INFLUENCE OF MOTIVATIONAL CLIMATE AND GOAL ORIENTATION ON ATTITUDES TOWARDS DOPING AMONG ATHLETES IN ELGEYO-MARAKWET COUNTY, KENYA

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APRIL, 2022

DECLARATION

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

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DEDICATION

To my entire family and dependable friends for the love and support always.

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ABBREVIATION AND ACRONYMS

ADAK: Anti-Doping Agency of Kenya

ADRV: Anti-Doping Rule Violations

AGT: Achievement Goal Theory

AAFs: Adverse Analytical Findings

AK: Athletics Kenya

ASP: Athlete Support Personnel

EMC: Elgeyo-Marakwet County

NACOSTI: National Commission for Science, Technology and Innovation

NADO: National Anti-Doping Organizations

NOCK: National Olympic Committee of Kenya

S**PSS:** Statistical Package for Social Science

PEAS: Performance Enhancement Attitude Scale

PES: Performance Enhancing Substance

PMCQ-2: Perceived Motivational Climate in Sport Questionnaire

TEOSQ: Task and Ego Orientation in Sport Questionnaire

TPB: Theory of Planned Behavior

TUE: Therapeutic Use Exemption

WADA: World Anti-Doping Agency

WADC: World Anti-Doping Code

OPERATIONAL DEFINITION OF TERMS

Adverse analytical findings: Refers to the findings of a doping control sample analysis that reveal the presence of a prohibited substance or method.

Athlete: Refers to athletes competing in events ranging from 800m to 10000m, cross-country, track races road races and marathon races.

Athlete Support Personnel: Refers to managers, coaches, trainers, team personnel, agents, medical staff, paramedics, relatives or other persons who assist an athlete who is competing or preparing for an athletic competition.

Attitude: Refers to the degree to which Kenyan athletes agree or disagree with certain views, opinions, and intentions on the practice of doping**.**

Doping: This refers to one or more violations of the anti-doping rules as contained in the World Anti-Doping Code.

Ego orientation: Refers to athletes engaging in sports with intention of outperforming others and is associated with pro-doping attitudes in sports.

Goal Orientation: Refers to the reasons why athletes participate in sports and aids in understanding athletes' definitions of success and assessing competence in sports.

Length of Experience: Refers to the number of years an athlete has participated in athletic competitions at junior level to elite level

Mastery motivational climate: Refers to the coach motivating the athlete through cooperative learning, encouraging effort and skill improvement and providing feedback and is associated with anti-doping attitudes in sports.

Motivational Climate: This is the environment that the coaches largely create and has an impact on the athletes' views regarding doping and achievement strategies in sports.

Performance Climate: Refers to the coach motivating the athlete by comparing their performances with others, punishment of mistakes and rewarding athletes differently. This, in turn, promote pro-doping attitudes in sports.

Performance Enhancing Substances: This are prohibited drug substances used by athletes to enhance sport performances.

Prohibited/Banned Substances: Refers to all substances that have been classified by WADA as performance-enhancing substances, and which have been banned under the WADC.

Task orientation: Refers to athletes engaging in sports with intention of developing skills, being competent

	on a task and associated with anti-doping attitudes in sports.
Therapeutic Use Exemption:	This refers to the permission granted to an athlete by either ADAK or World Athletics to use a prohibited substances or methods only for therapeutic purposes.

ABSTRACT

Doping is a global problem that is increasing at an alarming rate and most recently among Kenyan athletes. Athletes who have ego orientation (as opposed to task orientation) and have performance climate (as opposed to mastery climate) have been associated to doping and the use of performance-enhancing substances in sports. However, there is paucity of data on the status of these associations among Kenyan athletes where increasing doping cases are threatening the country's international reputation in distance running performance. Therefore, the purpose of this study was to determine the influence of motivational climate and goal orientation on attitudes towards doping among athletes in Elgeyo-Marakwet Count, Kenya. Additionally, the study assessed the influence of selected demographic variables of age, gender, and length of experience on attitudes towards doping. Cross-sectional survey design was used and data was collected from athletes (N=323) from Elgeyo-Marakwet County, Kenya who were recruited through stratified random sampling. An adapted version of the Perceived Motivational Climate in Sport Questionnaire (PMCQ-2) was used to assess the athletes' motivational climate, while athlete's goal orientation was assessed using the Task and Ego Orientation in Sport Questionnaire (TEOSQ). A modified version of the Performance Enhancement Attitude Scale (PEAS) was used to assess athletes' attitudes toward doping. Descriptive values of percentages, frequencies, means and standard deviations were calculated and used to organize and summarize the data. Spearman's rank correlation was calculated to determine the relationship between motivational climate and goal orientation on attitudes towards doping and binary logistical regression analysis were computed to find out the significant influence of motivational climate, goal orientation and demographic variables of age, gender, and length of experience on attitudes towards doping. Based on responses to a five-point Likert scale, results of descriptive analyses showed the following: mastery climate; 4.17± 0.62, performance climate; 2.88±0.62, task-orientation; 4.14±0.65, ego-orientation; 3.07±0.79 and doping attitude scale; 2.32±0.70 (Mean ± Standard Deviation). Correlational analysis indicated significant inverse relationship between mastery climate and doping attitude (*rho* = -.242; $p < 0.001$) and a significant positive correlation between performance climate and doping attitude (*rho* = .362; $p < 0.001$) in motivational climate. In goal orientation, results indicated significant inverse relationship between task orientation and doping attitude (*rho* = -.158; $p = 0.004$) and a significant positive correlation between ego orientation and doping attitude (*rho* = .362; $p < 0.001$). The study showed that majority of the athletes, 65.6% (212), were the least likely to dope, whereas 34.4% (111) were highly likely to dope. Binary logistical regression analysis revealed that performance climate ($\chi^2 = 9.94$; $p = 0.002$) and ego orientation ($\chi^2 = 12.90$; $p < 0.001$) made significant contributions/influence to attitudes towards doping. On the other hand, mastery climate ($\chi^2 = 2.21$; $p = .14$), task orientation ($\chi^2 = 2.00$; $p = 0.16$), age ($\chi^2 = 2.41$; $p = 0.12$), gender ($\chi^2 = .85$; $p = 0.36$) and length of experience ($\chi^2 = .10$; $p = 0.75$) made no significant influence on athletes' attitudes towards doping. In conclusion, the study found task orientation and mastery climate associated with anti-doping attitudes, while ego orientation and performance climate were associated with pro-doping attitudes. It is recommended that there should be more emphasis on coach and athlete education that promote the aspects of mastery climate and task orientation as opposed to performance climate and ego orientation as this may aid in anti-doping efforts.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Kenya's supremacy and popularity in athletics have put her on the world map as far as sports are concerned. This extraordinary performance in athletics is evident through her medal standings in Olympics. For instance, Kenya has won 113 medals in Olympics from the year 1964 when she first won her first Olympic medal to the 2020 Olympics. Athletics and boxing are the only two sports that have given Kenya medals in Olympics. Of the two sports, athletics has contributed the highest number of medals at 106 compared to 7 medals from boxing. Kenyan athletes' phenomenal success has attracted a lot of interest and research from many scholars to unearth why Kenyan athletes are so successful in athletics. For example, high hemoglobin and hematocrit content (Larsen, 2003); motivation to achieve economic success (Onywera et al., 2006); genetic predisposition (Scott & Pitsiladis, 2007); physiological and socio-cultural factors (Wilber & Pitsiladis, 2012); ethnicity of Kenya's most successful runners (Tucker et al., 2015) and somatotypical characteristics (Eksterowicz et al., 2016) have been attributed to Kenyan dominance in middle and long-distance running.

In the recent past, Kenya's dominance in athletics has been clouded with many controversies, with Kenyan athletes being associated with doping or performance-enhancing substances (PES). For instance, in all sports tested between 2004 and 1 August 2018, 138 Kenyan athletes have tested positive for the use of PES with distance running, producing more Adverse analytical findings (AAFs) at 95%, accounting for 131 out of 138 athletes tested (WADA, 2018a). Studies on doping and PES use among Kenyan athletes have shown that most Kenyan athletes are

knowledgeable on doping rules and aware of PES's consequences in sports. On the other hand, minority of the athletes have been reported to be either ignorant for not reporting to Therapeutic Use Exemptions (TUE) or lack knowledge and awareness on doping rules and procedures (Boit et al., 2012; Kamenju 2011; Kamenju et al., 2016). Similarly, WADA (2018a) showed that most Kenyan athletes are insufficiently educated on doping, with Athlete Support Personnel (ASP) aiding and abetting doping in Kenya. In a related study, Wambui and Waiya (2018) identified money in athletics in form of championship payments, endorsements, and sponsorships as well as peer pressure, and drug abuse legislations as some of the reasons influencing Kenyan athletes to dope.

Doping is a global problem in competitive sports because it negatively hurts integrity, sports image, and dangerous to users' health (Barkoukis et al., 2013). WADA (2018) describes doping as the existence of one or more of the Anti-Doping Rule Violations (ADRV) as set forward in the World Anti-doping Code (WADC). It is a phenomenon that has necessitated World Anti-Doping Agency (WADA) and National Anti-doping Agencies (NADO's) to develop and implement various preventive and deterrence measures as part of efforts in fighting this menace. Similarly, studies have opined that to prevent doping in sports, identification of athletes who use or are prone to using PES as well as understanding their situational factors may function as risk or protective factors towards doping (Lazuras et al., 2015; Petróczi et al., 2015). One way of understanding athletes' risk and protective factors towards doping is by considering athletes' motivation towards sports and, eventually, their propensity for doping and the use of PES.

Achievement Goal Theory (AGT) postulates that an individual's goal orientation is altered through various socialization processes that include different motivational climates in an achievement context (Nicholls, 1989). AGT framework is based on athlete’s demonstration of competence in sports. The examination of athletes' perceptions of coach-created motivational climate and the reasons for their participation in sports is vital in understanding their motivation towards doping.

