, F (12, 63349 = 10.434, p< .001. However, Box's test has been identified to be highly sensitive to variation in sample size and normal distribution. To overcome the concern, MANOVA was performed in combination with bootstrapping to ensure MANOVA assumptions of unequal sample size and normality of data distribution were not violated. Krishnamoorthy and Lu (2010) indicated that bootstrapping in MANOVA satisfactorily controls Type I error.

Results from MANOVA yielded that there was a statistically significant difference between the three groups, active swimmers, former swimmers, and coaches on combined dependent variables (psychological, structural and social factors) Pillai's $\Lambda = .613$, $F(6, 1164)= 85.833$, $p<0.001$, partial $\eta 2 = 0.307$, observed power = 1.00. Thus, psychological, structural and social attributes that may lead to competitive swimmers' attrition, significantly differ based on active swimmers, former swimmers, and coaches' perspectives.

MANOVA was then followed by ANOVA for each dependent variable (psychological, structural and social) and tested at an alpha level 0.05. The results showed that there was a significant difference in all three groups (active swimmers, former swimmers and coaches) on their views on factors leading to attrition among competitive swimmers in Kenya, psychological $F(2, 12.092)= 21.052$, $p<0.001$, structural $F(2, 22.486)= 42.113$, $p<0.001$, social $F(2, 141.572)= 339.58$, $p<0.001$. This is shown in table 4.3.2.

Table 4.3.2: ANOVA of Psychological, Structural and Social Attributes Affecting Attrition in Competitive Swimming

Source	***Df***	***SS***	***MS***	***F***	***P***
Psychological	2	12.092	6.05	21.052	.001
Structural	2	22.486	11.243	42.113	.001
Social	2	141.572	70.786	339.580	.001

Least Significance Difference (LSD) Post Hoc test was performed to establish the source of the difference between the three groups, active swimmers, former swimmers, and coaches. A significant mean difference was established among the three groups on psychological and social attributes affecting swimming attrition. On structural attributes, there was no significant difference found between coaches and former swimmers, however, there was a significant difference between coaches and active swimmers and between active swimmers and former swimmers. From these results, the respondents indicated that the psycho-social and structural attributes under study significantly affected attrition in competitive swimming.

4.4 Assessment of Psychological Attributes on Attrition from Competitive Swimming in Kenya.

The research question to be answered was to establish if psychological attributes were perceived to affect attrition in competitive swimming in Kenya. Psychological attributes that were investigated revolved around intrapersonal factors which included interest, being engaged in other sports or clubs thus having a conflict of interest as they had other things to do, and competence which included their perceived swimming performance during competition. The participants were required to respond to the construct items showing the extent to which they agreed or disagreed with the statement, with a Likert scale of 1 to 5, where 1 indicated the highest degree of agreeing with the statement and 5 indicated the lowest degree of agreeing with the statement. The items were rephrased for each of the three groups of respondents, where the active swimmers, were responding to the extent to which they perceived the items would affect their attrition. For former swimmers, the respondents were stating the extent to which these items influenced them to stop competitive swimming. The coaches indicated their views on the extent to which they felt these items caused swimmers they had coached to stop competitive swimming.

Table 4.4.1 shows the frequencies and composite mean for each of the items used to assess perception of psychological attributes on attrition among former swimmers.

Table 4.4.1: Frequencies of Responses by Former Swimmers on Psychological Attributes Affecting Attrition in Competitive Swimming

Psychological Attributes (Competence and Interest)	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	**Composite Mean of Likert Scale**
I stopped competing because…	%	%	%	%	%	**$\bar{x}$ Max= 5**
…had other things to do	8.7	75	6.8	9.5	0	**2.17**
….training was hard	0	0	5.4	88.5	6.1	**4.01**
…did not win enough	0	42.6	4.1	43.2	10.1	**3.21**
…not as good as I wanted to be	1.3	6.8	5.4	79.1	7.4	**3.84**
…not enough fun	0	70.9	6.8	13.5	8.8	**2.60**
…skills did not improve	0	72.3	5.4	14.9	7.4	**2.57**
….wanted to play another sport	1.4	75	8.1	6.8	8.7	**2.47**
….not exciting enough	0	70.9	0	17.6	11.5	**2.70**
….not like the pressure	1.4	76.3	0	13.5	8.8	**2.52**
…..it was boring	0	70.9	0	16.2	12.9	**2.71**
….lost interest in competition	0	72.3	4.1	14.9	8.8	**2.60**
….was not challenging enough	6.8	73.6	0	10.8	8.8	**2.41**
…not feel fit enough	2.7	9.5	0	80.4	7.4	**3.80**
…felt had reached my maximum potential	4.1	0	6.7	70.3	18.9	**4.00**

KEY:
SA- Strongly Agree-1; A- Agree- 2;NS- Not Sure- 3; D-Disagree- 4; SD- Strongly Disagree- 5

The former swimmers indicated that they did not drop out of competitive swimming because they felt the training was hard or that they had reached their maximum potential. The majority, (94.1%; 88.5% disagreed and 6.1% strongly disagreed) of former swimmers indicated that they did not stop competitive swimming because the training was too hard. Similarly, a large percentage (89.2%; 70.3% disagreed and 18.9 % strongly disagreed) indicated that they did not drop out of competitive swimming because they felt they had reached their maximum potential. They rated these two as the lowest reasons that made them drop out with a mean of $\bar{x}$ = 4.01 and $\bar{x}$ =4.00 respectively. Their major reasons for dropping out of competitive swimming among the psychological attributes was having other interests and things to do which they ranked highest with a mean of $\bar{x}$ =2.17 followed by not finding the competition challenging enough at $\bar{x}$ = 2.41. This was reiterated by some of the responses the former swimmers gave in the interviews as indicated;

Former Swimmer 1:

> "*I stopped competitive swimming since I noted there was no longer any improvements in my times and those I competed against did not give me much challenge, so the lack of tough competition made me stop. I was only good locally but when we went to compete internationally I could not match the other swimmers, so I thought the training in Kenya was only maintaining my times…maybe if I was training outside where there was tough competition, my times would have improved and I would have stayed on…."*

Former swimmer 2:

> *"The competition in Kenya is not tough, you find you keep winning with slow times, yet I know the international times expected. Maybe if I had gotten an opportunity to train outside like the Dunfords I would have made Olympic times…"*

Table 4.4.2 shows the rating of the views of coaches on psychological attributes affecting attrition in competitive swimming in Kenya.

Table 4.4.2: Frequencies of Responses by Coaches on Psychological Attributes Affecting Attrition in Competitive Swimming

Psychological Attributes (Competence and Interest)	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	**Composite Mean of Likert scale**
The swimmers stopped competitive swimming because…	**%**	**%**	**%**	**%**	**%**	$\bar{x}$ **Max= 5**
…had other interests	27.3	56.8	6.8	9.1	0	**1.98**
….training was hard	4.5	29.5	4.6	50	11.4	**3.34**
….not fit enough	18.3	29.5	9.1	29.5	13.6	**2.91**
…wanted to play another sport	34.1	36.4	13.6	9.1	6.8	**2.18**
…..did not win enough	11.4	20.5	31.8	22.7	13.6	**3.07**
…not enough fun	6.7	2.3	20.5	52.3	18.2	**3.73**
…skills did not improve	9.1	20.5	11.4	29.5	29.5	**3.55**
….not exciting enough	9.1	20.5	11.4	29.5	29.5	**3.70**
….not like the pressure	36.3	18.2	9.1	20.5	15.9	**2.61**
…..training was boring	4.5	9.1	15.9	25	45.5	**3.98**
….was not challenging enough	18.2	2.3	4.5	45.5	29.5	**3.66**
…felt had reached their maximum potential	20.5	18.2	13.6	29.5	18.2	**3.07**

KEY: SA- Strongly Agree-1; A- Agree- 2; NS- Not Sure- 3; D-Disagree- 4; SD- Strongly Disagree- 5

The coaches indicated that the major reason swimmers stop competitive swimming is that they get other interests and things to do, which they rated with a mean of $\bar{x}$ = 1.98, followed by the swimmers wanting to play another sport which they rated with a mean of $\bar{x}$ = 2.18. This follows logically, as having other interests may include wanting to play other sports and was supported by the large percentage of coaches (84.1%; 27.3% strongly agreeing and 56.8% agreeing) who did indicate that indeed swimmers stopped competing as they had other interests. Similarly, a large percentage of the coaches (70.5%), with 34.1% strongly agreeing and 36.4% agreeing that the swimmers stopped competing because they wanted to play another sport. This resonated with what the coaches felt as captured in some of their statements during interviews:

Coach 1:

> *"Most of the older swimmers stopped competitive swimming as they felt they wanted to do something else. Having been in competitive swimming, and having the same schedules of training almost daily, after school or both morning and evening for most part of their younger life, they wanted a different regime in their life…"*

Coach 2:

> *"Some of these swimmers were introduced to swimming by their parents at a very early age and did not get a chance to try out other sports, which when they did get a chance to in school, wanted to try them out and decided to stay in with them for a change."*

The coaches rated training being boring and not exciting as the least reasons why swimmers would drop out of competitive swimming with a mean of $\bar{x}$ = 3.98 and $\bar{x}$ =3.70 respectively, with a larger percentage of the coaches (70.5% and 59.5%) disagreeing and strongly disagreeing respectively,

that the two reasons would lead swimmers to stop competitive swimming. This finding was attributed to the coaches being biased as they responded, since they may not have wanted to seem to be the cause of the swimmers stopping if their training was boring and not exciting.

Table 4.4.3 shows the rating of the views of active swimmers on psychological attributes affecting attrition in competitive swimming in Kenya.

Table 4.4.3: Frequencies of Responses by Active Swimmers on Psychological Attributes Affecting Attrition in Competitive Swimming

Psychological Attributes (Competence and Interest)	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	**Composite Mean of Likert Scale**
I would stop competitive swimming if….	**%**	**%**	**%**	**%**	**%**	**$\bar{x}$ Max= 5**
…had other things to do	0	2.3	3.6	78.9	15.2	**4.07**
….training was not manageable	4.3	74.9	4.6	15.2	1	**2.34**
…not enough fun	15.2	69.8	3.3	11.7	0	**2.11**
…skills did not improve	20.3	76.9	2	0.8	0	**1.83**
….not exciting enough	14.2	70.8	1.5	13.5	0	**2.14**
….not like the pressure	9.1	32.7	4.2	52.3	1.5	**3.04**
…..it was boring	13.2	30.5	1.7	54.1	0.5	**2.98**
….was not challenging enough	14.7	77.9	2.8	4.6	0	**1.97**
…feel had reached my maximum potential	11.4	55.1	29.2	3.8	0.5	**1.73**

KEY: SA- Strongly Agree-1; A- Agree- 2;NS- Not Sure- 3; D-Disagree- 4; SD- Strongly Disagree- 5

The active swimmers indicated that the major reason they would stop competitive swimming was if they felt they had reached their maximum potential and their skills were no longer improving with a mean of $\bar{x}$ = 1.73 and $\bar{x}$ = 1. 83 respectively. This was supported by a larger percentage of active swimmers (66.5%; 11.4 % strongly agreed and 55.1% agreed) who accepted they would stop competitive swimming if they felt they had reached their maximum potential. Similarly, a very large percentage (97.2 %) of the active swimmers with 20.3 % strongly agreeing and 76.9% agreeing that they would stop competitive swimming if their skills were no longer improving, as captured by the views of one active swimmer:

> *"..If my times started dropping I would stop competitive swimming, because then I know I will not make it to the higher level of competition which is determined by the times one makes in the events…"*

The active swimmers indicated that having other things to do would least influence their stopping to be competitive swimmers, with a mean of $\bar{x}$ = 4.07. This follows logically, as that is why they were still active swimmers, because they preferred that to any other thing, this was supported by a majority of the swimmers (94.1%) with 78.9% disagreeing and 15.2% strongly disagreeing that having other things would have stopped them from competitive swimming. Active swimmers did not mind the pressure and indicated that this would not stop them from competing, they stated this as the second least reason that would make them stop competitive swimming with a mean of $\bar{x}$ = 3.04. This could be attributed to the fact that being competitive swimmers, they do not mind the pressure as that is what drives them to want to excel and continue competing. A larger percentage of the swimmers (53.8%) with 52.3 % agreeing and 1.5% strongly agreeing that they did not mind the pressure. This is echoed by a response by one of the active swimmers during an interview:

Active swimmer:

"After training consistently, I see the results by the way I perform as my times improve, I cut my times during competitions and start beating swimmers that had previously outperformed me and that makes me feel good and get psyche to continue training so that I can reduce my times even more…pressure from other competitors pushes me to train hard."

Table 4.4.4 shows the comparison of perception of psychological attributes among all the respondents and the p-value between the respondents.

Table 4.4.4 Comparison of Perception of Social Attributes on Attrition in Competitive Swimming Among Coaches, Active and Former Swimmers.