Achievement Goal Theory (AGT) (Nicholls, 1989) has two-dimensional concepts of goal orientation and motivational climate. These concepts act and interact and affect behavior in the definition of competence in sports. Goal orientations refer to the reasons athletes engage in sports and helps in understanding athletes' way of defining success and assessing competence in sports. For example, Nicholls (1989) argues that task-oriented athletes believe that effort and hard work are required to be successful in high-level competitions. On the other hand, ego-oriented athletes believe that minimal effort is required; demonstrating superior athletic ability in comparison to others and outperforming competitors makes them feel successful.

Moreover, task-oriented athletes believe in self-referenced personal improvement, whereas ego-oriented athletes judge their performance in comparison to others (Nicholls, 1989). Similarly, Ames (1992) defines motivational climate as situational goal structure that affects athlete's task and ego involvement in which success and competence are judged in sports. Motivational climate is categorized into mastery (or task) and performance (or ego) climate. Mastery-oriented climate have been known to carry the consequences of important roles, cooperative learning, and effort/improvement in assessing competence in sports. In contrast, performance

climate has been known to have implications of unequal recognition, intra-team rivalry, and punishment for mistakes (Newton et al., 2000).

Motivational climate created mainly by the coaches has been found to affect athletes' attitudes towards doping and achievement strategies in sports. For instance, McArdle and Duda (2002) have found ego-involved individuals to be more inclined to engage in cheating in sports to increase their chances of winning. On the other hand, task-involved individuals foster adaptive achievement behaviours during failure, like being persistent and putting a lot of effort to succeed next time (Roberts et al., 1997). Sage and Kavussanu (2008) reported positive associations between athletes who have ego orientation (as opposed to task orientation) and have a Performance climate (as opposed to mastery climate) to PES use in sports.

Motivational climate and goal orientation may be influenced by various demographic factors such as age, gender, and length of experience (Bakirtzoglou & Ioannou, 2011; Klain et al., 2014; Murcia et al., 2008). The same factors are vital determinants influencing athletes' attitudes towards doping in sports (Morente-Sánchez & Zabala, 2013; Muwonge et al., 2015; Wang & Biddle, 2001). For example, young athletes are more likely to endorse beliefs and attitudes that doping will lead to better performance in sports in comparison to older athletes (Boit et al., 2012; Mwangi et al., 2019; Sekulic et al., 2017; Singhammer, 2012). It is believed that older athletes have gained more knowledge on doping issues, and they have learned about the harmful and long-term consequences of doping in sports compared to younger athletes (Boit et al., 2012; Mwangi et al., 2019; Singhammer, 2012).

On the other hand, male athletes have been reported to have more permissive attitudes towards PES than females athletes (Bloodworth et al., 2012; Devcic et al.,

2018; Lata & Mondello,2010; Petróczi,2007; Sas-Nowosielski & Budzisz, 2018; Sas-Nowosielski & Swiatkowska, 2008; Soltanabadi et al., 2015). It is assumed that females are not prone to false consensus (believe that others are also doping) than males. In contrast, male athletes are susceptible to doping because they attach much importance to winning (Petróczi,2007).

Similarly, athletes with prolonged length of experience are assumed to have more knowledge on doping and hence not associated with positive attitudes towards doping (Chebet, 2014; Ćorluka et al., 2011). On the contrary, Sekulic et al., (2017) revealed that kickboxers who have competed in sports competitions for a longer period of time were more likely to dope than those who have competed for a short period of time. Moreover, Kenyan and East Africa athletes have revealed that athletes' length of experience did not influence doping attitudes (Boit et al., 2012; Kamenju et al., 2016; Mwangi et al., 2019). However, studies on these relationships are not conclusive, hence the need for this study.

1.2 Statement of the Problem

Doping is a global problem increasing at an alarming rate due to technological advancement and evidence of weaknesses in current Anti-doping deterrence measures. WADA and National Anti-doping Agencies (NADO's) have constituted various deterrence and preventive measures to curtail this menace as part of efforts to fight doping and PES use in sports. For example, WADA (2018b) has implemented various strategies and methods that include education and research, therapeutic use exemptions, testing, results management, intelligence gathering, and investigations. In Kenya, the Anti-doping Agency of Kenya (ADAK) has replicated WADA's efforts to fight this global problem with its parallel but complementary

programs geared towards preventing and deterring sports personalities from engaging in doping (ADAK, 2018).

Despite all these measures and efforts, doping is still prevalent worldwide. For instance, in Kenya, the doping problem is still prevalent, as reflected by 19 sanctioned athletes by ADAK since its inception in 2016 (ADAK, 2018). WADA, (2018a) report showed that most Kenyan athletes are insufficiently educated on doping, with athletes support personnel (ASP) aiding and abetting doping in Kenya. Cléret (2011) opines that WADA's education aim is to educate the athlete and the athlete's micro-society, which includes athlete support personnell (ASP).

Research studies on Kenyan athletes' motivation have shown that economic and extrinsic reasons motivated most Kenyan runners to participate in athletics (Elbe et al., 2010; Onywera et al., 2006). On the other hand, studies on doping in Kenya have centered on the knowledge, attitudes, and perceptions of teacher trainees and long-distance runners (Boit et al., 2012; Chebet, 2014; Kamenju,2011). Therefore, this study was necessary to examine the influence of motivational climate and goal orientation on attitudes towards doping among Kenya athletes in Elgeyo-Marakwet County (EMC). There was also a need to establish the influence of selected demographic factors of age, gender, and length of experience on doping attitudes.

1.3 Purpose of the Study

The purpose of this study was to examine the influence of motivational climate and goal orientation on attitudes towards doping amongst Kenyan athletes in Elgeyo-Marakwet County.

1.4 Objectives of the Study

i. To determine the motivational climate (mastery and performance) of Kenyan athletes in Elgeyo-Marakwet County.

ii. To determine the goal orientation (task and ego) of Kenyan athletes in Elgeyo-Marakwet County.

iii. To determine the attitudes of Kenyan athletes towards doping in Elgeyo-Marakwet County.

iv. To determine the relationship between motivational climate and attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya.

v. To determine the relationship between goal orientation and attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya.

vi. To determine the influence of motivational climate (mastery and performance) on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya.

vii. To determine the influence of goal orientation (task and ego) on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya.

viii. To determine the influence of age, gender, and length of experience on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya.

1.5 Research Questions

i. What is the status of motivational climate (mastery and performance) of Kenyan athletes in Elgeyo-Marakwet County?

ii. What is the status of goal orientation (task and ego) of Kenyan athletes in Elgeyo-Marakwet County?

iii. What is the attitudes of Kenyan athletes towards doping in Elgeyo-Marakwet County?

1.6 Hypotheses of the study

H_{01}. There is no significant relationship between motivational climate and attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya

H_{02}. There is no significant relationship between goal orientation and attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya

H_{03}. There is no significant influence of motivational climate (mastery and performance) on attitudes on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya

H_{04}. There is no significant influence of goal orientation (task and ego) on attitudes on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya

H_{05}. There is no significant influence of age, gender, and length of experience on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya.

1.7 Significance of the Study

The findings of this study did shed light on the contribution of motivational climate and goal orientation on attitudes towards doping amongst Kenyan athletes in Elgeyo-Marakwet County. The study found task orientation and mastery climate linked with attitudes towards anti-doping, while an ego orientation and performance climate

associated with attitudes towards pro-doping. Further, the findings revealed the coach's role in influencing athletes' attitudes towards doping and athletes who might be prone to doping. The information gained unearthed evidence-based information about Kenyan athletes in Elgeyo-Marakwet County that may be of specific interest in policy formulation towards anti-doping prevention and deterrence measures. Lastly, the information derived from this research enriched the present knowledge in global anti-doping and provided valuable information for future research in exercise and sports science.

1.8 Delimitations of the study

The study was delimited to Kenyan athletes competing in events ranging from 800m to 10,000m, road races, track races, cross-country, and marathon races, and have trained in Elgeyo-Marakwet County for at least six months.

1.9 Limitations of the Study

The study acknowledged certain limitations that should be considered in interpreting the findings of this study. For instance, the study was correlational in nature and this limited, the ability to tell if prior experience with PES and doping influenced present doping attitudes. Also, the self-reported questionnaire that was used might have limited the study because athletes who may have doped and were never discovered were unlikely to have reported about their perceptions, opinions, and attitudes honestly. Additionally, all data were gathered using minimal demographic information and a self-report questionnaire. As a result, the study could not account for other confounding factors that could have contributed to doping attitudes like peer pressure, accessibility to doping substances, or personality types of athletes.

1.10 Assumptions of the Study

The study assumed that Kenyan athletes in EMC have gained knowledge and may have developed attitudes towards doping. The study also assumed that there was a relationship between motivational climate and goal orientation on attitudes towards doping.

1.11 Theoretical and Conceptual Framework

In an attempt to justify the influence of motivational climate and goal orientation on attitudes towards doping among Kenyan athletes in Elgeyo-Marakwet County (EMC), Achievement Goal Theory (AGT) (Nicholls, 1989) and Theory of planned behavior (TPB) (Ajzen, 1991) were adapted and guided the study.

Achievement Goal Theory (AGT) (Nicholls, 1989) asserts that people have different goals in achievement situations like sports and have been applied widely in efforts to understand the interaction between motivational climate and goal orientation. Nicholls (1989) posits that goal orientation helps differentiate between ability, effort, and outcome in assessing competence in an achievement setting. It is the motivation to achieve a goal in sports and defined as the reasons why individuals/ athletes engage in a task. By extension, Nicholls (1989) categorized goal orientation into two dimensions: task orientation and ego orientation. Task orientation is characterized by an athlete's sports engagement with developing ability, self-referenced perception of competence, and belief that hard work and effort lead to success.