Dependent Variable	Participants	Mean	Std Deviation	P-Value
Psychological	Active Swimmers	2.47	0.43	
	Former Swimmers	2.97	0.69	0.792
	Coaches	3.15	0.76	
	Active Swimmers	2.47	0.43	0.001*
	Coaches	3.15	0.76	0.001*
	Former Swimmers	2.97	0.69	

*significant at $p \leq 0.05$

As indicated earlier (table 4.3.1), psychological attributes were found to influence attrition among all respondents combined at 2.80 ± 0.55 which was the attribute with the least influence. Further analysis among active swimmers rated the influence of psychological attributes on attrition highest at 2.47 ± 0.43 followed by former swimmers at 2.97 ± 0.69 and coaches viewed that psychological attributes had the least influence on attrition at 3.15 ± 0.76. Mann-Whitney U test results indicated

that the difference of psychological attributes on swimming attrition in Kenya between active and former swimmers was not statistically significant**,** U ($N_{\text{active swimmers}}$ =394, $N_{\text{former swimmers}}$ =148,) = 28729.00, z = -.263, p =0 .792. However, psychological attributes were found to contribute a significant difference between coaches' and active swimmers' views U ($N_{\text{active swimmers}}$=394, N_{coaches} =44) = 4805.00, z = - 4.855, p <0.001 and also between former swimmers and coaches, U ($N_{\text{former swimmers}}$=148, N_{coaches} =44) = 1929.00, z = - 4.174, p <0 .001. The difference between coaches and the swimmers (both active and former swimmers) could be attributed to the fact that these were intrapersonal factors and therefore affected the swimmer at a personal level whereas the coaches were giving their views as observers.

The findings of this study are supported by Rottensteiner, Tolvanen, Laasko and Konttien (2015) who also established that players with higher perceived competence, (which was evaluated as a psychological attribute in this study) reported higher levels of motivation which in turn influenced their persistence in the sport they participated in, thus reduced attrition in the sport. Similarly, Battaglia, Kerr and Tamminen (2021) and Siesmaa, Blitvich and Finch (2011) in their study found that having keen interest in the sport (which was evaluated as a psychological attribute in this study) by the players predicted intrinsic motivation which sequentially presaged continuous commitment. In this study, active swimmers were still engaged in competitive swimming since they felt their skill level was improving and had not reached their maximum potential, thus they perceived their competence level and subsequently level of interest in the sport was high. Among former swimmers, loss of interest in competitive swimming resulted when they felt they were no longer improving and had reached a plateau, this view was resonated by coaches.

4.5 Assessment of Social Attributes on Attrition from Competitive Swimming in Kenya.

Social attributes that were investigated included the influence of significant others (friends, parents, and coaches). The research question to be answered was to establish if social attributes were perceived to affect attrition in competitive swimming in Kenya. The participants were required to respond to the construct items showing the extent to which they agreed or disagreed with the statement, on a Likert scale of 1 to 5, where 1 indicated the highest degree of agreeing with the statement and 5 indicated the lowest degree of agreeing with the statement. The items were rephrased for each of the three groups of respondents. However, the coaches were to respond to give their view on the extent to which they felt the items influenced swimmers they had interacted with.

Table 4.5.1shows the frequencies and composite mean for each of the items used to assess perception of social attributes on attrition among former swimmers. Findings on influence of social attributes among former swimmers indicated that former swimmers' parents' did not discourage them from competing, the item of parents no longer wanting them to compete had the least influence on them stopping to compete with a mean of $\bar{x}$= 4.01, followed by item on them disliking team mates. The former swimmers indicated that it was not the dislike of their team mates that made stop competitive swimming as they ranked this as the second least influence at $\bar{x}$= 3.95. This was closely followed by the coach not emphasising on winning at $\bar{x}$=3.94, which the former swimmers ranked as the third least factor as their coach did not emphasise on them winning. Not being with friends was ranked as their major reason among social attributes for stopping competitive swimming at $\bar{x}$=2.42, followed by not being able to meet new friends at $\bar{x}$=2.56. Former swimmers were majorly influenced to stop competitive swimming by not being able to be

with their friends or interacting more with new friends. This could be attributed to the training regime where the swimmers would be training during their "free" time and probably the fact that most of their friends were not competitive swimmers. Most being at school going age, they would have preferred to be with their friends which is supported by Graupensperger et al, (2018); Crozier and Spink, (2018); Raabe, Zakrajskek and Readdy (2016).

Table 4.5.1:Frequencies of Responses by Former Swimmers on Social Attributes Affecting Attrition in Competitive Swimming

Social Attributes (influence of significant others-peers, coaches, parents)	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	**Composite Mean of Likert Scale**
I stopped competitive swimming…	**%**	**%**	**%**	**%**	**%**	**x̄ Max= 5**
….not with friends	0	82.4	0	10.8	6.8	**2.42**
….friends stopped swimming	0	8.1	1.4	84.4	6.1	**3.89**
….not meet new friends	0	76.3	0	14.9	8.8	**2.56**
….not like teammates	0	5.4	2.7	83.1	8.8	**3.95**
….coach favouring some teammates	0	38.6	8.1	45.9	7.4	**3.22**
….parents no longer wanted me to continue competing	4.1	0	1.4	80.4	14.1	**4.01**
….there was no teamwork	5.4	64.2	2.7	16.2	11.5	**2.64**
….not like being in the team	1.4	68.2	9.4	12.2	8.8	**2.59**
....parents stopped supporting me	13.6	0	0	70.9	15.5	**3.75**
….coach emphasised on winning	5.4	0	0	84.5	10.1	**3.94**

KEY:
SA- Strongly Agree-1; A- Agree- 2;NS- Not Sure- 3; D-Disagree- 4; SD- Strongly Disagree- 5

Table 4.5.2shows the frequencies and composite mean for each of the items used to assess perception of social attributes on attrition among active swimmers.

Table 4.5.2: Frequencies of Responses by Active Swimmers on Social Attributes Affecting Attrition in Competitive Swimming

Social Attributes (influence of significant others-peers, coaches, parents)	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	**Composite Mean of Likert Scale**
I would stop competitive swimming if/when…	**%**	**%**	**%**	**%**	**%**	**$\bar{x}$ Max= 5**
….not with friends	2.5	85.9	6.6	3	2	**2.16**
….friends stopped swimming	0.8	62.4	4.8	25.1	6.9	**2.75**
….not meet new friends	7.4	77.2	5.8	9.6	0	**2.18**
….not like teammates	9.9	68.5	4.6	12.7	4.3	**2.33**
….coach was favouring some teammates	13.3	53.6	5.1	23.4	4.6	**2.52**
….there was no teamwork	17	75.4	3.8	3.8	0	**1.94**
….not like being in the team	16.2	82.2	0	1.6	0	**1.87**
....parents stopped supporting me	25.9	67.7	1.3	5.1	0	**1.86**
….coach emphasised on winning	5.9	13.7	36.8	34.5	9.1	**3.27**

KEY:
SA- Strongly Agree-1; A- Agree- 2;NS- Not Sure- 3; D-Disagree- 4; SD- Strongly Disagree- 5

Among active swimmers, as shown in table 4.5.2, lack of parental support and not liking being on the team were the two most influential reasons related to social attributes that would contribute to active swimmers dropping out of competitive swimming. They ranked parental support highest

with a mean of $\bar{x}$=1.86 with 93.6% of the active swimmers being of the view that if their parents stopped supporting them, they would stop competitive swimming, as 25.9% strongly agreed and 67.7% agreed to the statement. The second major reason that the active swimmers indicated would contribute to them dropping out of competitive swimming was not liking the team with a mean of $\bar{x}$ =1.87, as almost all (99.4%) respondents with 16.2% strongly agreeing and 82.2% agreeing that they liked being in the team. This followed logically as if they did not like being on the team, they would not be active competitive swimmers**.** The reason cited related to social attributes that would least influence active swimmers to drop out of competitive swimmers was if their coach emphasised winning with a mean of $\bar{x}$ =3.27, this was supported by 43.6 % of the swimmers as there was a considerable percentage (36.8%) that were not sure if they would drop out if their coach emphasised on winning. This was a rational argument by the active swimmers who indicated that they would not drop out as the major purpose of competition is to win and therefore would not mind the coach emphasising on them to win. The other reason that would least influence attrition among active swimmers was if their friends stopped competing with a mean of $\bar{x}$ =2.75, this view was supported by 63.2% of the respondents.

Table 4.5.3 shows the frequencies and composite mean for each of the items used to assess perception of social attributes on attrition among coaches.

Table 4.5.3: Frequencies of Responses by Coaches on Social Attributes Affecting Attrition in Competitive Swimming

Social Attributes (influence of significant others-peers, coaches, parents)	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	**Composite Mean of Likert Scale**
The swimmers stopped competitive swimming because.…	**%**	**%**	**%**	**%**	**%**	**$\bar{x}$ Max= 5**
….not with friends	11.4	25	29.5	15.9	18.2	**3.05**
….friends stopped swimming	18.2	15.9	22.7	36.4	6.8	**2.98**
….not meet new friends	0	0	18.2	36.4	45.4	**4.27**
….not like teammates	2.3	4.5	18.2	20.5	54.5	**4.20**
….coach favouring some teammates	0	2.3	18.2	27.3	52.2	**4.30**
….parents no longer wanted them to continue competing	9.1	56.9	15.9	13.6	4.5	**2.48**
….there was no teamwork	0	2.3	4.5	47.7	45.5	**4.36**
….not like being in the team	4.5	0	13.6	36.4	45.5	**4.18**
....parents stopped supporting them	13.6	34.1	13.6	27.3	11.4	**2.89**

KEY:
SA- Strongly Agree-1; A- Agree- 2;NS- Not Sure- 3; D-Disagree- 4; SD- Strongly Disagree- 5

Among coaches on their views of the influence of social attributes on attrition in competitive swimming as shown in table 4.5.3, parental influence on the swimmers was found to be the highest influence by coaches that contributed to swimmers stopping competitive swimming with a mean

of $\bar{x}$ =2.48, where 66 % (9.1% strongly agreed and 56.9% agreed) of the coaches accepted this view that indeed swimmers would stop competitive swimming if their parents no longer wanted them to continue competing. Their views were consistent as they also indicated lack of parental support as the second highest reason swimmers stopped competitive swimming with a mean of $\bar{x}$ = 2.89. This would follow logically as parental influence on the swimmer included supporting the swimmer, which is the case as the parents facilitate the swimmers by paying for their training, and competition fees and taking them to the venues of competition, thus parental support is of paramount importance for the swimmer to be able to continue being a competitor.

No teamwork and coach favouring some athletes were found to be the two least-stated reasons why swimmers would stop competitive swimming. The coaches indicated there being no teamwork as the least reason at $\bar{x}$ = 4.36 with 93.2% of them accepting this as 47.7% disagreed and 45.5% strongly disagreed with the view that there being no teamwork contributed to the swimmers stopping competitive swimming. Similarly, a large percentage of the coaches (79.5%) were of the view that swimmers did not stop competitive swimming because coaches were favouring some of the swimmers with a mean of $\bar{x}$ = 4.30, as 27.3% of the coaches disagreed and 52.2% strongly disagreed to the statement. This response was expected as the coaches may not have wanted to seem to be the major reason among social attributes contributing to swimmers stopping competitive swimming. Out of the 10 items assessed concerning social attributes influencing attrition from the views of coaches, 7 of the items scored a mean above 3, which indicated that as per the views of coaches, swimmers were not so much influenced to stop competitive swimming because of social attributes.

Table 4.5.4 shows the comparison of the perception of social attributes among all the respondents and the p-value between the respondents.

Table 4.5.4: Comparison of Perception of Social Attributes on Attrition in Competitive Swimming among Coaches, Active and Former Swimmers.

Dependent Variable	Participants	Mean	Std Deviation	P-Value
Social	Active Swimmers	2.32	0.35	
	Former Swimmers	3.23	0.62	0.000*
	Coaches	3.57	0.62	
	Active swimmers	2.32	0.35	0.000*
	Coaches	3.57	0.62	
	Former Swimmers	3.23	0.62	0.001*

*significantly different at $p \leq 0.01$

As indicated earlier (table 4.3.1), social attributes were found to significantly influence attrition in competitive swimming with a mean of 2.66 ± 0.67. Comparing each category of respondents, active swimmers were more influenced by social attributes with a mean of 2.32 ± 0.35 followed by former swimmers at 3.23 ± 0.62, and were least viewed as an influencer by coaches at 3.57± 0.62. Mann-Whitney U test was used to establish if there was a significant difference between any of the respondents. The results revealed that there was a significant difference between active and former swimmers, U (N active swimmers =394, $N_{\text{former swimmers}}$ =148,) = 3951.00, z = -15.579, p < 0.000. It was also significantly different between coaches and active swimmers, U ($N_{\text{active swimmers}}$=394, N_{coaches} =44) = 4635.00, z = - 4.3858, p <0.000, and also between former swimmers

and coaches, U ($N_{\text{former swimmers}}$=148, N_{coaches} =44) = 1889.00, z = - 4.012, p <0 .001 as shown in table 4.5.4

This finding supports the findings of other studies (Crane & Temple 2015; Vella, Cliff & Okely, 2014; Mallet &Hanrahan 2004) that consistently indicate the pivotal role significant others have on athletes. Though this study did not establish any negative influence of significant others on athletes, leading to dropping off from the sport, studies (Bronfenbrenner & Morris, 2016; Knight et al, 2016) have shown that coaches and parents may have a negative influence on athletes as they put pressure on the athletes to excel. Influence of social attributes was however not as high among former swimmers, who had a mean of 3.23 which was leaning towards not influencing much. Similarly, the coaches' mean score of 3.57 was leaning towards not influencing. The former swimmers and coaches did not feel that the social attribute influenced attrition in competitive swimming. This is contrary to studies (Graupensperger et al, 2018; Knight, Dorsch, Osai, Haderlie & Sellars, 2016; Crane & Temple 2015; Vella, Cliff & Okely, 2014) that have shown the influence of significant others on participation and consistency in sports. This may however be attributed to probably that most coaches are based in educational institutions and their swimmers are within the same institution so the friends are already in their schools and get to interact and be with them even if they are not in the swimming team. Similarly, probably most of the former swimmer respondents in the study had gone to educational institutions where most of their friends were and got to be with them when not swimming or training. Swimming being an individual sport, probably the former swimmers who responded did not feel the strong social connection of peers as they may been having private swimming training sessions and therefore did not interact much.