On the other hand, ego orientation is characterized by athletes' engagement in sports to demonstrate ability relative to others, comparing the ability to others, outperforming others, and believing that demonstrating high ability and impressing

the right people lead to success. In an earlier study Nicholls, (1984) had found task-oriented individuals to be associated with greater perceptions of effort as an indicator of high ability, improvement, reduced performance impairment, and tremendous academic success. On the other hand, ego-oriented individuals were linked to perception of effort as an indicator of low ability, avoidance of or withdrawal from challenging and difficult tasks that require extended effort.

Motivational climate refers to the salient environment in which achievement is judged in sports. Ames (1992) defines motivational climate as the situational goal structure through which success and failure is judged in an achievement context like sports. Ames (1992) categorized motivational climate into mastery (or task) and performance (or ego) climate. Mastery climate is where success and competence are defined by self-referenced terms such as personal development and improvement. On the other hand, performance climate is where competence and success defined in relation to others, for example, by outperforming others and winning. Similarly, Newton et al. (2000) demonstrated a mastery-oriented climate to carry the consequences of important roles, cooperative learning, and effort/improvement in assessing competence in sports. In contrast, performance climate was found to carry the consequences of unequal recognition, intra-team rivalry, and punishment for mistakes.

According to Roberts et al. (2012), athlete support personnel act as socializing agents who create motivational climate through their actions, which in turn influence how individuals approach and respond to achievement tasks. As a result, how individuals perceive the motivational climate influences how they approach and respond to achievement tasks, including their goal orientation.

The TPB was used to determine the likelihood of behavior like doping happening (Ajzen, 1991). TPB model assumes that behaviors like doping in sports can be purposeful and premeditated by either the athlete or by athlete support personnel. It is assumed that athletes will engage in doping, having gained knowledge on doping either by themselves or by athlete support personnel. For instance, an athlete's attitudes towards doping determine whether an athlete will engage in doping or not. It is assumed that athletes will use performance-enhancing drugs if their attitudes support (pro-doping) or inhibit (anti-doping) doping. These attitudes are formed when athletes have gained knowledge of the benefits and associated risks of doping and having assessed their control beliefs that include self-efficacy beliefs and perceived external barriers towards the engagement. Research has demonstrated that determining athletes' attitudes towards doping could predict the actual situation of doping in sports (Petróczi & Aidman, 2009). Figure 1.1 shows the relationships between age, gender, and length of experience on one side and motivational climate and goal orientation on the other side and their influence on attitudes towards doping.

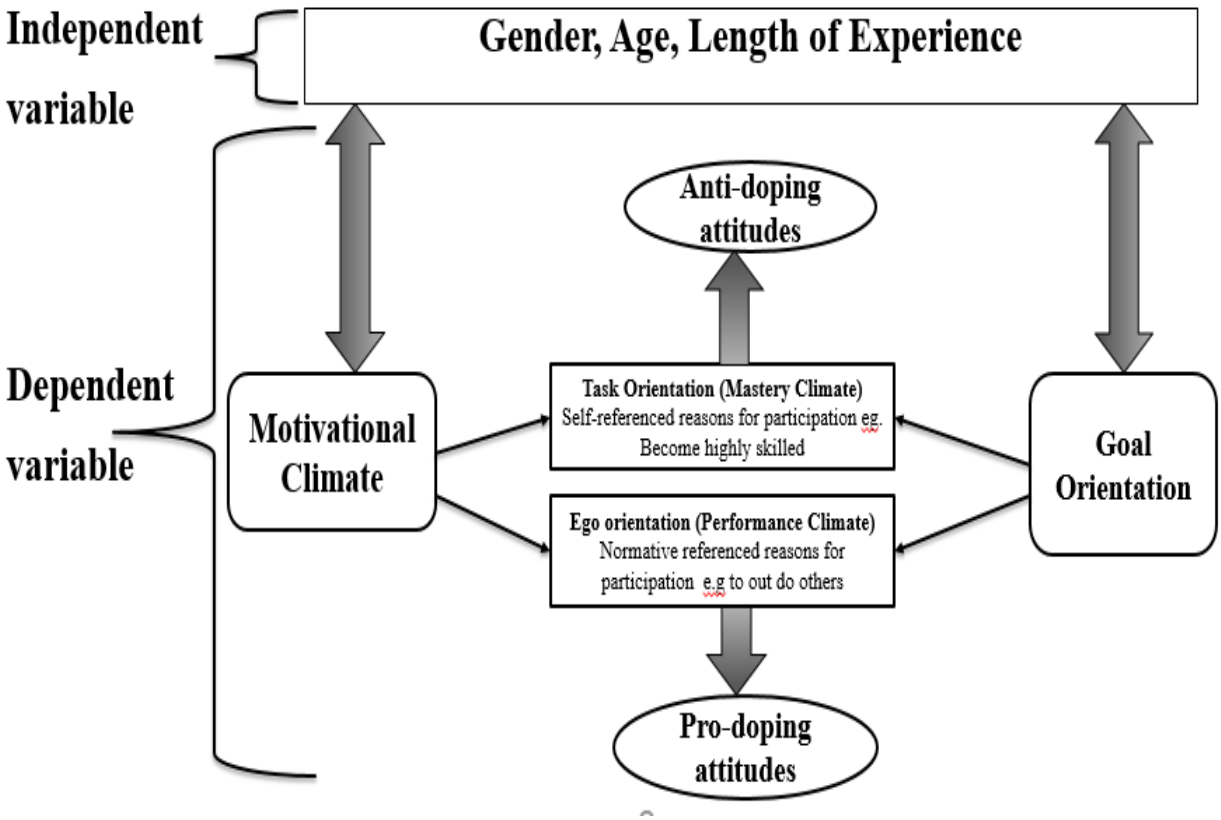

Figure 1.1 Theoretical and Conceptual Model: Adapted from AGT by Nicholls (1989) **and TPB by** Ajzen (1991)

The model shows that athletes have various motives for their participation in sports, categorized as either motivational climate or goal orientation. Research studies have linked athletes with task orientation or mastery climate to anti-doping attitudes, while athletes with ego orientation or performance climate to pro-doping attitudes (Moran et al., 2008; Sage & Kavussanu, 2008). Other studies have argued that the creation of motivational climate which promotes task orientation (mastery climate) as opposed to ego orientation (performance climate) may aid in anti-doping efforts (Petróczi & Aidman, 2008; Sas-Nowosielski & Swiatkowska, 2008). Personal variables of age, gender, and length of experience are believed to influence motivational climate and goal orientation on attitudes towards doping.

CHAPTER TWO. LITERATURE REVIEW

2.1 Motivational Climate and Doping in Sports

In the definition of competence in sports, two-dimensional concepts of goal orientation and motivational climate have been applied (Nicholls, 1989). These concepts act and interact and affect behavior in the definition of competence in sports. Ames (1992) defines motivational climate as situational goal structure that affects athlete's task and ego involvement in which success and competence is judged in sports. Motivational climate is categorized into task (or mastery) and ego (or performance) climate (Ames, 1992).

Mastery-oriented climate have been known to carry the consequences of important roles, cooperative learning, and effort/improvement in assessing competence in sports. On the other hand, performance climate has been known to carry the consequences of intra-team rivalry, punishment for mistakes, and having unequal recognition of athletes in a team (Newton et al., 2000). Similarly, Ames (1992) observes that mastery climate is where athletes define competence and success by comparing their performance with their personal best to improve one's performance. In contrast, performance climate is where success and competence are defined by athletes comparing their performance with others with the intention of winning and outperforming them.

In an achievement context like sports participation and competitions, individual and team success are influenced by many factors. One of the most notable influences is the interactions athletes have with athlete support personnel. Athlete Support Personnel (ASP) are individuals who are very important to athlete wellbeing. These

individuals include team managers, coaches, peers, trainers, staff, team officials, paramedical and medical staff, parents, and other persons assisting, treating, and working with athletes during athlete training and competition. According to Weigand et al. (2001), ASP have been identified as crucial individuals in motivational climate who create quality sports engagement for athletes, which in turn, influences athletes' behavior, beliefs, and intentions, and attitudes in sports. This study implied that the roles of ASP in an athlete's sports life could create an environment or climate characterized with success devoid of or presence of antisocial behaviors in sports such as cheating and use of PES.

In the team setup, athlete support personnel (ASP) and athletes will each have different team goals. The interactions of athletes with these individuals will influence how athletes perceive teamwork, competition, ability, effort, and outcomes in sport participation. Among the ASP, coaches have been cited as the most influential in athletes' sport participation (Bartholomew et al, 2010; Karjane & Hein, 2015; Stenling, 2016). Coaches are assumed, for example, in comparison to other ASP to perform essential leadership positions for athletes. For instance, Stenling (2016) indicates that coaches, through their various leadership styles play a critical role in motivating young athletes. To achieve excellence, coaches should aim to build competence, confidence, connection, and character in athletes of various ages and competitive levels using different types of knowledge, skills, and training (Stenling, 2016).

Duda and Balaguer (2007) observe that motivational climate is mainly created by the actions or inactions of athlete support personnel such as the coach. Furthermore, Newton et al. (2000) claim that the coach-created mastery climate includes the

coach's actions, focusing on athletes displaying effort, the important role each athlete plays in a team, and fostering intra-team cooperation. On the other hand, the coach-created performance climate includes the coach's actions directed towards punishment of mistakes, fostering intra-team rivalry, and having differential treatment among teammates (Newton et al., 2000). In addition, coaches have been cited as critical influencers towards athletes' attitudes, intentions, and behaviors towards PES use in sports (Huybers & Mazanov, 2012). Therefore, it was crucial to identify the perceptions of athletes about their motivational climate created by coaches.

Studies in sports psychology have associated mastery climate with positive outcomes such as sportspersonship, including respect for team officials, game rules, teammates, and opponents, and positively linked to pro-social behavior. On the other hand, performance climate has been positively associated with anti-social behavior and adverse outcomes such as taking shortcuts, cheating, or aggressiveness (Ntoumanis & Biddle, 1999; Selfriz et al., 1992; Stanger et al., 2018). Pro-social behaviors are actions by athletes intended to support or benefit other athletes (Sage & Kavussanu, 2008). For example, athletes assisting an opponent getting back to their feet or congratulating a teammate or opponents for good play. On the other hand, anti-social behaviors are actions engaged in by athletes intended to injure or disadvantage other athletes, for example, athletes intentionally injuring an opponent, time-wasting, obstructing an opponent, and verbally abusing a teammate or opponents (Sage et al., 2006).

When it comes to doping and PES use in sports, motivational climate that is created mainly by the coaches has been found to affect athlete's attitudes towards doping and

achievement strategies in sports. For instance, studies have associated coach-created mastery climate to negative attitudes towards doping in sports, whereas coach-created performance climate has been positively associated with positive attitudes towards doping and cheating in sports (Allen et al., 2015; Bae et al., 2017; Hodge et al., 2013; Kavussanu, 2017; Moran et al., 2008). It is believed that coaches, through their actions and inactions in sports, act as either protective or risk agents on athlete doping. For example, Kirby et al. (2011) study on athletes who have admitted to doping found coaches as risk agents on athlete doping. For instance, coaches' inactions due to lack of their participation in doping problems and perceived unwillingness by coordinating bodies to face doping issues were identified as factors that led to athletes' decision to dope. In the same study, Kirby et al. (2011) revealed that coaches have been protective agents on athlete doping through their actions. For instance, one of the athletes confessed to having succumbed to doping pressure when this athlete changed training groups, and the positive impact of the coach as the role model and a deterrent to doping was no longer present. In the study of doping in professional sports in Germany, Pitsch et al. (2007) reported that 5.1% of elite athletes were persuaded by their coaches, other managers, and officials to participate in doping activities, and family members and friends inspired 6.5%. This research found that coaches motivate athletes to cheat because doping often boosts the coach's income prospects.

In conclusion, a coach-created motivational climate has been shown to play a critical role in promoting pro-doping and anti-doping efforts in sports. For instance, coaches can place athletes at either "lower risk" or "greatest risk" on doping or PES use through their actions and inactions. However, despite proven associations between motivational climate and attitudes towards doping, no research has examined the

contribution of motivational climate in determining doping attitudes among Kenyan athletes. Therefore, it was essential to examine the influence of motivational climate on attitudes towards doping among Kenyan athletes in EMC.

2.2 Goal Orientation and Doping in Sports

According to Achievement Goal Theory (AGT) (Nicholls, 1989), people have different goals in achievement situations like sports, and their main goal is to demonstrate competence. In the same line, the way people interpret their competence has implications depending on their goal perspective. According to Nicholls (1989), goal orientation is categorized into two dimensions: task and ego orientation. Task-oriented individuals perceive their competence through self-referential terms when they perform their best and strive to improve their performance without regard for how others perform the same tasks. On the contrary, ego-oriented individuals assess their competence by comparing themselves to others, outperforming them, winning at all costs, and demonstrating superior performance to others (Nicholls, 1989).

In the way individuals assess competence, the proportion of both goal orientations has implications in individuals' motives, beliefs, and sports performance. For example, studies in sports psychology have associated task orientation with positive outcomes in sports, while ego orientation has been linked with adverse outcomes. For example, Nicholls (1984) found task-oriented individuals to be associated with greater perceptions of effort, high ability, improvement, reduced performance impairment, and greater academic success. On the other hand, ego-oriented individuals have been linked to the perception of effort as an indicator of low ability, avoidance of, or withdrawal from difficult and demanding tasks that require a lot of effort. Similarly, (Roberts et al., 1997) observed task-involved individuals foster

adaptive achievement behaviours during failure like being persistent and putting a lot of effort to succeed next time. Furthermore, McArdle and Duda (2002) have found that ego-involved individuals are more inclined to engage in cheating in sports to enhance their winning opportunities.

In dealing with doping and PES use in sports, it has been established that goal orientation plays an essential role in identifying athletes who might be prone to doping and PES use in sport. For instance, studies have associated task orientation with adaptive behaviours such as athlete participation in sports for internal purposes such as being physically active, self-esteem, and developing mastery. These athletes can result in them experiencing more positive feelings and cognitions when engaging in sports and negatively associated with doping attitudes in sports. On the other hand, ego orientation has been associated with maladaptive behaviours that include athlete participation in sports for external purposes such as performing better than others and, in most cases, doing so with less effort. It is argued that ego-oriented athletes may reach for whatever they can, for example, using PES to ensure they can beat oopponents of more extraordinary ability than themselves when faced with challenges and therefore associated with pro-doping attitudes in sport (Allen et al., 2015; Bae et al., 2017; Barkoukis et al., 2011; Ring & Kavussanu, 2018; Sage & Kavussanu,2008; Sas-Nowosielski and Swiatkowska, 2008). In Sage and Kavussanu (2008), task orientation was associated with pro-social behaviour and sportspersonship in sport, whereas ego orientation was associated with antisocial behaviour.

Similarly, Sas-Nowosielski & Swiatkowska (2008) found out that athletes who are high in ego orientation are more likely to endorse doping than athletes who have

high in task orientation. Allen et al. (2015) study on individual and team sport athletes in Scotland reported individual sport athletes to have high ego orientations compared with team sport athletes. Therefore, individual athletes were associated with positive attitudes towards doping compared to team sports athletes. Along the same line, Bae et al. (2017) study on Korean elite athletes established that perfectionism, especially athletes' concerns over mistakes, was positively correlated to doping attitudes. Finally, Ring and Kavussanu, (2018) study among college athletes supported previous studies by reporting that ego orientation increased doping likelihood among the athletes compared to task orientation or no goal orientation. In conclusion, athletes with high ego orientations and low task orientations have a greater risk of PES use and doping in sports than athletes with low ego orientations and high task orientations.

2.3 Attitude towards Doping

Attitude is defined as the dispositions and assessments that people hold concerning specific objects of their thought (Banaji & Heiphetz, 2015). The athletes' attitude towards PES use has been used widely to determine the prevalence of doping in various sports. Numerous studies have opined that prediction of athletes' attitude in sports has been shown to predict the actual situation (Boit et al., 2012; Jalleh, et al., 2014; Madigan, et al., 2016; Ntoumanis, et al., 2014; Petróczi & Aidman, 2009). For instance, Petróczi & Aidman (2008) argues that many athletes are reluctant to report the actual situation on doping in sports due to its illegal nature and, more so, the legal implications on athletes' careers, hence need to determine athletes' attitudes.

Several instruments have been used to assess athlete’s attitudes in sports. For example, Petróczi and Aidman (2009) used the Performance Enhancement Attitude

Scale (PEAS), revealing that PES use and doping in sports is rarely an accident, and understanding athletes' attitudes is likely to be predictive of doping-related behaviours. Bloodworth et al., (2012) among United Kingdom Young athletes used an anonymous questionnaire showing evidence of a small but significant proportion of adolescents engaging in doping practices with males expressing a more permissive attitude toward performance-enhancing methods than females. Similarly, Jalleh, et al. (2014) among elite Australian athletes used Sport Drug Control Model, revealing the weaknesses in current anti-doping measures such as anti-doping awareness, penalties for non-compliance, and testing requirements. Further, Jalleh, et al. (2014) proposed incorporating morality in both deciding to use PES and the resultant consequences of being caught using PES by athletes and adopting fairness to all athletes in various anti-doping deterrence measures for effective anti-doping prevention and deterrence. In the same line, Ntoumanis et al. (2014), using self-reports drawn from an extended theory of planned behaviour framework, revealed that the strongest positive links between doping intentions and behaviors in athletes were perceived social norms, legal supplements and positive attitudes towards doping. Sas-nowosielski (2017), using the Adaptive and Maladaptive Perfectionism Questionnaire in examining perfectionism and attitudes toward doping in sports, showed adaptive perfectionism as a positive predictor of doping attitudes. On the other hand, maladaptive perfectionism was negatively correlated with attitudes towards doping.

Consistent with previous studies done in Kenya, East Africa, and elsewhere, this study used the Performance Enhancement Attitude Scale (PEAS) (Allen et al., 2015; Kamenju et al., 2016; Morente-Sánchez & Zabala, 2013; Muwonge et al., 2015; Mwangi et al., 2019; Petroczi & Aidman, 2009). Similar studies have shown that

knowledge on doping among athletes help in preventing the formation of pro-doping attitudes and the development of anti-doping attitudes (Backhouse et al., 2007; Blank et al., 2014). Along the same lines, Fung and Yuan (2006) submit that for coaches to serve as role models, they must demonstrate their knowledge and ethically sound attitudes toward doping.

Previous studies in Kenya on athlete's attitudes towards doping have shown that Kenyan elite and college athletes have strong negative attitudes towards doping (Boit et al., 2012; Kamenju et al., 2016), with the majority of the athletes significantly knowledgeable on doping issues and aware of doping and PES consequences. However, these studies among Kenyan athletes revealed a small percentage of athletes who indicated positive attitudes towards doping, revealing that given an opportunity, this small percentage of athletes are likely to engage in doping (Boit et al., 2012; Kamenju, 2011). Therefore, it was significant to assess Kenyan athletes' attitudes in EMC towards doping and identify athletes who might be prone to doping and thereby able to institute objective intervention programs.