4.6 Assessment of Structural Attributes on Attrition from Competitive Swimming in Kenya.

The study examined if structural attributes were perceived to affect attrition in competitive swimming in Kenya by reviewing the responses of active swimmers, former swimmers and swimming coaches. Structural attributes were measured using items that focused on the selection process for teams, incentives and awards given at the competitions, availability of funds, financing and facilitation, availability and access to a swimming pool, and academic load.

The participants were required to respond to the construct items showing the extent to which they agreed or disagreed with the statement, on a Likert scale of 1 to 5, where 1 indicated the highest degree of agreeing with the statement and 5 indicated the lowest degree of agreeing with the statement.

Former swimmers responded to eight items indicating the influence of structural attributes on their attrition in competitive swimming. Table 4.6.1 shows the frequencies and composite mean for each of the items used to assess the influence of structural attributes on attrition among former swimmers.

Table 4.6.1: Frequencies of Responses by Former Swimmers on Structural Attributes Affecting Attrition in Competitive Swimming

Structural Attributes (Facilitation to competitions and training, access to facilities, academics, awards, selection, recognition)	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	**Composite Mean of Likert Scale**
I stopped competitive swimming because.…	**%**	**%**	**%**	**%**	**%**	**$\bar{x}$ Max= 5**
….did not have adequate chances to travel to compete	0	83.1	5.4	6.1	5.4	**2.34**
…..did not like the awards	4.1	73.6	0	10.8	11.5	**2.52**
….not have adequate access to the swimming pool	2.7	9.5	5.4	77.7	4.7	**3.72**
….not have adequate chances to compete	6.7	75.0	2.7	6.8	8.8	**2.36**
….not get enough recognition	6.7	70.9	4.1	9.5	8.8	**2.43**
….had to put more time into academics	13.5	68.9	0	11.5	6.1	**2.28**
….had limited finances to pay for events	9.4	8.1	0	70.3	12.2	**3.68**
….had no one to take me for training and competition	4.1	66.8	0	16.9	12.2	**2.66**

KEY:
SA- Strongly Agree-1; A- Agree- 2;NS- Not Sure- 3; D-Disagree- 4; SD- Strongly Disagree- 5

The findings indicated that having to put more time into academics contributed most to their attrition in competitive swimming with a mean of $\bar{x} = 2.28$. A majority of the former swimmers (82.4%) accepted this view with 13.5% agreeing and 68.9% strongly agreeing that having to put

more time into their academics contributed to them stopping competitive swimming. This was captured by the views of some former swimmers during the interview sessions:

Former Swimmer-1:

> *"I decided to stop competitive swimming as I had a lot of school work and assignments and could not be able to finish if I was to continue with the regime of training, both morning and evening. I had to be in school by 8 am and leave at 5 pm, it was hectic to rush from training to school and from school to training, yet it's the grades you get in the national (KCPE and KCSE- Kenyan system of education) or international exams (GCE or IGCE) that determine your next placement and no waivers are given even if you had competed for the country…"*

Former Swimmer-2:

> *"When I was in class 7 (one year before Kenya National primary school exams), our swimming and PE classes were removed from the timetable, so we stopped going for sports as the school wanted us to concentrate on academics so that we could all pass and ensure the school maintains its top 10 position in the country… after that, I had lost interest in competitive swimming".*

The second major reason cited by the swimmers that contributed to them stopping competitive swimming was not having adequate chances to travel to compete with a mean of $\bar{x}$ =2.34, where 83.1% of the respondents agreed to this view. The third major reason cited was not having chances to compete with a mean of $\bar{x}$ =2.36, with 75.0% of the respondents accepting this view. These two reasons were supported by the first reason cited, as having to put more time into academics followed logically that they may not have time to compete or travel to compete. Not having

chances to travel to compete may however have been contributed by the selection process, where probably the swimmers felt they were left out of travel in an unbiased manner to represent the team or country and therefore felt discouraged to continue competing. This was captured by some of the views of the former swimmers during interviews;

Former swimmer 1:

> *"Being left behind frequently because I could not raise my air fare ticket to go for an international event even though I had qualified made me feel bad and killed my morale. It's like swimming was only for those who could afford to pay their way to the competitions."*

Former swimmer 2:

> *"I was selected to represent the country in championships taking place in Kenya, then I was asked to pay for accommodation and food within the facility that the team was to reside at,..since four of us could not afford to pay we were replaced by those who paid up, it's just not a fair system…"*

The reason cited as least to contribute to attrition among former swimmers was not having adequate access to the swimming pool with a mean of $\bar{x} = 3.72$ as 82.4 % (77.7% disagreed and 7.7% strongly agreed) of the former swimmers were not of the view that they stopped competitive swimming because they did not have access to swimming pools. Not having finances to pay for events during competitions was the second least reason cited that would contribute to stopping competitive swimming with a mean of $\bar{x} = 3.68$ as 82.5% (70.3% disagreed and 12.2 % strongly disagreed) of them were not of the view that they stopped competing because they could not pay

for the events. This could be attributed to the fact that competitive swimming is taken up by those who can afford access to a swimming pool for training and can also afford the finances to pay for the events to participate in competitions.

Table 4.6.2 shows the frequencies and composite mean for each of the items used to assess the perception of structural attributes on attrition among coaches.

Table 4.6.2: Frequencies of Responses by Coaches on Structural Attributes Affecting Attrition in Competitive Swimming.

Structural Attributes (Facilitation to competitions and training, access to facilities, academics, awards, selection, recognition)	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	**Composite Mean of Likert Scale**
The swimmers stopped competitive swimming because.…	**%**	**%**	**%**	**%**	**%**	**$\bar{x}$ Max= 5**
….did not have adequate chances to travel to compete	34.1	20.5	11.3	31.8	2.3	**2.48**
…..did not like the awards	6.8	6.8	9.1	15.9	61.4	**4.18**
….not have adequate access to the swimming pool	13.6	20.5	9.1	45.5	11.3	**3.20**
….not have adequate chances to compete	18.2	11.3	15.9	34.1	20.5	**3.27**
….not get enough recognition	18.2	11.4	9.1	31.8	29.5	**3.43**
….had to put more time into academics	52.4	38.6	0	4.5	4.5	**1.66**
….had limited finances to pay for events	31.8	15.9	15.9	25	11.4	**2.68**
….had no one to take them for training and competition	9.1	18.1	20.5	34.1	18.2	**3.34**

KEY:
SA- Strongly Agree-1; A- Agree- 2;NS- Not Sure- 3; D-Disagree- 4; SD- Strongly Disagree- 5

As shown in table 4.6.2 coaches viewed academics as the major structural reason that swimmers stopped competitive swimming with a mean of $\bar{x} = 1.66$. They indicated that swimmers having to put more time into academics contributed to the swimmers stopping competitive swimming with 90% of the coaches being of this view as 52.4% agreed and 38.6% strongly agreed, as aptly put by some of the coaches during the interviews:

View from coach 1:

> *"Most of the swimmers I train are below 13 years, once they start senior high school or reach class 8 (National Examination Class in Kenyan Education system), they reduce in number as they now concentrate on academics and feel they do not have time to do both efficiently, so they opt to drop swimming…"*

View from coach 2:

> *"The education system in Kenya is not conducive for most athletes. In my club, students in schools following the Kenyan education system (8-4-4) do not have adequate time to train, as they are expected to be in school as early as 7 am, especially from class 6 (about 12-year-olds), leave school as late as 6 pm and have remedial classes on Saturdays. So, most stop competitive swimming as they do not have the time, due to tight academic time schedules…."*

The coaches ranked not liking the awards as the least reason for swimmers stopping competitive swimming with a mean of $\bar{x} = 4.18$ as a large percentage (77.3%) of the coaches accepted this view with 15.9 % disagreeing and 61.4% strongly disagreeing with the fact that the athletes stopped competitive swimming because they did not like the awards. This could be attributed to the fact that most of the respondent coaches interacted with young swimmers who liked the medals, which are awarded to the swimmers. The awards are also seen by the coaches as a way of showing their

excellence in performance as winning teams are awarded trophies that the coaches present to the institutions they work in. The second least reason under structural attributes that was found to least influence attrition as viewed by coaches was swimmers not getting enough recognition with a mean of $\bar{x} = 3.43$ as 61.3 % (31.8% disagreed and 29.5% strongly disagreed) of the coaches were of this view. This was consistent with their view that the swimmers liked the awards and can be attributed to that most coaches were in educational institutions, hence the swimmers were awarded the medals in school assembly, thus the swimmers got recognition for their excellence.

Table 4.6.3shows the frequencies and composite mean for each of the items used to assess the influence of structural attributes on attrition among active swimmers.

Table 4.6.3: Frequencies of Responses by Active Swimmers on Structural Attributes Affecting Attrition in Competitive Swimming

Structural Attributes (Facilitation to competitions and training, access to facilities, academics, awards, selection, recognition)	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	**Composite Mean of Likert Scale**
I would stop competitive swimming if/when…	**%**	**%**	**%**	**%**	**%**	**$\bar{x}$ Max= 5**
….did not have adequate chances to travel to compete	17.7	43.4	0.5	37.1	1.3	**2.61**
…..did not like the awards	9.7	52.8	2	35.5	0	**2.63**
….not have adequate access to the swimming pool	8.4	74.9	1.5	15.2	0	**2.24**
….not have adequate chances to compete	0	55.2	3	32.7	9.1	**1.77**
….not get enough recognition	9.9	24.9	5.8	58.6	0.8	**3.15**
….had to put more time into academics	21.7	20.1	0	50.3	7.9	**2.44**
….had limited finances to pay for events	59.1	17.3	0	16.2	7.4	**2.02**
….had no one to take me for training and competition	18.5	75.6	0	4.1	1.8	**2.28**
…did not have organised coaching	34.3	57.1	7.3	0.5	0.8	**1.76**

KEY:
SA- Strongly Agree-1; A- Agree- 2;NS- Not Sure- 3; D-Disagree- 4; SD- Strongly Disagree- 5

From table 4.6.3, the highest ranked reason among the structural attributes that would influence active swimmers to stop competitive swimming was not having organised coaching with a mean of $\bar{x}$ =1.76, as 91.4% (34.3% agreed and 57.1% strongly agreed) of the active swimmers accepted

this view that if they did not have organised coaching, they would stop competitive swimming, as one of the active swimmers said during the interview sessions:

Active swimmer:

> *"The coach writes and plans out our workouts, he/she also organises how we are to use the pool during the training sessions. At least that organisation makes us do what we are supposed to do within the time set aside, so no time wasting and are able to achieve our goals…"*

The second major reason among the structural attributes that the swimmers indicated would stop them from competitive swimming was not having adequate chances to compete at $\bar{x} = 1.77$ with 55.2 % agreeing with the statement. This was rational as the active swimmers are in the sport to compete, hence if they did not get adequate chances to compete, they would not have any aspiration to be in the sport. Not getting recognition was the reason indicated as the least among the structural attributes that would stop active swimmers from competing at $\bar{x} = 3.15$, with 59.1 % accepting this view, this could be attributed to swimmers being in the sport for the purpose of improving their skills and improving on their performance other than to get recognition.

Table 4.6.4 shows the comparison of the perception of structural attributes among all the respondents and the p-value between the respondents.

Table 4.6.4: Comparison of Perception of Structural Attributes on Attrition in Competitive Swimming among Coaches, Former and Active swimmers.

Variable	Participants	Mean	Std-deviation	p-value
Structural	Active Swimmers	2.32	0.39	
	Former Swimmers	2.75	0.67	0.001*
	Coaches	3.03	0.83	
	Former Swimmers	2.75	0.67	0.247
	Coaches	3.03	0.83	0.301
	Active Swimmers	2.32	0.39	

*significantly different at $p \leq 0.01$

As indicated earlier (Table 4.3.1), structural attributes were found to significantly influence attrition in competitive swimming with a mean of 2.65 ± 0.55 by all respondents. Comparing the responses of each of the three categories of respondents, active swimmers rated structural factors highest with a mean of 2.32 ± 0.39, followed by views of former swimmers at 2.75 ± 0.67 and least among coaches at 3.03 ± 0.83 as shown in table 4.6.4.

To establish if the structural factors contributed significantly between the category of respondents, Mann-Whitney U test was done and the results established that the influence of structural factors was significantly different comparing active and former swimmers U (N active swimmers =394, N former swimmers =148,) = 17925.00, z = -6.94, $p < 0.001$. However, the difference in views of former swimmers and coaches was not significantly different, U (N former swimmers

=148, *N* coaches =44) = 2904.00, *z* = -1.158, *p* = 0.247. Similarly, comparing views of active swimmers and coaches, the difference was not significant, *U* (*N* active swimmers =394, *N* coaches =44) = 11589.05, *z* = -4.56, *p* < 0.301. This was expected and hence the reason why active swimmers were still engaged in competitive swimming in comparison to former swimmers who were no longer in competitive swimming. These results partly concur with the findings of Amusa, Toriola, Onyewadume and Dhaliwall (2008); Hashim (2012); Sirimba (2015), and Craike, Symons, and Zimmerman (2009) who in their findings indicate the extent to which structural attributes are positive towards the athletes, there will be a tendency for prolonged participation in sports. Comparing the different construct items that comprised structural attributes for this study, the findings revolving around the selection process by the respondents, indicated that some of the former swimmers dropped out of competitive swimming because of biased selection. Similarly, some of the active swimmers felt they had been left out unfairly and some coaches indicated that swimmers were selected in an unbiased manner to represent the country, as captured in some of the statements of the respondents.

An active swimmer stated:

> *"I have heard my mum complaining about the criteria the federation uses to select swimmers to represent the team. She feels it is unfair, as some of the national competitions used for selection are by invite only and use FINA points which you earn more if you go for international competitions and attend many other competitions, so even if you are good and do not have many FINA points, you will not be selected…."*

A coach stated:

> *"The selection of your swimmer depends on your cordial relation with the federation officials, parents influence the officials who also happen to be coaches of some of their children. So the conflict of interest causes biases in selection…"*

Johansson and Fahlén (2017) support this finding as they reported that negative impact of the stakeholders which included partly, the manner in which athletes were selected to be part of the national youth teams contributed to athletes dropping out. The ranking system was biased towards those who were not financially privileged, since, for one's ranking to rate high, one had to compete in several recognized competitions to get points, with the international-based championships having higher ranking points. Andronikos, Westbury, and Martindale (2019) also agree with the findings of this study, as athletes were not selected on merit but instead depended on their coach's or parent's connection and network with the national federation. This made many athletes feel unmotivated and withdrew from sports.

The influence of awards and incentives given during competitions was assessed, as one of the construct items under structural attributes that featured a lot in the semi-structured interview sessions. Some of the responses were captured aptly in their statements.

An active 11-year-old swimmer stated:

> *"I like the medals as I am awarded during school assembly hence getting recognition.."*

This was in contrast with the views of a 16-year-old active swimmer:

> *"I have been getting the same medals since I started competing when I was 11 years old. I wish they could give more tangible awards, especially to swimmers who are 16 years and above like sports shop vouchers, laptops, and such stuff. I am not motivated by the*

awards, but I keep competing because I hope to improve my times and get an academic sports scholarship abroad..."

Another active swimmer noted:

"I wish the media would cover swimming more during sports news, this may attract more sponsors and make the awards better and also make us swimmers get more recognition….Then we can also be in advertisements and such like promotions…exposure by media will assist us to get the kind of recognition that Kenyan footballers or runners get…recognition is a form of incentive."

A coach stated:

"You cannot be awarding the same swimmer the same kind of medals you awarded them when they were 9- 10 years old when they are 16 years old and above, especially the few in the University who still compete and were competing when they were much younger. We have to look for better incentives for the older swimmers to keep them in competition."

A former swimmer noted:

"I have a box full of medals from way back when I started competing, 10 years ago, I will give them out or donate to a competition at some time….the medals were no longer motivating, I had hoped to get a sports scholarship after my O- levels because of swimming, but was not successful, so I stopped competitive swimming since there was no motivation for further competition..."

Most of the swimmers who had competed were no longer motivated by the medals, which is what is awarded at swimming competitions. This finding is also supported by (Ekuri, 2018; Ongalo, 2014; Njororai, 2012). The athlete expects to be rewarded for their achievement, with awards commensurate to their performance. Hence the reason why professional athletes in various sports choose what events to compete in and those not to. Preference for the various kinds of incentives has been found to have some correlation with age of the swimmer, with younger athletes (below 12 years) being content with parental approval "lesser value" awards such as ribbons and medals, which are awarded especially in institutional setups. These incentives play a key role in motivating the athletes' performance and persistence in a sport and have also been found to direct and energize performance. The young adult athlete where most elite athletes fall under the age bracket of 18 to 27 years, in addition to public recognition, now prefers longer-term tangible rewards like some form of income, employment, and academic scholarships that can accommodate their studies and sports training.

Academic load was found to influence the respondents in attrition in competitive swimming, more so among former swimmers and from the views of coaches. The findings of this study is supported by (Bauman, Reis, Sallis, Wells, Loos & Martin, 2012; Armentrout & Kamphoff, 2011; Wetton, Radley, Jones & Pearce, 2013) who found time constraint as a result of academics has been stated as one of the frequent causes of reduced participation and attrition in sports. The respondents in these studies indicated that timetable schedules do not favour engagement in sports as adequately as they would like to, as lessons begin very early and also have evening and weekend classes scheduled. As Jago and Baranowski (2004) found in their study, this was also prevalent in the study as academic structural programmes within educational institutions have been stated by many students as a constraint for their decline in participation in sports. The starting and ending time of

academic classes does not favour them to participate in sports as classes, especially in higher classes in primary and secondary schools as students near national examination classes. Since most schools were under pressure to raise and maintain high academic performance thus time that would otherwise be devoted to sports and other extra-curricular activities that are done before and after school was redacted from the curriculum for students in upper classes.

Other constructs assessed under structural attributes concerned financing, facilitation to attend competitions, organised training, and access to the swimming pool, were not a major concern to a majority of the respondents, as most indicated they had the support of their parents who paid for their training and facilitated their competitions. However, financing and facilitation and partly access to the swimming pool was a major concern among swimmers at university as captured by the views of one of them:

> "*Our university does not support us, they always say they do not have money, so we pay for ourselves to participate in events using money we are given by our parents for our upkeep at the university, so the two or three of us who go for the competitions only pay for events we can afford. We also have to use our money as fare to and from the venue and to buy lunch. This has made some of the good swimmers we know in our university to stop competing in swimming".*

Another student responded that:

> *"Our university does support us, though there are events we would like to participate in but are not able to as they say their budget is limited, so we only attend maybe three events organised by the Kenyan University Sports Federation in a season".*

A third student noted:

> *"Our training time is limiting as some of the swimmers cannot fit within the time set aside for training as we have varied timetable schedules due to the different programmes we pursue. The times they are available, the pool is in use by academic classes, so cannot train or is not open late in the evening. This has made some swimmers stop competitive swimming as they are not able to be consistent in training".*

Casey and Harvey (2010) and Wicker Hashim (2012) support the findings of this study as convenience of access to sporting facilities is a factor of concern that influences participation in sports. The findings of this study also concur with Shehu, (2012) as he noted that Kenyan Universities were underfinanced in sports and suggested practical policy solutions to finance sports by finding other sources of generating finances to run their sports programmes effectively other than sports departments only relying on budgetary allocations from the university management.

4.7 Assessment of Psycho-Social and Structural Attributes on Attrition in Competitive Swimming in Kenya across Gender.

The fourth research question in the study sought to find out if gender influenced attrition in competitive swimming in Kenya. The influence of gender on psychological, social, and structural attributes was assessed, to establish the extent to which each of the attributes was influenced by gender on the rate of attrition in competitive swimming. The construct items for each of the attributes were assessed using questionnaires for the three categories of respondents, where the responses were combined for each attribute across gender to get a composite mean for each attribute.

Table 4.7.1 shows a summary of responses (composite mean) for each of the three attributes among all the respondents across gender.

Table 4.7.1 Influence of Gender on Psychological, Social and Structural Attributes Affecting Attrition in Competitive Swimming.

Attribute	Gender	Mean	Std Deviation	P-Value
Psychological	Female	2.802	0.031	
	Male	2.807	0.033	0.273
Social	Female	2.60	0.037	
	Male	2.71	0.040	0.106
Structural	Female	2.65	0.033	
	Male	2.64	0.29	0.231

*significantly different at $p \leq 0.01$

Among the females, the social attribute was ranked highest (2.60±0.037) followed by structural (2.65±0.033) and psychological (2.802±0.031). Among the male respondents, structural attributes were ranked highest (2.64±0.29), followed by social (2.71±0.040) and psychological (2.807±0.033). However, analysis from Mann-Whitney U test revealed that gender did not significantly influence any of the attributes under study. Specifically, Mann-Whitney U test results on psychological attribute found; U (N_{males} =333, N_{females} =253) = 39902.50, z = -1.096, p =0.273; for the social attribute, U (N_{males} =333, N_{females} =253) = 38851.00, z = -1.618, p =0.106 and for structural attribute; U (N_{males} =333, N_{females} =253) = 39700.50, z = -1.198, p = 0.231. The findings of this study showed no significant difference across gender on any of the attributes under study

(psychological, social, and structural) in attrition in competitive swimming. These findings are not unique to this study as other studies (Kang, 2013; Salguero, Gonzalez-Boto, Tuero & Marquez, 2004; Dusko, 2009), cited the reasons for athletes dropping off competitive sports being similar across gender, the difference being order in which they were placed. In this study, females ranked social attributes highest in comparison to the other two attributes, where social attributes revolved around the influence of significant others including parents, peers, and the coach. If their friends did not swim or stopped swimming, they also were likely to drop out of swimming. Similarly, if they felt the coach was not supportive and probably favoured some of their teammates more, they would most likely stop competitive swimming. Females also indicated that if their parents were not supportive or pressured them to compete they were likely to drop out of swimming. This finding is supported by (Molloy, Dixon, Hamer & Sniehotta, 2010) who found social support to be a major determinant for consistency in the participation of females in sports compared to males with females requiring more encouragement from their friends and peers than males. Females place greater importance on social aspects of the sport thus team orientation, cohesion, and social support attract females and make them consistent in sports (Warner and Dixon 2015). Similarly, neighbourhoods that are more accommodative for participation in sports have been found to influence females more than males (Velasquez, Holahan & You, 2009) which agrees with the findings in this study. This study has also shown that the coach plays a major role in influencing attrition in swimming which concurs with the finding by Warner and Dixon (2015) that found dissatisfaction with the coach was among the major constraints affirmed by female athletes.

Further analysis across gender on each of the three categories of respondents (coaches, active and former swimmers) as shown in table 4.7.2 shows the level of influence each had on the dependent variables under study influencing attrition in competitive swimming.

Table 4.7.2 shows a comparison of the influence for each of the three attributes among each of the category of respondents across gender.

Table 4.7.2: Comparison of Influence of Gender across Coaches, Active and Former Swimmers on Psycho-Social and Structural Attributes Affecting Attrition in Competitive Swimming.

	Gender	Psychological	p-Value	Structural	p-Value	Social	p-Value
Coaches	Male n=33	3.27 ±0.78		2.97±0.92		3.56±0.65	
	Female n=11	3.18±0.72	0.724	3.02±0.52	0.578	3.57±0.54	0.891
Active Swimmers	Male n=176	2.77±0.43		2.56±0.38		2.32±0.32	
	Female n=218	2.69±0.43	0.036	2.47±0.39	0.009*	2.32±0.38	0.990
Former swimmers	Male n=82	2.94±0.78		3.01±0.73		3.18±0.56	
	Female n=66	2.81±0.56	0.465	2.78±0.56	0.027	3.39±0.64	0.231

*significantly different at $p \leq 0.01$

As shown in table 4.7.2, male coaches were of the view that structural attributes influenced attrition among swimmers most at 2.97±0.92, followed by psychological (at 3.27 ±0.78) attributes and then social attributes (3.56±0.650. The female coaches were also of the view that structural attributes influenced attrition of competitive swimmers most at 3.02±0.52 followed by psychological attributes and then social factors at 3.18±0.72 and 3.57±0.54 respectively. The male coaches ranked both structural and social attributes higher than the female coaches who ranked the influence of psychological influence higher. Further analysis from Mann-Whitney test revealed that among coaches, gender did not significantly influence any of the attributes under study.

Specifically, Mann-Whitney U test results on psychological attribute found; U (N_{males} =33, $N_{females}$ =11) = 168.500, z = -.353, p = .724, for the social attribute, U (N_{males} =33, $N_{females}$ =11) = 176.500, z = -.137, p = .891 and for the structural attribute, U (N_{males} =33, $N_{females}$ =11) = 161.000, z = -.557, p = .578.

Among the active swimmers, both male and female swimmers, rated social attributes as the factor influencing their attrition most, followed by structural and psychological attributes. The social attributes influenced both males and females at almost the same level which was 2.32±0.32 and 2.32±0.38 respectively. Females were influenced more by structural attributes at 2.47±0.39 compared to the male swimmers at 2.56±0.38. Similarly, the female swimmers were influenced more by psychological attributes at 2.69±0.43 compared to the male swimmers at 2.77±0.43. Further analysis from Mann-Whitney U test revealed that among active swimmers, gender was influenced by structural attributes significantly at U (N_{males} =176, $N_{females}$ =218) = 16239.000, z = -2.628, p = .009. However, gender did not have a significant influence on psychological attributes at U (N_{males} =176, $N_{females}$ =218) = 16833.000, z = -2.095, p = .036 and social attributes, U (N_{males} =176, $N_{females}$ =218) = 19170.000, z = -.013, p = .990.