2.4 Relationship between Motivational Climate and Goal Orientation and Attitudes towards doping in Sports

Athletes are motivated to participate in sports due to the interactions of many factors. One of the main components is the interaction between personal goals and situational goals. Weinberg and Gould (2007) indicate that athletes or situational factors cannot infer motivation results in sports. Therefore, the best way to understand athletes' motivation in sports is through understanding the interaction between an athlete and a specific situation. For instance, an athletes' personality determines his or her response towards external motivation given to him. On the other hand, the external

environment, like the motivational climate of athletes from athlete support personnel (ASP), affects athletes' perception of the task given to them and, eventually, their performance.

In the context of doping and PES use in sports, Petróczi and Aidman (2008) contend that doping in sports occurs in a life-cycle model that includes individual athletes and systemic factors like motivational climate. This study implied that an individual could be both ego and task-oriented, but the climate or the context an athlete operates in can affect attitudes, opinions, and doping practices. Similarly, Ames (1992) in motivational climate research revealed motivational climate created by ASP to bear the implications for athletes' task or ego goal orientation.

Studies on doping in sports have linked athletes with task orientation as well as those who experience mastery climate to anti-doping attitudes, while athletes with ego orientation and have experienced performance climate have been associated with pro-doping attitudes (Moran et al., 2008; Sage & Kavussanu, 2008). Similar studies have argued that the creation of motivational climate that promotes aspects of task orientation and mastery climate on athletes as opposed to ego orientation and performance climate may aid in anti-doping efforts (Petróczi & Aidman, 2008; Sas-Nowosielski & Swiatkowska, 2008).

Along the same line, Allen et al. (2015) and Bae et al. (2017) claim that a coach-created motivational climate has implications for athletes' task or ego goal orientation, which is closely linked to cheating and doping. Therefore, coaches must be more informed on the importance of creating motivational climate free from doping (Moran et al., 2008).

There is evidence of the existence of relationships between motivational climate and goal orientation on attitudes towards doping. However, most of the studies reviewed came from western countries. This study examining the influence of motivational climate and goal orientation on attitudes towards doping was necessary to find athletes' goal orientation and, therefore, derive optimal motivational climate from the coaches for superior athletic performance and coaching excellence free of doping.

2.5 Influence of Athletes Demographic Variables on attitudes towards doping

This section reviews related studies on the influence of demographic variables of age, gender, and level of experience on attitudes towards doping amongst Kenyan athletes in Elgeyo-Marakwet County, Kenya, where little is known about these variables. For instance, older athletes have been associated with performance-oriented goals, making them more vulnerable to doping as compared to younger athletes who have linked to mastery-oriented goals, thereby making them less vulnerable to doping (Petroczi, 2013). Similarly, male athletes have been reported to be more susceptible to doping than female athletes (Bloodworth et al., 2012). On the other hand, length of experience has been shown to significantly relate to athletes' knowledge of the doping, with athletes with an extended length of experience regarded as knowledgeable and less vulnerable to doping than their counterparts with a short length of experience (Ćorluka et al., 2011).

In a related study, Boit et al. (2012) study among Kenyan elite athletes has shown that age influences doping attitudes, with younger athletes having pro-doping attitudes compared to older athletes, and neither gender nor experience had any effect on doping attitudes. Therefore, it was critical to investigate the influence of age, gender, and length of experience on attitudes towards doping among Kenyan

athletes in Elgeyo-Marakwet County to ensure that policy and anti-doping measures are customized across different age categories, runners' length of experience categories, and are gender-specific.

2.5.1 Influence of Age on Attitude towards doping

Age has been shown to play a pivotal role in determining the influence of athlete's attitudes towards doping in sports. Studies in sports psychology have brought out contradicting results on the influence of age on attitude towards doping in sports. For example, young athletes have been reported to be more likely to endorse beliefs and attitudes that doping will lead to better performance in sports in comparison to older athletes (Boit et al., 2012; Mwangi et al., 2019; Sekulic et al., 2016; Singhammer, 2012). For example, Boit et al. (2012) on Kenyan elite runners revealed that increased knowledge among the senior athletes cushioned them from having pro-doping attitudes.

Similarly, Singhammer (2012) and Mwangi et al. (2019) opined that older athletes have gained more knowledge on doping issues, and they have learned about the harmful and long-term consequences of doping in sports. On the other hand, Sekulic et al. (2016), in high-level team sports, reported that male athletes who had achieved higher sporting success at junior level and the same higher performance at the senior level protected these athletes from doping. However, junior athletes who experienced frustrations, repeated failures, and lack of success at the senior level were more predisposed to doping.

On the contrary, Devcic et al. (2018) claim that age did not have any influence on the doping susceptibility of Slovene swimmers with swimmers who were afraid of

adverse effects of doping, such as rejection by friends and family, to be less likely to declare a positive intention towards doping. Similarly, Kim and Kim (2013), among elite level Asian Youth, found out that older athletes showed higher doping likelihood than younger athletes. Therefore, there was a need to examine Kenyan athletes' age and their influence on attitudes towards doping and customize interventions across different age categories.

2.5.2 Influence of Gender on Attitude towards doping

Doping and PES use in sports affect both male and female athletes. Studies have been done to investigate the reasons that lead male and female athletes to use performance-enhancing drugs. For example, Peters et al. (2005) study among college male and female athletes found that male athletes resort to doping in sports to enhance their sports performance, win competitions, and more so when they get encouragement from athlete support personnel. Along the same line, Sekulic et al. (2016), in high-level team-sports, reported male athletes who consumed legal PES inform of dietary supplements, perceive their sport as being contaminated by doping and had achieved better results at the junior level had higher intentions and attitudes towards doping compared to their female counterparts. On the other hand, female athletes reported higher doping likelihood on athletes involved in binge drinking and lower doping likelihood on female athletes who possessed better knowledge on sports nutrition (Sekulic et al., 2016).

Similarly, Devcic et al. (2018) revealed male swimmers to have a higher doping susceptibility in comparison to their female counterparts. Further, both male and female athletes who consume alcohol and dietary supplements and have had low sporting performance were susceptible to PES use and doping (Devcic et al., 2018).

Studies on the influence of gender on attitude towards doping in sports have brought out contradicting findings. For example, male athletes have been reported to have more permissive attitudes towards PES than female athletes (Bloodworth et al., 2012; Devcic et al., 2018; Lata & Mondello,2010; Petróczi,2007; Sas-Nowosielski & Budzisz,2018; Sas-Nowosielski & Swiatkowska,2008; Soltanabadi et al., 2015). According to Petróczi (2007), male athletes are more likely to use performance-enhancing drugs than female athletes because they attach much importance to winning. Similarly, Zaletel et al., (2015) study among college athletes found female athletes to have a reduced propensity to doping and PES use in sports compared to their male counterparts because they are more concerned about the harmful effects of doping, including church criticism, lousy reputation in the media, and health risks compared to their male counterparts.

In contrast, studies elsewhere in Africa and Kenya have shown that gender did not influence athletes' attitudes towards doping (Boit et al., 2012; Kamenju et al., 2016; Muwonge et al., 2015; Mwangi et al., 2019). For instance, Boit et al. (2012) and Muwonge et al. (2015) found that both male and female athletes in Kenya and Uganda had similar knowledge of doping issues. Similarly, Kamenju et al. (2016) on Kenya Colleges athletes attributed similar attitudes towards doping between males and females because college athletes train in the same coaching environment and have experienced the same coaching education.

In summary, the reasons for doping and PES use in sports between males and females vary. However, these associations were seen in athletes mostly from western countries. Studies in Africa focused on team sports and individual sports (Muwonge et al., 2015; Mwangi et al., 2019). On the other hand, studies in Kenya focused on

elite and college athletes (Boit et al., 2012; Kamenju et al., 2016). A study like this was warranted since the information gained may necessitate the creation of anti-doping policies and deterrence measures that would be inclusive to both genders. In the preceding, irrespective of gender, anti-doping preventive programs should consider both male and female athletes as vulnerable groups towards doping and PES use.

2.5.3 Influence of Length of Experience on Attitudes towards doping

Athlete sports life is categorized into four stages: initiation stage, specialization stage, investment stage, and finally retirement stage (Côté et al, 2003; Wylleman et al, 2004). Regarding doping and PES use in sports, Wylleman et al. (2016) claim that athletes dope due to stagnation in athlete physical development, enhancement of performance, financial rewards, culture of the sports, and the athlete environment. The study also alluded that these factors are determined at various stages in the athletic career. Wylleman et al. (2016) identified personal norms, support from athlete support personnel, the existence of anti-doping strategies, and fear of the consequences of being caught as reasons deterring athletes from doping.

Similarly, Petróczi and Aidman (2008) demonstrated that the decision to start using PES by athletes is very complex with the interaction of factors influencing each other at different stages of athlete sports life. For example, this study alludes that successful anti-doping prevention and deterrence measures will likely to benefit from a holistic approach in looking at a sport-specific set of facilitators and inhibitors (and their interaction). In addition to targeting the athlete population from preadolescents to adults at all stages of athlete sports life (Petróczi & Aidman, 2008).

WADA (2018b) expects all athletes to be conversant with its anti-doping rule violations and the consequences of doping. Common sense seems to dictate that the expectations are even higher to athletes who have participated in the sport for a long time since it is assumed that they are better informed and motivated to participate in clean sport than athletes who have competed for few years. This assertion is supported in (Chebet, 2014; Ćorluka, et al., 2011; Mwangi et al., 2019; Singhammer, 2012). For instance, Chebet (2014) study among elite Kenyan runners found athletes who have an extended length of experience to be associated with knowledge of doping than athletes who have a short length of experience. Further, Chebet (2014) submits that athletes who have been in the sport longer were more knowledgeable on doping issues than those who have competed for few years because these athletes have participated in several national and international athletic meetings allowing them to interact with officials and other athletes and most of them could have been exposed to testing.

Similarly, Ćorluka et al. (2011) study among footballers reported that players' length of experience is significantly related to knowledge of doping. On the contrary, Sekulic et al. (2017) revealed that kickboxers who had competed in sports for a longer period of time were more prone to doping than those who had competed for a short period of time. This study argues that kickboxers who had participated in the sport for a long period of time were led to believe that doping was prevalent in the sport, which explains their increased tendency to dope. It can therefore be summed up that increased knowledge on doping issues irrespective of athletes' length of experience protected athletes from doping and PES use.

Concerning Kenyan athletes and East Africa athletes, studies of (Boit et al., 2012; Kamenju et al., 2016; Mwangi et al., 2019) revealed that athletes' length of experience did not influence doping attitudes among the athletes. These studies believed that Kenyan athletes and East Africa University athletes, irrespective of their length of experience, have knowledge on doping and therefore no significant influence of athletes length of experience on attitudes towards doping (Boit et al., 2012; Kamenju et al., 2016; Mwangi et al., 2019). Further, Kenyan athletes reported similar attitudes irrespective of athlete length of experience because most of these athletes train in the same environment and have received doping awareness and knowledge on doping (Boit et al., 2012; Kamenju et al., 2016).

Studies conducted have provided conflicting findings on the association of athletes' length of experience and attitudes towards PES use and doping. Therefore, there was the need to find the influence of athlete length of experience on attitudes towards doping among Kenyan athletes where studies are scarce. The information gained may necessitate the need for policy interventions to be customized according to the athlete's length of experience categories.

2.6 Summary of Literature Review

The reviewed studies provided theoretical links between doping attitudes and certain psychological attributes like motivational climate and goal orientation. In addition, several studies investigated indicated a clear association between athletes of different age categories, gender, and different length of experience on attitudes towards doping. However, there are distinct gaps that the present study identified. For instance, most of the reviewed studies that corroborated these associations came

from western countries. Then, the studies on these relationships are not conclusive among Kenyan athletes, hence the need for this study.

CHAPTER THREE: METHODOLOGY

3.1 Research Design

A cross-sectional analytical survey design was used in this study. The cross-sectional analytical survey design was appropriate for this study because it allowed gathering information about Kenyan athletes' demographic details, motivational orientations, and attitudes at one specific point in time. According to Kamlesh (2006) and Best and Kahn (2016), cross-sectional analytical survey design allows specific traits of a population such as demographic data, opinions, perceptions, and attitudes to be evaluated spatially at one specific point in time involving a cross-section of the population.

3.2 Measurement of Variables

In this study, athletes' age, gender and length of experience were the independent variables, and motivational climate, goal orientation, and attitudes towards doping were treated as dependent variables. Independent variables of age and length of experience were measured at interval level whereas gender was measured at nominal level. On the other hand, dependent variables of motivational climate, goal orientation, and attitudes towards doping were measured at interval level using a a 5-point Likert scale.

3.3 Location of the Study

Elgeyo-Marakwet County was purposively selected because it has a large pool of athletes ranging from amateur to elite hence priding herself as the "home of champions". For instance, (Appendix E) contains a list of notable elite athletes from

EMC who have represented Kenya in numerous international athletic competitions. (Elgeyo-Marakwet County, 2018). The high concentration of athletes of different ages, gender, and length of experience gave the researcher a good sample that acted as a total representation of all Kenyan athletes on the influence of motivational climate and goal orientation on attitudes towards doping.

3.4 Target Population

The population for this study were athletes competing in 800 to 10,000 meters, track races, road races, cross-country, and marathons. According to Yauma, (2018), Elgeyo-Marakwet County had 2000 athletes, both registered and unregistered. As a result, 2000 athletes were identified as the study's target population.

3.5.1 Inclusion Criteria

The inclusion criteria were Kenyan athletes who train in EMC and have attained the age of 14 years and above and were registered athletes by their individual training camps at the time of data collection.

3.5.2 Exclusion Criteria

The exclusion criteria were on Kenyan athletes who were participating in sprints, field events, or any other sports other than athletics. Any athlete who has been running for less than 6 months, has not attained 14 years or has failed doping controls were also excluded.

3.6 Sampling Techniques

In Elgeyo-Marakwet County, senior male and female athletes as well as junior male and female athletes of various ages train together. Stratified random sampling technique was used in determining the actual composition of the respondents for this study. For instance, the athletes were stratified in terms of age and gender. Stratified sampling allowed the percentage of a particular variable (age and gender) in the original population to determine the sample percentage. According to Krejcie and Morgan (1970), Stratified sampling allows an equal chance for the diverse population groups to get an equal chance of being sampled.

3.7 Sample Size

The sample size was determined using the (Cochran, 1977) formula. The sample size was calculated in two steps:-

i. Sample size for large population to yield representative sample for proportions

$$\mathbf{n_o = Z^2pq / e^2}$$

Where, $\mathbf{n_o}$**=** Sample size for the study, **Z** = desired confidence interval (95% CI), **P =** proportion of the target population estimated to have the desired characteristics (0.5), e = desired level of precision 5% or 0.05 and q **= 1- p**

Therefore: $\mathbf{n_o}$= (1.962 x 0.5 x0.5) ÷ $(0.05)^2$

= 385 athletes

ii. Adjustment of the sample size to the required target population

$\mathbf{n = n_o / 1+ (n_o -1) /N}$

Where, **n=** Sample size for the study, **N=** population size, $\mathbf{n_o}$= is calculated sample size for infinite (large) population

Therefore: **n** = 385 / 1 + (385- 1) ÷ 2000

= 323 athletes

WADA Social Science Research Package for Anti-Doping organizations supported this sample size (Appendix D) (Donovan, et al, 2015). This package proposes that in a population of athletes, a sample size at a confidence level of 95% is required to obtain a proportion on any question within plus or minus 5% of the population.

3.8 Research Instruments

A self-report questionnaire was used for data collection. The questionnaire was divided into four different sections to cover the objectives of the study (Appendix C).

Items in Section A sought the athletes' personal data of age, gender and length of experience.

Items in Section B were on athletes' motivational climate and were assessed using an adapted version of the Perceived Motivational Climate in Sport Questionnaire (PMCSQ-2) (Newton et al., 2000). The 33-item PMCSQ-2 questionnaire contains 6 subscales that identify the dimensions of a mastery climate and performance climate. The mastery climate dimension contained 3 subscales that measured the existence of important roles (each athlete contributes in some important way), cooperative learning (athletes' help each other learn), and effort/improvement (athletes feel good

when they try their best). On the other hand, the performance climate dimension contained 3 subscales that assessed unequal recognition (only the best athletes get praise), intra-team rivalry (athletes are encouraged to outperform the other athletes) and punishment for mistakes (the coach gets mad when an athlete makes a mistake). The items were prefaced with the heading (In this athletics team**…**). The athletes responded to the 33 items weighted on a 5-point Likert type scale ranging from (1) strongly disagree to (5) strongly agree.

Items in Section C were on athletes Perception of success or achievement goal orientation, which used 13 item Task and Ego Orientation in Sport Questionnaire (TEOSQ) (Duda & Nicholls, 1992). On the TEOSQ, the athletes were asked to rate how much they personally agree with the items prefaced with the heading (I feel really successful in athletics when...). An example of an item measuring task-orientation asks: (I work really hard). An example of an item assessing an ego-orientation asks: (I can do better than my friends). The athletes responded to the 13 items weighted on a Likert type scale ranging from (1) strongly disagree to (5) strongly agree.

Items in Section D sought athletes' attitudes towards doping in athletics, and it had 17 items modified version of Performance Enhancement Attitude Scale (PEAS) (Petróczi & Aidman, 2009). The athletes responded to the 17 items weighted on a Likert type scale ranging from (1) strongly disagree to (5) strongly agree.

3.9 Recruitment and Training of Research Assistants

The researcher recruited two research assistants who were former athletes and were assistant athlete coaches in EMC, and were university students in neighboring

universities. Before pre-testing of the study instruments and data collection, the research assistants were trained by the researcher for a half-day training on the recommended way of administering the questionnaire in Elgeyo-Marakwet County (Appendix F). During the training, the researcher allowed research assistants to familiarize themselves with the questionnaire, and explanations of various words and adjectives used in the questionnaire were explained. Further, the research assistants were allowed to fill a copy of the questionnaire. The research assistants were also trained on the procedure in questionnaire administration, data management, professional ethics and code of conduct. To ensure effective administration of the questionnaire, the research assistants were involved in the pre-testing of the questionnaire in Uasin-Gishu County, Kenya, for them to gain practical experience.

3.10 Pre-testing of the Study Instrument

The researcher and two research assistants conducted the pre-testing of the questionnaire prior to the main study. The questionnaire pre-testing was conducted among athletes training in Strabag Scholarship Training Centre in Uasin-Gishu County, Kenya. The training Centre was purposefully selected because it has a large pool of athletes. Secondly, the training Centre is located in a different county from EMC, thereby providing athletes that were not included in the main study. The researcher first stratified the athletes in terms of gender and further randomly chose 32 athletes. This was equivalent to 10% of the total study sample of 323. According to Mugenda and Mugenda (2003), the pre-testing of study instruments should be between 1% and 10% depending on the researchers sample size. After the pre-testing of the questionnaire, the researcher held a debriefing session with the respondents. The respondents each gave their views about each item in the questionnaire, the

instructions given in the instrument, and procedures to be applied in data collection. The respondents had no issue with the wordings, adjectives and instructions in the questionnaire; hence the questionnaire was not improved. However, the pre-testing of the study questionnaire helped the researcher and research assistants in two ways. First, it allowed the researcher and research assistants to gain valuable information in understanding the approximate time the athletes take in filling the questionnaire. Secondly, it provided experiences and opportunities to research assistants and researcher to test their skills in administering the questionnaire that was useful during data collection.