Among former swimmers, males ranked psychological attributes the highest, followed by structural and social attributes. The females ranked structural attributes highest, followed by psychological and social attributes. Females rated the psychological and structural attributes higher than their male counterparts, where for the psychological attributes, the mean was 2.81±0.56 while for the males the mean was 2.94±0.78. Similarly, for the structural attributes, the mean among the females was 2.78±0.56 while for males, the mean was 3.01±0.73. However, the social attributes were rated higher by the males at 3.18±0.56 compared to females at 3.39±0.64. This latter finding is however contrary to studies by (Molloy, Dixon, Hamer & Sniehotta, 2010; Warner & Dixon

2015) that had shown female athletes are influenced more by significant others than males. Further analysis from Mann-Whitney U test revealed that among former swimmers, gender did not significantly influence any of the attributes under study. Specifically, Mann-Whitney U test results on psychological attribute found, U (N_{males} =82, $N_{females}$ =66) = 2524.000, z = -.730, p = .465, for social attributes, U (N_{males} =82, $N_{females}$ =66) = 2405.500, z = -1.198, p = .231 and for structural attributes, U (N_{males} =82, $N_{females}$ =66) = 2211.500, z = -2.212, p = .027. These findings are supported by other studies (Kang, 2013; Salguero, Gonzalez-Boto, Tuero & Marquez, 2004; Dusko, 2009) that cite the reasons for athletes dropping off competitive sports being similar across gender, the difference being the order in which they were placed.

4.8 Assessment of Psycho-Social and Structural Attributes on Attrition in Competitive Swimming in Kenya Based on Age.

The study aimed at examining the influence of age on selected psychological, social, and structural attributes on participation and attrition in competitive swimming in Kenya. The analysis captured the ages of the active swimmers and the coaches. Former swimmers were not analysed as all respondents in the study were aged between 18 and 24 years and thus were in the same age group category and therefore did not have a comparison age group to establish if their views were significantly different from any other former swimmers. The other analysis related to age that was assessed was the age of the coaches, where views of youth coaches (under 35 years) were compared to non-youth coaches (above 35 years) to assess if their views were significantly different.

4.8.1 Assessment of Psycho-Social and Structural Attributes on Attrition in Competitive Swimming in Kenya Based on Age of Swimmer.

The study examined whether the age of the swimmer influenced their views on psychological, social and structural attributes in attrition. The age group categories in competitive swimming in Kenya are categorized as; ≤ 7 years, 8-9 years, 10-11 years, 12-13 years 14-15 years, and ≥16 years. Only swimmers above 10 years (1,646) were sampled, as children below 10 years are still developing cognitive skills and generally give "satisfying" responses, especially for questionnaires with a Likert scale (Mellor and Moore, 2013).

Table 4.8.1 shows the composite mean of responses across age of swimmers among psychological, social and structural attributes affecting attrition in competitive swimming.

Table 4.8.1 Influence of Age of Swimmers on Psychological, Social and Structural Attributes Affecting Attrition in Competitive Swimming.

Age	**10-11 Yrs n = 51**		**12-13 Yrs n = 85**		**14-15 Yrs n = 56**		**≥16 Yrs n = 202**	
	Mean	StdDev	Mean	StdDev	Mean	StdDev	Mean	StdDev
Social	2.19	0.17	2.23	0.29	2.16	0.20	2.44	0.41
Structural	2.33	0.45	2.45	0.41	2.44	0.35	2.60	0.36
Psychological	2.71	0.48	2.83	0.42	2.74	0.50	2.68	0.39

Comparing each of the four age groups, each of them was influenced most by social attributes, followed by structural and psychological as shown in table 4.7.1 However, the 14-15 year age group of swimmers rated social attributes highest with a mean of 2.16 ± 0.20 followed by the 10-11 year age group with a mean of 2.19 ± 0.17, the 12- 13 year age group with a mean of 2.23 ± 0.29 and least influenced the ≥16 year age group with a mean of 2.44 ± 0.41. Structural attributes

were rated highest by the 10-11 year age group with a mean of 2.33 ± 0.45 followed by the 14-15 year age group at 2.44 ± 0.35, the 12-13 year age group with a mean of 2.5 ± 0.41 and least influenced the ≥16 year age group at 2.60 ±0.36. Psychological attributes were rated highest by the ≥ 16-year age group with a mean of 2.68 ±0.39, followed by the 10-11-year-old age group at 2.71 ±0.48, the 14-15-year-old age group with a mean of 2.74 ±0.50 and least influenced the 12-13-year-old age group at 2.83± 0.42.

Table 4.8.2 shows the pairwise comparison across the categories of the age of active swimmers on structural, social and psychological attributes affecting attrition in competitive swimming.

Table 4.8.2 Comparison of Influence of Age of Active Swimmers on Structural, Social and Psychological Attributes Affecting Attrition in Competitive Swimming.

	Structural				Social				Psychological			
	10-11	12-13	14-15	16>	10-11	12-13	14-15	16>	10-11	12-13	14-15	16>
10-11	-	0.054	0.226	0.001*	-	0.300	0.439	0.000*	-	0.113	0.778	0.229
12-13		-	0.494	0.043*		-	0.075	0.000*		-	0.488	0.001*
14-15			-	0.012*			-	0.000*			-	0.043*

******Significant *p* value at ≤.05 Pairwise comparison using Mann-Whitney U test

Pairwise comparison using Mann-Whitney U test between the various age categories (Table 4.7.2) shows significant difference only existed between active swimmers in the age group of 16 years and above with each of the other three age categories (10-11,12-13, 14-15) across the three dependent variables (structural, social and psychological). Specifically, on structural attributes significant difference existed between the following groups, U ($N_{10\text{-}11\text{years}}$ =51, $N_{\geq 16\text{years}}$ =202) = 3555.500, z = -3.426, p = 0.001}; U ($N_{12\text{-}13\text{years}}$ =85, $N_{\geq 16\text{years}}$ =202) =7291.000, z = -2.021, p = 0.043}; U ($N_{14\text{-}15\text{years}}$ =56, $N_{\geq 16\text{years}}$ =202) = 4417.500, z = -2.513, p = 0.012}. In relation to social attributes, a significant difference between the age group 16 years and above was identified with

each of the following age categories, U ($N_{10\text{-}11years}$ =51, $N_{\geq 16years}$ =202) = 3053.000, z = -4.526, p = 0.00}; U ($N_{12\text{-}13years}$ =85, $N_{\geq 16years}$ =202) =5902.500, z = -4.212, p = 0.000}; U ($N_{14\text{-}15years}$ =56, $N_{\geq 16years}$ =202) = 3058.000, z = -5.295, p = 0.000}. Whereas with psychological attributes significant difference was identified between active swimmers in the age category ≥16 years and 12-13 years, p = 0.01 and between ≥16 years and 14-15 years p = 0.04.

The finding in this study is related to that of Eime, Harvey and Charity (2016) that indicated the participation rate declined considerably during adolescence (15-19 years) as they cited various factors significantly influencing them to stop competing in sports, compared to other age groups. As children age, the participation rate in sports declines (Basterfield et al., 2015), and the level of influence of factors that contribute to dropout in sports changes as children develop and grow socially and physically (Woods, Tannehill, Quinlan, Moyna & Walsh, 2010). The findings of Basterfield et al (2015) indicate that at the adolescent age, the responses to stop participation in sports, predominantly revolved around intrapersonal factors and peers, such as no longer having an interest in the sport, had other things they preferred to do other than sports, feeling they were no longer improving, the awards they receive not motivating them, and that they no longer wanted to be engaged in sports where their friends were not, as peer acceptance and fitting in was an important dimension at this age compared to when they were younger. The findings of this study also agree with those of Zimmermann-Sloutkis, Wanner, Zimmermann and Martin (2010) as the age group above 16 years cited major reasons for dropping out of competitive swimming to be related to psychological and structural attributes as they now had other engagements such school work and other interests they may have acquired thus not having time to be engaged as a competitive swimmer as they did not have adequate time to train. However, the findings by Kang (2013) differ slightly in ranking order in which the factors influencing the decline in participation

in sports are placed in the age group of athletes aged 9- 25 years. From the study, the respondents rank structural attributes first, followed by psychological and social. Among the Kenyan swimmers, despite the different age group categories, they ranked social attributes first, followed by structural and psychological.

4.8.2 Assessment of Psycho-Social and Structural Attributes on Attrition in Competitive Swimming in Kenya, Based on Age of Coach.

The study assessed whether the age of the coach influenced their views on psychological, social and structural attributes influencing attrition among competitive swimmers. The age range of the coaches was between 24 years and 64 years with a mean age of 40.98 years. The coaches were categorized as youth (under 35 years) and non-youth (above 35 years) as stipulated in the Kenyan constitution, where youth are persons under 35 years. From the data, there were 12 (27.3%) coaches under 35 years and 32 (72.7%) coaches who were 35 years and above. The results showed that despite the age of the coaches (youth and non-youth), they ranked the attributes in the same order, with structural attributes being ranked first, followed by psychological attributes and then social attributes. As shown in table 4.7.3 no significant difference was found between the two categories of age of the coaches on any of the attributes. However, the non-youth-age coaches rated the three variables higher than the youth-age coaches. For psychological attributes, the non-youth age coaches (above 35 years) rated psychological higher at 3.22 ± 0.75 than youth coaches (under 35 years) at 3.32 ± 0.80, Mann- Whitney U test results, found coaches' age had no significant influence on psychological factors influencing swimming attrition, U (N youth coaches =12, N non-youth coaches =32) = 203.5, $z = -.164$, $p = .870$.

Table 4.8.3 shows the comparison of the influence of psychological, social and structural attributes affecting competitive swimming across the age categories of the coaches.

Table 4.8.3: Comparison of Influence of Age of Coach on Psycho-Social and Structural Attributes Affecting Attrition among Competitive Swimmers.

Coaches	(n)	Psychological			Social			Structural		
		Mean	StdDev	*p*-value	Mean	StdDev	*p*-value	Mean	StdDev	*p*-value
Youth (≤ 35 Years)	12	3.32	0.80	0.870	3.57	0.74	0.939	3.06	0.88.	0.830
Non Youth (>35 Years)	32	3.22	0.75		3.56	0.57		2.95	0.82	

For the social attributes, the views of youth age (under 35 years) and non-youth age coaches (above 35 years) did not differ much with non-youth age coaches rating social attributes at 3.57 ± 0.74 and youth age coaches rating the social attributes at 3.56 ± 0.57. Mann Whitney U test established the age of the coach had no significant influence on social attributes associated with swimmers' attrition, U ($N_{\text{youth coaches}}$=12, $N_{\text{non-youth coaches}}$ =32) = 207.000, z = -.076, p = .939.

When the coaches were asked whether they felt structural attributes contributed to swimmers' attrition, results revealed that non-youth age coaches (above 35 years) rated the structural attributes higher at 2.95 ± 0.82 compared to youth age coaches (below 35 years) at3.06 ± 0.88. However, there was no significant variation between the youth and non-youth coaches on the influence of structural factors on swimmers' attrition, U (N youth coaches =12, N non-youth coaches =32) = 201.500, z = -.215, p = .830. This study is supported by the findings of Dimec and Kajtna, (2009), who found younger coaches (under 35 years) rated problems lower as they were more open to new ideas and ways of solving challenges they encountered.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the findings, conclusions and recommendations based on the findings. The chapter ends with areas for further research.

The study sought to assess attributes that affect attrition in competitive swimming in Kenya and was guided by the following objectives:

1. To assess the psychological attributes (having other interests and perceived competence) that affect attrition in competitive swimming in Kenya.
2. To determine the social attributes (relationship with significant others-parents, peers, coaches) that affect attrition in competitive swimming in Kenya.
3. To examine the structural attributes (funding and sponsorship, facilities and equipment, incentives and awards, academics and selection process) that affect attrition in competitive swimming in Kenya.
4. To establish the influence of gender on attrition in competitive swimming in Kenya.
5. To assess whether age influences attrition in competitive swimming in Kenya.

5.2 Summary of Findings

The study's primary objective was to establish if selected psychological, social and structural attributes affect attrition in competitive swimming in Kenya. Views from active competitive swimmers, former competitive swimmers and swimming coaches were collected and analyzed. The respondents indicated that the psycho-social and structural attributes under study significantly affected attrition in competitive swimming. The results from all the respondents showed that structural attributes had the highest influence followed by social attributes and then psychological

attributes. Comparing each of the three groups of respondents, all three attributes under study (psychological, social and structural) were each rated highest by active swimmers who ranked social attributes highest, followed by structural attributes and then psychological. Former swimmers ranked psychological attributes highest, followed by structural and then social. Whereas among coaches, structural attributes were ranked highest, followed by psychological and then social. It was established that active swimmers were influenced more by each of the attributes than the former swimmers. This was attributed to probably to the fact that they were still engaged in the sport, thus the attributes affected them more directly. A significant mean difference was established among the three groups on psychological and social attributes affecting swimming attrition. On structural attributes, there was no significant difference between coaches and former swimmers, however, there was a significant difference between coaches and active swimmers and between active swimmers and former swimmers.