3.11 Validity of the Instruments

Validity of the instruments is improved through expert judgment (Gall et al., 1996). As such, the researcher liaised with the supervisors who are specialists in exercise and sports science for scrutiny and expert judgment

3.12 Reliability of the Instruments

The questionnaire used in this study was reliable as it has been used in diverse cultures and studies at different levels. For instance, the reliability index of PMCSQ-2 has reported a 0.87 mastery climate and 0.89 performance climate (Newton et al., 2000). The reliability index of TEOSQ has reported 0.78 task orientation and 0.91 ego orientation (Castillo et al., 2010). The modified version of PEAS reliability index has reported between 0.71 and 0.91 across various samples (Moran et al., 2008; Petroczi & Aidman, 2009).

The researcher scrutinized the instruments' reliability during the pre-testing of the study instruments by using the internal consistency technique. The internal

consistency technique examines scores of data obtained from a single data collection administered to a sample of respondents (Mugenda & Mugenda, 2003; Tavakol & Dennick, 2011). A high-reliability coefficient indicates that items assessing a specific concept have consistency and correlate highly among themselves. According to Mugenda (2008) and Suter (2011), the internal consistency technique gives a unique and quantitative estimate in determining the internal consistency. Table 3.1 shows Cronbach's coefficient alpha results for determining reliability for each section in the administered questionnaire.

Table 3. 1: Results of Cronbach's Coefficient Alpha for Determining Reliability

Variable	**Cronbach's Alpha**	**N of Items**
PMCQ-2 Subscale		
Mastery Climate	0.82	17
Performance Climate	0.76	16
TEOSQ Subscale		
Task Orientation	0.66	7
Ego Orientation	0.47	6
PEAS scale	0.89	17

Table 3.1 shows Cronbach's Coefficient Alpha for Determining Reliability for PMCQ-2 subscales, TEOSQ Subscales, and PEAS scale. PMCSQ-2 reported (α = 0.82) mastery climate and (α = 0.76) performance climate, TEOSQ reported (α = 0.66) task orientation and (α = 0.47) ego orientation and PEAS scale reported (α = 0.89). Only the TEOSQ subscales reported moderate reliability, whereas PMCQ-2 and PEAS reported high reliability. This finding largely met the recommendations in psychological studies (Shaughnessy et al., 2003).

3.13 Data Collection Procedures

Data collection took place between October and November 2019 at the training grounds of the selected training camps in EMC. Data was collected by the researcher and the two research assistants at the training camps. The researcher contacted coaches and managers of the selected training camps using a letter of introduction from Elgeyo-Marakwet County government (Appendix J). Upon being granted approvals to access their training camps, the researcher planned with the coaches and managers on the date and time of filling the questionnaires. For logistical concerns, coaches and managers were requested to allow the filling of questionnaires to a group setting of athletes instead of one athlete at a time. The researcher and research assistants, after being introduced to the athletes by either the coach or team managers, explained to the participating athletes the aim of the study, after which they distributed the questionnaire to the athletes and sought their consent by appending their signatures in the informed consent form (Appendix A) for athletes aged 18 years and above who agreed to participate in the study after which they were allowed to fill the questionnaire. For athletes between the ages of 14 years and 18 years, an informed assent form (Appendix B) was obtained before the completion of the questionnaires. The researcher and research assistants then supervised the filling process, guiding the respondents in the process and responding to any questions sought until all the athletes had filled the questionnaire. The researcher and research assistants immediately collected the questionnaire once they were filled and a code number assigned to each questionnaire. Athletes took an average of 30 minutes in filling the questionnaire.

3.14 Data Analysis and Presentation

All data obtained were coded and entered into IBM SPSS Version 23.0 Computer Software for data analysis. Descriptive values of means, standard deviations, percentages and frequencies were calculated and used to organize and summarize the data to understand its distribution. Skewness and kurtosis tests and Shapiro-Wilk tests were executed to determine if the sample distribution of the data was normally distributed.

Skewness and kurtosis results as well as Shapiro-Wilk results revealed that the data was statistically significantly different from a normal distribution data therefore non-parametric inferential tests were used in this study. Correlations were done using Spearman's rank correlation to determine the relationship between motivational climate and goal orientation on attitudes towards doping. Binary logistical regression analyses were used to examine if athletes' attitudes towards doping was influenced by the motivational climate, goal orientation and demographic variables (age, gender, and length of experience). Binary logistical regression analyses were used because the outcome variable (attitudes towards doping) was binary (dichotomous). Tables were used to present the results. All hypotheses were tested at $P < 0.05$ significance level.

3.15 Logistical and Ethical Consideration

The researcher applied and got the approval of the research proposal and research authorization from Kenyatta University Graduate School (Appendix G), Kenyatta University Ethical Review Board (Appendix H), National Commission for Science, Technology, and Innovation (NACOSTI) (Appendix I), and Elgeyo-Marakwet

County (Appendix J) before commencing the study. The researcher sought permission from coaches, team managers, and owners of the training camps before data collection through verbal communication. In addition, the researcher in the field sought participants' permission to participate in the study and informed consent (Appendix A) obtained from athletes (except for athletes aged between 14 and 18 years) who agreed to participate in the study and then given the questionnaire. For athletes aged between the ages of 14 years and 18 years, assent forms (Appendix B) were obtained from them before the completion of the questionnaires. Participants were then informed that their participation in the study was voluntary, free to seek clarifications at will, and information obtained in the study was purely for academic purposes. Further, participants were informed not to write their actual names in the questionnaire to protect the confidentiality of their information and were assured that they could pull out of the study if they felt uncomfortable or leave out some items that could cause discomfort.

CHAPTER FOUR: RESULTS

This study set out to examine the influence of motivational climate and goal orientation on attitudes towards doping amongst Kenyan athletes in Elgeyo-Marakwet County, Kenya. This chapter presents the results based on objectives of the study. Demographic data of the respondents that included age, gender and length of experience were first presented before answering of research questions and hypothesis testing.

4.1 Demographics of Respondents

In this study, the total number of respondents who participated in the study were 323 athletes representing 100% return rate of the administered questionnaires.

4.1.1 Age of the Respondents

The distribution of the respondents based on their age categories is presented in Table 4.1

Table 4. 1: Age of the Respondents

Age Categories (Years)	Frequency	Percent
14 – 18	75	23.2
19 – 23	126	39.0
24 – 28	62	19.2
29 – 33	43	13.3
34 – 38	12	3.7
>39	5	1.5
Total	323	100.0

Results in Table 4.1 reveal that majority of the respondents 126 (39%) were aged between 19 and 23 years, followed by those aged between 14 and 18 years 75 (23.2%), those aged from 24 to 28 years 62 (19.2%). Those aged between 29 and 33 years were 43 (13.3%), those aged 34 to 38 years were 12 (3.7 %) and those older

than 39 years were 5 (1.5%) and represented the minority of the sampled respondents. The gender of the respondents is presented in the next section.

4.1.2 Gender of the Respondents

The distribution of the respondents based on their gender is presented in Table 4.2

Table 4. 2: Gender of the Respondents

Gender	Frequency	Percent
Male	215	66.6
Female	108	33.4
Total	323	100.0

Results in Table 4.2 shows that male respondents constituted 215 (66.6%) while female respondents were 108 (33.3%). The length of experience of the participants is presented in the next section.

4.1.3 Length of Experience of the Respondents

The distribution of the respondents based on their length of experience is presented in Table 4.3

Table 4. 3: Length of Experience of the Respondents

Length of Experience (Years)	Frequency	Percent
< 1	1	0.3
1 – 5	195	60.4
6 – 10	79	24.5
11 – 15	36	11.1
16 – 20	8	2.5
>21	4	1.2
Total	323	100.0

Results in Table 4.3 shows that majority of the respondents 195 (60.4%) had athletic length of experience between 1 – 5 years, followed by those with Length of

Experience of between 6- 10 years at 79 (24.5%) and then those with Length of Experience of between 11 – 15 years at 36 (11.1%). Those with Length of Experience of 16 – 20 years were 8 (2.5%) and those with Length of Experience of more than 21 years were 4 (1.2%). The minority of the sampled respondents was 1 (0.3%) athlete who had 8 months (less than < 1 year) length of experience.

4.2 Athletes Perceptions of Coach Motivational Climate

The Perceptions of Coach Motivational Climate assessed in this study contained 6 subscales that identified the dimensions of a mastery climate (co-operative learning, important role, and effort/improvement) and performance climate (punishment for mistakes, unequal recognition, and intra-team rivalry). Responses on each of these Perceptions of Coach Motivational Climate were captured using the 33-item PMCSQ-2 questionnaire with Seventeen items appraising the mastery climate and sixteen items appraised performance climate.

4.2.1 Perceptions of Coach Created Mastery Motivational Climate

The means and standard deviations of the participants' responses to the items appraising mastery climate are presented in the Table 4.4.