Assessment of Psychological Attributes on Attrition in Competitive Swimming

Psychological attributes that were investigated cogitated around intrapersonal factors which included having other interests such as other sports and perception of competence which included skill improvement and performance during competition. Psychological attributes were found to significantly influence attrition among the respondents and were ranked as the attribute that had the least influence on attrition among the three attributes under study. Specifically, psychological attributes were rated highest by active swimmers, followed by former swimmers and then coaches. There was a significant difference in the influence of psychological attributes between coaches and active swimmers and between coaches and former swimmers. However, there was no significant difference in psychological attributes between active and former swimmers. The latter was attributed to probably the attribute being an intrapersonal factor where both active and former

swimmers had direct experience in contrast to coaches whose views were from an observational point.

The major psychological attribute that affected former swimmers to stop competitive swimming was that they had other interests they picked up which included other sports and other activities. This was attributed to the fact that probably that the swimmers may have moved to other educational institutions and got an opportunity to take up these other activities and sports that they may not have had before. The second major reason related to psychological attributes was swimmers felt they did not get enough challenge during training and competition, and thus did not feel inspired to continue competing as there were no competitors to push them to do better. Training being hard and having reached their maximum potential were the least reasons cited by former swimmers among the psychological attributes that contributed to them stopping competitive swimming. The coaches viewed swimmers having other interests and wanting to play other sports as the major reasons swimmers stopped competitive swimming among the psychological attributes. The coaches attributed this to probably the swimmers having started competitive swimming at a very early age and did not get a chance to play any other sport, until later when they had a choice of other sports. In view of the coaches, swimmers being bored by the training regime was the reason least stated by the coaches for swimmers who stopped competitive swimming. This was considered a biased view as the coaches may not have wanted to be viewed that their training regime was not interesting and varied to the swimmers. Among the active swimmers, concerning the psychological attributes, they indicated the major reasons that would make them stop competitive swimming were if they felt they had reached their maximum potential and if their skills were no longer improving. Having other things to do and not liking the pressure of competition were the least reasons related to psychological attributes that would influence the

competitive swimmer to stop competitive swimming. This followed logically as being active swimmers, they were in the sport because they do not mind the pressure that comes with being a competitor and were also in the sport because they liked swimming more than their other interests.

Assessment of Social Attributes on Attrition in Competitive Swimming

Social attributes were assessed by evaluating the influence of significant others including coaches, parents and friends on attrition in competitive swimming. Social attributes were found to significantly influence attrition and ranked as having the second most influence among the three attributes under study. A significant difference was found between each of the three groups of respondents with active swimmers rating the influence of social attributes highest, followed by former swimmers and rated least by coaches.

Among the social attributes, the main reasons former swimmers stopped competitive swimming were that they were not with their friends and did not meet new friends. Their parents not wanting them to continue competing was the reason least stated that would have contributed to them dropping out of competitive swimming as they had the support of their parents. The other lesser reason that would have contributed to them dropping out was their coaches emphasizing winning. For the active swimmers, the major reasons that contributed to them stopping competitive swimming were their parents stopping to support them and if they no longer liked being on the team. This was logical as they require the support of their parents to remain in competitive swimming as their parents facilitate financing for training and competition, similarly, if they did not like being in the team, they would not be in the team. The least stated reasons that would contribute to them dropping out of competitive swimming were the coach emphasizing winning

and friends stopping to swim. Being competitors, they did not mind the coach emphasizing winning as the purpose of competition is to excel which can be measured through winning.

For the coaches, the major reasons related to social attributes that they viewed would contribute to the swimmers dropping out of competitive swimming was the parents of the swimmers no longer encouraging the swimmers to continue competing and not supporting the swimmers. The parents provided finances to facilitate the swimmers in training and competition, thus if they stopped supporting the swimmers, they would drop out of competitive swimming. The coaches indicated the least reasons related to social attributes that would contribute to swimmers dropping out of competitive swimming would be no teamwork and the coach favouring some teammates. This was considered a biased view as the coaches may not want to seem to be contributing to attrition among competitive swimmers.

Assessment of Structural Attributes on Attrition in Competitive Swimming

Structural attributes were measured using items that focused on the selection process for teams, incentives and awards given at the competitions, availability of funds, financing and facilitation, availability and access to a swimming pool and academic load. The influence of structural attributes was not found to significantly influence attrition in competitive swimming among all respondents. Similarly, comparing the categories of respondents, there was no significant difference in the influence of structural attributes between coaches and active swimmers and between coaches and former swimmers. However, there was a significant difference in structural attributes between active and former swimmers, hence the reason why active swimmers were still engaged in competitive swimming in comparison to former swimmers who were no longer in competitive swimming.

Comparing responses of each of the three categories of respondents, active swimmers rated the influence of structural attributes highest, followed by coaches and was rated least by former swimmers. For the former swimmers, the major reasons cited under structural attributes that influenced attrition in competitive swimming included having to put more time into academics and not having adequate chances to travel to compete. The former swimmers indicated that they had to put more time into academics as the academic workload increased, thus having no time or reduced time to train and participate in competition. The former swimmers also indicated that unbiased selection to travel to compete, contributed to them dropping out of competitive swimming. The least reasons they cited for dropping out of competitive swimming were not having adequate access to the swimming pool and limited finances to pay for events, this was rational as most competitive swimmers have access to swimming pools and can afford to pay for the events they participate in during competitions, thus this would not deter them from being competitors.

The coaches indicated swimmers having to put more time into academics and not having adequate chance to travel for competitions as the major reasons the swimmers stopped competitive swimming. Similar to the former swimmer, the coaches indicated that academic workload reduced the training and participation frequencies of the swimmers, most of whom eventually stop as they can no longer train consistently. Similarly, coaches indicated that there was a biased and unfair selection of swimmers into teams representing the country, thus discouraging some swimmers from the sport. The coaches indicated swimmers not liking the awards and not getting enough recognition as the least reasons that would contribute to swimmers stopping competitive swimming. This view could be attributed to being biased as the awards given during the competitions included trophies which the coaches presented in schools they taught thus an indication of their excellence and also recognition of their performance.

Among the active swimmers, concerning structural attributes, the major reasons they indicated that would contribute to them stopping competitive swimming was if they did not have organised coaching and limited finances to pay for events to compete in. The active swimmers appreciated the need for organised coaching and finances to enable them to have effective training and consistent competing opportunities respectively. The reasons they indicated that would least influence them to stop competitive swimming was if they did not get adequate recognition, this could be attributed to the fact that they may be in the sports for purpose of excelling and getting opportunities to travel and probably get academic scholarships other than public recognition.

Availability of swimming pools was not cited as a major concern, as the respondents were already involved in the sport, only the swimmers at the university level found access to their facility an issue as their timetables were varied and the time they were available to use the swimming pool, it was either closed (evening) or was in use by other groups for academic classes. Thus they did not get time to train and eventually stopped competitive swimming.

Financing and facilitation to participate in the competitions were found to be a barrier mainly among the university students as the institutions did not have adequate funds to facilitate their participation, thus they used their own money (to pay for the events) or only attended limited competitions. This led to a decline in the number of competitive swimmers who either dropped from the sport or joined other sports that were not as expensive.

Influence of Gender on Attrition in Competitive Swimming

The influence of gender on psychological, social and structural attributes was assessed, to establish the extent to which each of the attributes was influenced by gender on the rate of attrition in competitive swimming. Gender was found not to have any significant influence on any of the dependent variables. However, the ranking order of the attributes was different by gender as male

respondents ranked structural attributes as the most important, followed by social attributes and psychological attributes influencing attrition in competitive swimming. The female respondents ranked social attributes as the most important followed by structural and psychological attributes influencing attrition in competitive swimming. Females rated psychological and social attributes higher than males however, they rated structural attributes higher than females. Females were influenced more by intrapersonal factors concerning competence, having other interests, and influence of significant others (coaches, parents, and peers) while males were influenced more by factors such as facilities, funding, selection process into teams, and awards given during competitions.

Gender comparison of respondents across coaches, active swimmers and former swimmers was not significant. Both male and female coaches ranked structural attributes as the highest factor influencing attrition in competitive swimming, followed by psychological and then social attributes. However female coaches rated psychological attributes higher than male coaches. The female coaches were of the view that swimmers dropped out of competitive swimming majorly due to intrapersonal factors on the swimmer such as no longer having interest and having other things to do. The male coaches rated structural and social factors higher than the female coaches; where the male coaches were of the view that swimmers majorly dropped out of competitive swimming due to issues of funding, facilities, awards and the influence of significant others on the swimmers.

Comparing the male and female active swimmers, both ranked social attributes as the highest factor influencing competitive swimmers followed by structural factors and then psychological attributes. Active female swimmers rated each of the attributes higher than their male counterparts, thus females were more affected by the psychological, social, and structural attributes than male

swimmers. Among former swimmers, ranking of the attributes was different as former male swimmers ranked psychological attributes higher, followed by structural and then social. Females ranked structural attributes as the most important followed by psychological and then social. For both male and female former swimmers social attributes were found to be the least influencing attribute in attrition in competitive swimming, however the males indicated that the social attributes affected them more than their female counterparts, thus former male swimmers were more influenced by factors relating to significant other (parents, coaches and peers). Former female swimmers rated psychological and structural attributes higher than their female counterparts, they were of the view that intrapersonal factors such as loss of interest, skills no longer improving, having other things to do, facilities, funding and awards given influenced them more in attrition from competition.

Influence of Age on Attrition in Competitive Swimming

The influence of age on psychological, social and structural attributes was assessed to establish the extent to which each of the attributes was influenced by age, on the rate of attrition in competitive swimming. The age categories in competitive swimming in Kenya are categorized as; ≤ 7 years, 8-9 years, 10-11 years, 12-13 years 14-15 years, and ≥16 years. Across the four age groups assessed in the study, they all ranked the influence of the attributes influencing competitive swimming in the same order, with social attributes ranked highest, followed by structural attributes and then psychological. The only significant difference was between the ≥16 years age group in comparison with each of the other age groups on the influence of the attributes in competitive swimming. The 10-11 years age group rated structural attributes highest in comparison with the other three age groups, while the 14-15 years age group rated social attributes highest compared to the other age group, whereas the ≥16 years age group rated psychological attributes highest in

comparison to rating by the other age group. Besides the age of the swimmers, social attributes that revolved around the influence of significant others (coaches, parents, and friends), influenced their attrition in competitive swimming the most. The psychological attributes that revolved around intrapersonal issues such as skill improvement, interest and having other things to do least influenced significant others in attrition in competitive swimming.

Responses of the coaches based on their age was assessed to get their views on factors influencing attrition in competitive swimming. The coaches gave their views based on their interactions with the swimmers and from what they encountered in the sports industry. The age of the coaches was uniquely considered in this study to assess whether younger coaches (under 35 years) had similar or different views from older coaches (35 years and above) on attributes that influence attrition among competitive swimmers. Despite the age of the coaches (youth or older), the two groups ranked the attributes influencing attrition in competitive swimming in the same order. Structural attributes were rated highest, followed by psychological and then social attributes. There was no significant difference between the younger and older coaches on any of the attributes influencing attrition in competitive swimming. However, the younger coaches rated each of the attributes higher than the older coaches. This was attributed to the fact that the younger coaches may not have varied ways to mitigate challenges they encountered that contributed to attrition in competitive swimming.

5.3 Conclusions

The swimmers stated the need to have a more structured swimming training regime so that they could transition from one level to the other and have coaching sessions catering to the different levels of swimmers. This was however hampered by the academic programmes as most swimmers

were based in academic institutions and stopped training when the institutions were on recess. Having to put more time into academics was cited by both coaches and former swimmers as the major reason that swimmers stopped competitive swimming, as the academic workload increased and the swimmers could not train as consistently as they would have wanted to, thus opting to drop out of competitive swimming.

Whereas structural attributes were not found to significantly influence attrition, there was a consistent response of the swimmers wanting more tangible rewards as a way of motivating them to continue competing, other than medal awards they got from when they started competing. This was echoed by coaches who indicated that more tangible incentives would attract more older swimmers as they would attach more value to the awards and therefore train, even more, recognizing the award they will receive are worth their effort. Selection criteria into teams to represent the country was another major reason within the structural attributes that the coaches and former swimmers viewed influenced attrition in competitive swimming. They perceived that most times the selection criteria was unfair and hoped that the process would be fairer when selecting swimmers other than or in addition to using FINA ranking points which disadvantaged those who were not able to compete in competitions that earned more points, especially those held outside the country.

Among the social attributes, the coaches, active and former swimmers concurred that parental support played a major role in contributing to swimmers staying in the sport, as they facilitated by paying for training sessions, taking them to competition venues and paying for the events to participate in. With reference to psychological attributes both active and former swimmers presaged that reaching their maximum potential contributed to dropping out or staying in the sport. Where active swimmers stated that this was one of the major reasons they would contribute to

them stopping competitive swimming, they indicated that if they felt they had reached their maximum potential regarding their performance in competitive swimming, they would drop out. The former swimmers indicated that one of the least reasons that contributed to them dropping out of sports was not that they had reached their maximum potential. Thus the perception of one's current potential in the sport was a factor of concern.

The cost of engaging in swimming competitions was raised by most of the respondents especially at the University level, as sometimes they did not participate in all the events and championships they would have liked to due to not being adequately financed by their institutions. Related to cost was the lack of adequate funds to sponsor the selected team to participate in regional swimming championships; leaving out those who could not facilitate themselves financially, this made the sport to be for those who afford the funds required thus discouraging potential good swimmers from lower and middle-income levels. This was evidenced by a negligible number of swimmers from government educational institutions, as the institutions have limited funds for sports from the government, in comparison to the bulk of swimmers from private schools financed by parents who also pay for all the co-curricular activities in the schools including sports. Competitive swimming is not common in many institutions due to the high cost and spectators are charged highly to go watch, the sport does not attract masses, therefore media coverage of the sport remains very low. This being the case, competitive swimming in Kenya will remain low and for only those who have the finances, unless the sport is funded to make participation in competition affordable and thus attract more people.

5.4 Policy Recommendations

Based on the findings of this study, the following policy recommendations are made:

1. Kenya Swimming Federation and its affiliate county federation should consider sponsors to fund swimming competitions as this will make it cheaper and more affordable to more swimmers thus increasing and attracting more competitors.
2. Improve the incentive and reward system, to have more tangible and functional awards, especially among the swimmers aged 16 years and above as a way of preventing attrition.
3. With the increased number of swimming pools for recreational use, the federation in conjunction with the swimming coaches' body should invite swimming pool owners to be hosting swimming training camps within estates like other sports do, to increase the number of swimmers.

5.5 Recommendation for Further Research

1. There is need for a study to investigate the influence of the level (competitive versus recreational) of parental involvement in sports on their children's involvement in competitive swimming.
2. A study should be done to investigate the correlation between coaches' skills and training with athlete swimmer consistency and performance in competition.
3. Further study can be done to assess attrition in other competitive sporting disciplines in Kenya and compare it to swimming.

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APPENDICES

Appendix 1: Consent Letter- For parents

Dear Parent

I am a postgraduate student at the University of Nairobi seeking your assistance in a research project entitled "Investigating selected psycho-social and structural attributes affecting attrition in competitive swimming in Kenya". I am also a swimming coach at Kenyatta University and this area is of great interest to me. The purpose is to gather information purely for academic purposes. I request that your child be among the respondents to the questionnaires including semi-structured interviews that shall be carried out during the data collection period.

The questionnaires shall be coded with numbers ensuring anonymity, and the results and findings of this research shall be available to you if you so wish. Please tear off below the dotted line and return the bottom part (Consent Form) through your child/children's swimming coach and an appropriate time for the interview shall be arranged. If you have any questions please feel free to contact me at +254721755214) or my Supervisors Dr Munayi (+254710207498) – University of Nairobi and Dr Wanjira (+254722782868) University of Nairobi.

Thank you

Mary Mwihaki Gathwe

University of Nairobi – Reg Number: E88/53733/2018

CONSENT FORM

I_____(Participant's parent/guardian) have read the information and agree to allow_____(Participant's name) to participate. I agree that the research data gathered for this study may be used for academic purposes provided my child is not identifiable.

Signature_____ Date_____

Appendix 2-Questionnaire for active swimmers

SECTION A:

Age_____
Gender_____
At what age did you start competing?_____
Who first introduced you to swimming?_____
Do you compete/in a team in any other sport/s-? YES NO
If yes, which sport/s_____Do you plan to continue competing in any of these sports? YES NO
Are you involved in any other school activity/club? YES NO
If yes, please state the club/activity_____
Do your friends swim competitively? YES NO
Is or was your mother ever involved in any sport? YES NO
If yes, which sport_____
Is or was your father ever involved in any sport? YES NO
If yes, which sport_____
Do you have siblings or cousins who swim competitively? YES NO
Since you started competing, have you changed coaches?_____
How many hours a week do you train?_____
Do you train on weekends (when there are no competitions)? YES/NO
What do you like best about your coach?_____
What do you not like about your coach?_____
What do you like best about the training sessions?_____
What do you like least/not like at all about the training sessions?_____
What do you like best during the competitions you attend?_____
What do you like least/not like at all during competitions you attend?_____

SECTION B:
Please put a mark (√) in one box for each of the reasons listed along each row.

	I would stop competing if/when…	**Strongly Agree**	**Agree**	**Not Sure**	**Disagree**	**Strongly Disagree**
1	my skills stop improving					
2.	I am not able to be with my friends					
3	I do not have many chances to travel to represent the team					
4	I have other things to do					
5	my friends do not swim					
6	the training is not manageable					
7	I do not meet new friends					
8	I do not like the awards					
9	I do not like some teammates					
10	the coach favours some teammates					

11	the training is boring					
12	my parents stop supporting me to compete					
13	I do not learn new skills					
14	there is no teamwork					
15	It is not exciting					
16	I do not have adequate access to the swimming pool & the swimming training equipment					
17	I do not feel important enough					
18	I do not get enough chances to compete					
19	I do not like being in the team					
20	I do not get enough challenge					
21	I do not have enough fun					
22	I do not get enough recognition					
23	I do not like the pressure					
24	academics limit my training time					
25	I feel I have reached my maximum potential					
	Please put a mark (√) in one box : How often -	**Always**	**Freq uently**	**Some times**	**Rarely**	**Never**
1	Do you train?					
2	Do you have to pay to participate in some competitions?					
3	Are you taken for competitions or practice (if no pool within your institution)?					
4	Does your coach emphasize on winning?					
5	Does your institution facilitate participation in all competitions you would like to attend?-eg provide lunch and or transport					
6	Do you attend competitions?					
7	Do you have organized coaching					
8	Do you get an allowance when you go to competitions?					

What motivates you to swim competitively?_____
_____

What else would you like to be done to improve or make competitive swimming more interesting or attractive?_____

Appendix 3-Semi structured interview for active swimmers

1. What was the best swimming experience you have had so far?
2. What was the least swimming experience you have had so far?
3. Does swimming stop you from doing any other activities you like? What are these other activities?
4. At what age did you start to compete seriously, and what is the highest level you have achieved so far?
   -What are your goals or what is your ultimate aim in swimming i.e how far would you like to compete up to?
5. How often on average do you train per week?
   -How did you feel about the amount of training you are doing, do you feel it is adequate, less or enough?
6. To what extent are you involved in other sports whilst participating in swimming?
   -How does this affect your training?
   - What are the positive and negative effects?
7. How does training and competing in swimming affect you?
   -What are the positive effect you get from training and competing?
   -What were the negative effects of training and competing?
   -Has it ever come to a point where you felt there was too much pressure on you to do well? If so, where did or does this pressure come from?
8. What support do you have whilst training and competing?
   - Who encourages you and how do they do this?
   -Who helps you practically in terms of getting to training and how do they do this?
9. To what extent do you receive financial support to be in swimming?
   For example:
   -If you do receive financial support: Who finances you and how has the financial support helped?
   -If you do not receive financial support: How does this affect you in terms of participating in swimming
10. How do you feel your coach plays an important role in your sport?
    -To what extent is your coach supportive?
    -Is your coach interested in your life outside swimming?
    -How would you classify your coach, for example as a friend or just as a coach?
11. Describe the moments throughout your swimming involvement so far where you lacked motivation to train. Tell me about these times.
    -Why did you feel like this at that time?
    -What was the response of your coach when you did not turn up?
    -What was the response of your parents at these times?
12. How do you find balancing your education with your sporting participation?
    -Do you ever feel one aspect is suffering in comparison with the other?
    -How do you resolve/manage this situation?
13. How did you find balancing your social life with your training?
    -How do you manage/resolve any conflict between the two?

14. Have you ever dropped out of swimming before returning again? If YES:
    -For how long did you drop out?
    -What led you to dropping out at that time?
    -How did you go about communicating the fact you were dropping out?
15. What made you return to swimming?
    -Did anyone influence your decision to return? If YES, who was it?
16. After you retire from competitive swimming do you have intentions of staying involved in the sport, by coaching, officiating or helping out?

-Anything else you may want to say that has not been covered in this interview?

Appendix 4- Questionnaire for former swimmers

SECTION A:

Age_____
Gender_____
At what age did you start competing_____ At what age did you stop competing_____
Who first introduced you to swimming?_____
Do you compete/in a team in any other sport/s? YES NO
If yes, which sport/s_____Do you plan to continue competing in any of these sports? YES NO
Are you involved in any other activity/club within the school or out of school? YES NO
If yes, please state the club/s or and or activity/ies_____
Do your friends swim competitively? YES NO
Is or was your mother ever involved in any sport? YES NO
If yes, which sport_____
Is or was your father ever involved in any sport? YES NO
If yes, which sport_____
Do you have siblings or cousins who swim competitively? YES NO
When you were competing, did you change coaches?_____
How many hours in a week did you train?_____
Did you train on weekends (when there were no competitions)? YES/NO
What did you like best about your coach?_____
What did you not like about your coach?_____
What did you like best about the training sessions?_____
What did you like least/not like at all about the training sessions?_____
What did you like best during the competitions you attended?_____
What did you like least/not like at all during the competitions you attended?_____

SECTION B-Please put a mark (√) in one box for each of the reasons listed along each row, indicating the reason you stopped competing

	Reason	**Strongly Agree**	**Agree**	**Not Sure**	**Disagree**	**Strongly Disagree**
1	My skills did not improve further					
2.	I was not able to be with my friends					
3	I did not have many chances to travel to represent the team					
4	I had other things to do					
5	My friends stopped swimming					
6	I did not win enough					
7	The training was too hard					

8	I did not meet new friends					
9	I did not like the awards					
10	I did not like some teammates					
11	The coach was favouring some teammates					
12	The training was boring					
13	My parents no longer wanted me to compete					
14	I did not learn new skills					
15	There was no teamwork					
16	It was not exciting enough					
17	I was not as good as I wanted to be					
18	I did not have enough access to the swimming pool & the swimming training equipment					
19	I stopped liking competition					
20	I did not feel important enough					
21	I did not get enough chances to compete					
22	I got an injury					
23	I did not like being in the team					
24	There was not enough challenge					
25	I did not have enough fun					
26	I did not get enough recognition					
27	I did not like the pressure					
28	I was not fit enough					
29	I wanted to play another sport					
30	I felt I was too old					
31	I had to put more time into academics					
32	I no longer had easy access to a swimming pool and organized coaching					
33	I felt I had reached my maximum potential and highest level I could					
34	Finances-having to pay for events; limited on events I could participate					
35	There was no one to take me to practice and competitions					
36	My coach emphasized on winning					
37	My parents did not support me					

Any other reason they may have given for stopping to compete that is not listed? (specify)_____
_____
_

Appendix 5- Semi-structured interview for former swimmers

1. At what age did you start to compete seriously, and what was the highest level you achieved?
   -How serious were you about swimming?
   -What were your goals or what was your ultimate aim?
2. What was the best swimming experience you have had?
3. What was the least swimming experience you have had?
4. Did swimming stop you from doing any other activities you like? What are these other activities?
5. What was a typical training session when you used to compete?
   -How did you feel about the amount of training you were doing?
   -What were the positive effects of training and competing?
   -What were the negative effects of training and competing?
   -Did you ever come to a point where you felt there was too much pressure on you to do well? If so, where did this pressure come from?
6. What support did you have whilst training and competing**?**
   - Who encouraged you throughout your sporting career, and how did they do this?
   -Who helped you practically in terms of getting to training, and how did they do this?
7. To what extent did you receive financial support in swimming?
   -If you did receive financial support: How did you find the financial support helped you?
   -If you did not receive financial support: How did this affect you in terms of participating in swimming?
8. How do you feel your coach played an important role?
   -To what extent was your coach supportive?
   -How much was your coach interested in your life outside of swimming?
   -How would you classify your coach, for example as a friend or just as a coach?
9. Describe the moments throughout your swimming involvement when you lacked the motivation to train.
   -Why did you feel like this at that time?
   -What was the response of your coach when you did not turn up?
   -What was the response of your parents at these times?
10. How did you find balancing your education with your swimming training and competition?
    -Did you ever feel one aspect was suffering in comparison with the other?
    -How did you resolve/manage this situation?
11. How did you find balancing your social life with your training?
    -How did you manage/resolve any conflict between the two?
12. To what extent were you involved in other sports whilst participating in swimming?
    -How did this affect your training?
    - What were the positive and negative effects?
13. Tell me about when you dropped out of swimming and the process involved.
    -How long it took to drop out after you thought about the decision?
    -What was the main decider?
    -How did you go about communicating the fact you were dropping out?
14. What were your thoughts and emotions when you finally withdrew from swimming?
    -To what extent did others try to persuade you to reconsider or continue involvement?

-Who and why did they try to persuade you?
-What was their response?

15. Do you participate in any other sporting activities after you quit swimming? If yes**:**
-Why did you decide to participate in another sport after, and for what reasons?
-To what extent do you consider returning to swimming?
-What circumstances led you to feel this way?

16. After withdrawing from swimming was there any intention of staying involved by coaching or helping out?
-Would you ever consider going back into swimming at any point during your life?
-Do you consider your withdrawal as retirement rather than quitting?
-What do you miss about the involvement in swimming?

-Anything else you may want to say that has not been covered in this interview

Appendix 6- Questionnaire for Swimming Coaches

Gender_____ Age_____
How long have you coached swimming?_____
Have you been a competitive swimmer? YES/NO
If Yes, for how long did you compete? (Specify the age bracket you were in when competing)_____
Apart from swimming, is there any other sport you train? YES/NO
If yes, which other sport_____
What age group of swimmers do you train_____
Does your institution have a swimming pool_____
Please put a mark (√) in one box in each row as to the reason the swimmers you have interacted with gave as to why they stopped competitive swimming.

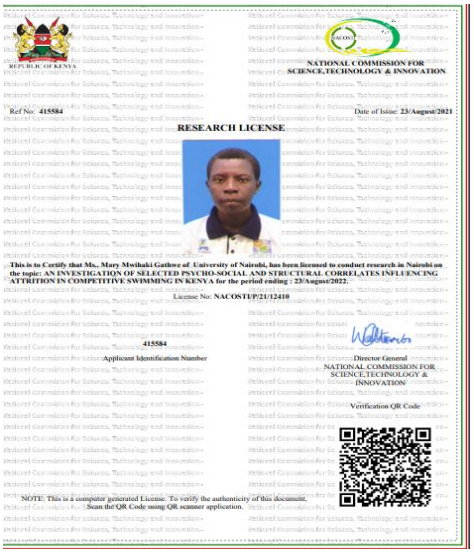
	Reason for quitting competitive swimming	**Strongly Agree**	**Agree**	**Not Sure**	**Disagree**	**Strongly Disagree**
1	Their skills did not improve further					
2.	They were not able to be with their friends					
3	They did not have many chances to travel to represent the team					
4	Their friends stopped competing					
5	They did not win enough					
6	The training was too hard					
7	They did not meet new friends					
8	They did not like the awards					
9	They did not like some teammates					
10	Their parents no longer wanted them to compete					
11	They were not as good as they wanted to be					
12	They did not have enough access to the swimming pool & the swimming training equipment					
13	They lost interest in competition					
14	They did not get enough chances to compete					
15	They got an injury					
16	They did not like being in the team					
17	There was not enough challenge					
18	They did not get enough recognition					
19	They did not like the pressure					
20	They were not fit enough					
21	They wanted to play another sport					
22	They felt they were too old					

23	They had to put more time into academics					
24	They no longer had easy access to a swimming pool					
25	They felt they had reached their maximum potential and the highest level they could					
26	Finances-having to pay for events; limited on events they could participate					
27	There was no one to take them for practice and competitions					
28	Their parents did not support them					

Is/Are there any other reason/s they have given or you would give for swimmers withdrawing from competitive swimming, not listed (please specify)_____

What would you like to be done to attract and improve competitive swimming?_____

Appendix 7- RESEARCH PERMIT



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Appendix 8

KENYA's PARTICIPANTS AND PERFORMANCE IN SELECTED INTERNATIONAL SWIMMING COMPETITIONS

OLYMPICS				
Year	**Total number of athletes**	**Male**	**Female**	**Performance**
1956	1	-	Margaret Northrop	Out in Preliminaries -did not reach finals
2000	2 1 Male 1 Female	KimJin Woo	Maria Awor	All out in Preliminaries- did not reach finals
2004	2- 1 Male 1 Female	Amar Shah	Eva Donde	Out in Preliminaries
2008*	2- 2 Male	Jason Dunford	-	5th in the finals –best performance
		David Dunford	-	Out in Preliminaries- did not reach finals
2012	2- 2 Male	Jason Dunford	-	Out in Preliminaries- did not reach finals
		David Dunford	-	Out in Preliminaries- did not reach finals
2016	2- 1 Male 1 Female	Hamdan Bayusuf	Talisa Lanoe	All out in Preliminaries- did not reach finals
2020	2- 1 Male 1 Female	Danilo Rosafio	Emily Muteti	All out in Preliminaries- did not reach finals
* Best performance by a Kenyan Swimmer in Olympics so far, reaching the finals.				
COMMONWEALTH GAMES				
Year	**Total number of athletes**	**Male**	**Female**	**Performance**
1966	3- 2 Males 1 Female	Daniel Walmsley Guy Woodhouse	Kay Donoghue	All out in Preliminaries- did not reach finals
1982	3- 3 Male	Conrad Thorpe Pip Omamo Kevin Wray	-	All out in Preliminaries- did not reach finals
1986	3- 3 Male	Conrad Thorpe Pip Omamo Kevin Wray	-	All out in Preliminaries- did not reach finals
1994	2- 2 Male	Anthony Lihalakha Edward Ikinya	-	All out in Preliminaries- did not reach finals

1998	4- 4 Male	Anthony Lihalakha Vyombo Ramadhan Nicholas Diaper Kamal Shah	-	All out in Preliminaries- did not reach finals
2002	4- 4 Male	Vyombo Ramadhan Hamid Nassir Kabir Walia Nicholas Diaper	-	All out in preliminaries-did not reach finals
2006	4 3 Males 1 Female	David Dunford Amar Shah Vyombo Ramadhan	Nasra Nandhi	All out in preliminaries-did not reach finals
2010*	10- 5 Males 5 Females	David Dunford Jason Dunford Amar Shah Vyombo Ramadhan Akshay Shah	Talisa Lanoe Sylvia Brunlehner Hanika Patel Nadie Salyani Kanyali Ilako	Gold medal by Jason Dunford
2014	13- 6 Males 7 Females	Micah Fernandes Steven Maina Tory Pragassa Issa Mohamed Hamdan Bayusuf Jason Dunford	Ger Ogot Rebecca Kamau Danielle Awori Anita Field Martha Opiyo Talisa Lanoe Sylvia Brunlehner	Only Jason Dunford reached the finals- position 7.
2018	5- 2 Males 3 Females	Steven Maina Issa Mohamed	Maria Brunlehner Emily Muteti Sylvia Brunlehner	All out in Preliminaries- did not reach finals

* Best performance by a Kenyan Swimmer in Commonwealth

WORLD UNIVERSITY GAMES

Year	Total number of athletes	Male	Female	Performance
2009*	1	Jason Dunford David Dunford	-	1 Gold, 1 Silver, 1 Bronze
2011	1	-	Kanyali Ilako	Out in Preliminaries
2013	1	-	Stacy Wairimu	Out in Preliminaries
2019	3- 2 male 1 Female	Talib Swaleh Ridhwan Mohamed	Emily Muteti	Out in Preliminaries

*Best performance by a Kenyan Swimmer at World University Games

ALL AFRICA GAMES

Year	Total number of athletes	Male	Female	Performance
1965	1- 1 Male	Guy Woodhouse	-	1 Silver
2007	6	Jason Dunford	Rachita Shah	3 Gold

	3 Male 3 Female	David Dunford Amar Shah	Pina Ercolana Sylvia Brunlehner	2 Silver 2 Bronze All medals won by Jason Dunford and David Dunford
2011*	14- 6 Male 4 Female	Joshua Oruya Jason Dunford David Dunford Tory Pragassa Kadermani Abdulmajid Abdalla Issa Hamdan Bayusuf Rama Vyombo Kiptolo Boit Amar Shah	Sonia Cege Soraya Oruya Talisa Lanoe Sylvia Brunlehner	3 Gold 4 Silvers 4 Bronze*
2015	14- 8 Male 6 Female	Edward Ilako Abdalla Issa Emmanuel Ndonga Hamdan Bayusuf Steven Kimani Hanani Saahil Tory pragassa Kadermani Abdulmajid	Talisa Lanoe Anita Field Rebecca Kamau Emily Muteti Sylvia Brunlener Natasha Oduor	
2019**	9- 4 Male 5 Female	Talib Swaleh Samuel Ndonga Issa Mohamed Ridhwan Mohamed	Imara Thorpe Rebecca Kamau Emily Muteti Maria Brunlehner Sylvia Brunlehner	1 bronze in the female relay

*Gold and Silver Medals won by Jason Dunford and David Dunford and First medals ever to be won in Relay- Men's team (400m free relay men, 800m free relay men, 400medley relay men)

**First medal ever to be won by the ladies' team- in relay.

WORLD SWIMMING CHAMPIONSHIPS (LONG COURSE)

Year	**Total number of athletes**	**Male**	**Female**	**Performance**
1998		Kim Jin-Woo		
2001	5- 3 Male 2 Female	Hamed Nassir NicholasDiaper Fahad Bayusuf	Miriam Nakolo Amanda Onyango	No medals
2003	4 3 Male 1 Female	Amar Shah Kabir Walia Ramadhan Vyombo	Eva Donde	No medals
2005	5- 5 Male	Amar Shah Ramadhan Vyombo Joseph Kimani	-	No medals

		Jason Dunford David Dunford		
2007	5- 4 Male 1 Female	Amar Shah Ramadhan Vyombo Jason Dunford David Dunford	Ercolana Pina	No medals
2009	6- 2 Males 4 Females	David Dunford Jason Dunford	Ajulu Bushell Sylvia Brunlehene Ercolana Pina Rachita Shah	No medals
2011	3- 2 Males 1 Female	David Dunford Jason Dunford	Sylvia Brunlehener	No medals
2013	3- 1 Male 2 Females	Hamdan Bayusuf	Sylvia Brunlehener Emily Muteti	No medals
2015	4- 2 Males 2 Females	Hamdan Bayusuf Issa Mohamed	Talisa Lanoe Emily Muteti	No medals
2017	4- 2Males 2Females	Issa Mohamed Steven Kimani	Rebecca Kamau Emily Muteti	No medals
2019	3- 2 Male 1 Female	Danilo Rosafio Issa Mohamed	Emily Muteti	No medals
WORLD SWIMMING CHAMPIONSHIPS (SHORT COURSE)				
Year	**Total number of athletes**	**Male**	**Female**	**Performance**
2000	1- 1 Female	-	Maria Awori	No medals
2002	3- 3 Males	Amar Shah Kabir Walia Nicholas Diaper	-	No medals
2004	3- 2 Males 1 Female	Joseph Kimani Jason Dunford	Pina Ercolana	No medals
2006	5- 4 Males 1 Female	Amar Shah Ramadhan Vyombo Jason Dunford David Dunford	Nasra Shehan	No medals
2008	6- 4 Males	Akshay Shah Amar Shah	Pina Ercolana Achieng Ajulu	No medals

	2 Female	Jason Dunford David Dunford		
2010	11- 5 Males 6 Females	Bayusuf Hamdan Edwin Kiptolo David Dunford Jason Dunford Rama Vyombo	Sylvia Brunlehener Cege Sonia Talisa Lanoe Soraya Obuya Sehan Saleh Salyani Anham	No medals
2012	7- 3 Males 4 Females	Jason Dunford Tory Pragassa Ramadhan Vyombo	Anita Field Sylvia Brunlehner Talisa Lanoe Emily Muteti	No medals
2014	3- 2 Male 1 Female	Micah Fernandez Hamdan Bayusuf	Talisa Lanoe	No medals
2016	6- 3 Males 3 Females	Steven Maina Mohammed Issa Mohamed Ridhwan Kadermani Abdulmajid	Sylvia Brunlehner Rebecca Kamau Emily Muteti	No medals
2018	4- 2 Male 2 Female	Danilo Rosafio Ridhwan Mohamed	ImaraThorpe Rebecca Kamau	No medals
2019	1 1 Female	-	Sylvia Brunlehner	No medals
2021	1 1 Male	Ridhwan Mohamed		No medals
AFRICA SWIMMING CHAMPIONSHIPS				
Year	**Total number of athletes**	**Male**	**Female**	**Performance**
*2006	13- 6 Male 7 Female	David Dunford Jason Dunford Ramadhan Vyombo Manji Shafiq Amar Shah Jameel Nabhan	Achieng Ajulu Pina Ercolana Patel Hanika Dass Naila Rachita Shah Shivani Patel Kanyali Ilako	4 Gold 4 Silver 1 Bronze
** 2008	7- 3 Male 4 Female	Jason Dunford Ramadhan Vyombo Akshay Shah	Achieng Ajulu Pina Ercolana Rachita Shah Sylvia Brunlehner	5 Gold 3 Silver 2 Bronze
*2010	10- 7 Male 3 Female	Jason Dunford David Dunford Amar Shah Zubeir Muhamed Ahmed Abdulmajid Akshay Shah Hamdan Bayusuf	Sylvia Brunlehner Talisa Lanoe Salyani Anham	3 Gold 2 Silver 1 Bronze

*** 2012	14 9 Male 5 Female	Jason Dunford Tory Pragassa Kadermani Abdulmajid Issa Abdalla Edward Ilako Hanani Saahil Hamdan Bayusuf Micah Fernandez Ramadhan Vyombo	Emily Muteti Martha Opiyo Anita Field Sonia Cege Soraya Oruya	3 Gold 2 Silver 1 Bronze
2018	5- 3 Male 2 Female	Samuel Ndonga Alvin Omondi Swaleh Talib	Imara Thorpe Rebecca Kamau	No medals

***** All medals won by Jason Dunford and David Dunford
******First-time female swimmer/s won individual and relay Medals in the championships
*** All medals won by Jason Dunford