Table 4. 4: Means and Standard deviations for Mastery Climate items (N=323)

Mastery Climate items	Mean	SD
Athletes help each other to get better and excel.	4.46	0.83
Athletes feel good when they try their best.	4.37	1.04
Athletes help each other learn.	4.35	0.98
Athletes feel successful when they improve.	4.32	0.99
The coach encourages athletes to help each other	4.25	1.02
On this team, the focus is to improve each game/practice.	4.23	1.01
Each athlete contributes in some important way.	4.19	0.96
The coach emphasizes always trying to do your best.	4.17	1.09
The Athletes really 'work together' as a team when it comes to competitions.	4.17	1.17
Athletes at all skill levels have an important role in performances	4.15	1.00
The coach believes that all of us are crucial to the success of a performance	4.14	1.07
The coach makes sure athletes improve on skills they're not good at	4.13	1.09
Each athletes has an important role	4.12	1.08
The coaches wants us to try new skills/Movements	4.06	1.10
Athletes are encouraged to work on their weaknesses.	4.04	1.20
Each athlete feels as if they are an important team member.	3.99	1.17
Trying hard is rewarded in training sessions and competitions	3.94	1.16
Overall mean	**4.17**	**0.62**

Table 4.4 shows the means and standard deviations of athletes' perceptions of coach created motivational climate. The first three items with the highest means and standard deviations were: athletes perception of their coaches encouraging athletes to help each other to get better and excel (4.46±0.83), ability of athletes to perceive their coaching environment to encourage self-referenced perceptions of competence by athletes feeling good when they try their best (4.37±1.04) and the ability of athletes to see their coaches encourage them to help each other learn (4.35±0.98).The three items with the least means and standard deviations included: athletes perceptions of rewards awarded by coaches by trying hard both in training and competitions (3.94±1.16), athletes perceptions of coach encouraging each athlete to feel as if they are an important team member (3.99±1.17) and athletes perceptions of their coaching environment when they are encouraged to work on their weaknesses (4.04±1.20). Overall, the athlete's responses indicated that their overall mean on

perceived coach created mastery motivational climate was (4.17±0.62). The composite means and standard deviations of the athlete perceptions of coach created mastery motivational climate are presented in Table 4.5.

Table 4. 5: The composite means and Standard deviations for Perceptions of Coach Motivational Climate (Mastery Climate Subscale) (N=323)

Mastery Climate Subscale items	Mean	SD
Cooperative Learning	4.31	0.72
Effort/Improvement	4.16	0.66
Important Roles	4.12	0.72

Results in Table 4.5 indicate that cooperative learning had the highest mean (4.31±0.72), followed by effort/improvement (4.16±0.66) whereas the important roles had the least mean score (4.12±0.72). Athletes in this study recorded an overall mean of (4.17±0.62) in their perceptions of coach created mastery motivational climate. This finding implies that the coaches in EMC value cooperation and effort when coaching the athletes as compared to important roles. The low mean scores of important roles in contribution to overall mean score of mastery climate indicate that the coaches in EMC need to appreciate the important roles other athletes contribute to the overall team success and the coaching environment.

4.2.2 Perceptions of Coach created Performance Motivational Climate

The means and standard deviations of the participants' responses to the items appraising performance climate are presented in the Table 4.6.

Table 4. 6: Means and Standard deviations for Perceptions of Coach Motivational Climate (Performance Climate Subscale) items (N=323)

Performance Climate Subscale items	Mean	SD
If you want to be picked for a competition you must be one of the best athletes	3.63	1.32
Athletes are encouraged to outperform the other athletes	3.41	1.42
Athletes are afraid to make mistakes.	3.23	1.29
The coaches gives most of his or her attention to the stars	3.11	1.50
Athletes are 'psyched' when they do better than their fellow athletes in a match	2.99	1.40
The coaches makes it clear who he or she thinks are the best athletes.	2.97	1.32
The coach has his or her own favourites	2.79	1.48
The coach yells at athletes for messing up.	2.76	1.39
Athletes are not selected for the best roles if they make mistakes.	2.72	1.31
The coaches gets mad when an athlete makes a mistake	2.71	1.41
The coach thinks only lead athletes contribute to the success of a performance	2.57	1.39
Athletes are punished when they make a mistake	2.51	1.39
Only the best athletes get praise	2.49	1.35
The coach praises athletes only when they outperform other athletes.	2.47	1.28
Only the top players 'get noticed' by the coach	2.29	1.33
The coaches favour some athletes more than others	2.16	1.31
Overall mean	**2.88**	**0.62**

Table 4.6 shows the means and standard deviations of athlete perceptions of coach created performance climate. The first three items with the highest means and standard deviations were: athletes' perceptions of coach encouraging athletes to be one of the best as this will make them be picked for competitions (3.63±1.32), athletes' perceptions of coaches encouraging athletes to outperform other athletes (3.41±1.42) and athletes' perceptions of coaches not viewing mistakes as part of learning since athletes are afraid to make mistakes (3.23±1.29). The items with the least means and standard deviations were: athlete's perceptions of the coach favouring some athletes more than others (2.16±1.31), athlete's perceptions of the coach only noticing the top players (2.29±1.33) and athlete's perceptions of the coach praising athletes only when they outperform other athletes (2.47±.1.28). Generally, the athlete's responses indicated that their overall mean on perceived

coach created performance motivational climate was (2.88±0.62). The composite means and standard deviations of the athlete perceptions of coach created performance motivational climate are presented in Table 4.7.

Table 4. 7: The Composite Means and Standard Deviations for Perceptions of Coach Motivational Climate (Performance Climate Subscale) Items (N=323)

Performance Climate Subscale items	Mean	SD	
Intra-Team Rivalry		3.35	0.92
Punishment For Mistakes		2.82	0.75
Unequal Recognition		2.55	0.83
Overall mean	**2.88**	**0.62**	

Results as shown in table 4.7 indicate that intra-team rivalry had the highest mean (3.35±0.92), followed by punishment for mistakes (4.31±0.72), whereas unequal recognition had the least mean score (2.55±0.83). Athletes in this study recorded an overall mean of (2.88±0.62) in their perceptions of coach created performance motivational climate. Athletes in this study scored higher in intra-team rivalry indicating that coaches encourage athletes to be competitive and outperform others more than punishment of mistakes and unequal recognition. The low mean scores in unequal recognition in contribution of the overall mean score of performance climate indicate that coaches in EMC somehow treats all athletes in the team equally.

4.3 Athletes Perceptions of Success or Achievement Goal Orientation

Task and Ego Orientation in Sport Questionnaire assessed Athletes Perception of success or achievement goal orientation. TEOSQ assessed the two composite scales of goal orientation; the task orientation subscale comprising of seven items and ego orientation subscale comprising of six items. The means and standard deviations of the participants' responses to the items are shown in the Table 4.8.

Table 4. 8: Descriptive Statistics on Goal orientation items (N=323)

Items	Mean	SD
I do my very best.	4.37	0.89
I learn a new skill and it makes me want to practice more.	4.35	0.80
I work really hard.	4.30	0.90
Something I learn makes me want to go and practice more.	4.22	0.92
I learn a new skill by trying hard.	4.09	1.09
A skill I learn really feels right.	4.08	0.98
I score the most points/goals/hits, etc.	3.66	1.16
I'm the best.	3.63	1.28
I learn something that is fun to do.	3.59	1.20
I can do better than my friends.	3.34	1.30
The others can't do as well as me.	2.78	1.39
I'm the only one who can do the play or skill.	2.51	1.35
Others mess up and I don't.	2.49	1.26

Table 4.8 shows the means and standard deviations of Athletes Perception of success or achievement goal orientation. The first three items with the highest means and standard deviations were: ability of the athletes to judge their success by each athlete doing his or her very best (4.37±0.89), being able to learn a new skill and makes him or her to practise more (4.35±0.80) and ability to value hard work by each athlete really working hard (4.30±0.90).The items with the least means and standard deviations were: ability of athletes to judge their success by others messing up and he or she doesn't (2.49±1.26), being the only one who can do the play or skill (2.51±1.35) and others can't do as well as me (2.78±1.39).The composite means and standard deviations of the Athletes Perception of success or achievement goal orientation are presented in Table 4.9.

Table 4. 9:The composite means and standard deviations of the Athletes Perception of success or achievement goal orientation (N=323)

Questionnaire items	Mean	SD
Task orientation	4.14	0.65
Ego orientation	3.07	0.79

Results as shown in Table 4.9 indicate that athletes perceived their success or achievement goal orientation as more task-oriented (4.14±0.65) than ego-oriented (3.07±0.79). This finding suggests that athletes in EMC demonstrated a relatively high task orientation score and low ego goal orientation. This finding suggests that athletes in EMC assess their success and competence in relation to self-referenced terms, effort, learning, hard work, improvement and limit judging their success through comparative performances, outperforming others and winning.

4.4 Athletes attitudes towards doping

Athlete's attitudes towards doping were assessed using 17 item modified version of Performance Enhancement Attitude Scale (PEAS). The athletes responded to the various items on a Likert type scale ranging from (1) strongly disagree to (5) strongly agree. The highest score an athlete could score in each item was 5points (strongly disagree) and the lowest score was 1 point (strongly disagree). The lower score signified negative attitude to doping while a higher score denoted a positive attitude to doping. The means and standard deviations of the athlete's responses on Performance Enhancement Attitude Scale (PEAS) Questionnaire items are presented in Table 4.10

Table 4. 10: Descriptive Statistics on Performance Enhancement Attitude Scale (PEAS) (N=323)

Items	Mean	SD
Use of enhancing-substance/drugs in sports is necessary to be competitive	1.68	1.08
Doping is not cheating since everybody does it.	1.91	1.20
Recreational substances/drugs help to overcome boredom during training.	1.95	1.27
Recreational substances/drugs boost an athlete's morale to train and compete at the highest level.	2.01	1.22
Athletes who take recreation substances /drugs should not feel guilty about breaking the rules and taking performance-enhancing substances/drugs.	2.03	1.27
There is no difference between drugs and fiberglass poles, and speedy swim suit that are all used to better performance	2.18	1.26
Athletes who take Social/recreational substance/drugs use them because they help them in sports situations.	2.2	1.33
Athletes in my sport are pressured to take performance enhancing substances/ drugs.	2.2	1.37
Media should talk less about performance-enhancing substances/drugs.	2.23	1.28
Athletes have no alternative career choices, except sport	2.27	1.32
Doping is an unavoidable part of the competitive sport.	2.35	1.43
Athletes often lose time due to injuries and drugs can help make up the lost time.	2.42	1.49
The media exaggerates the doping issues out of proportion.	2.51	1.42
The risks related to doping are exaggerated.	2.62	1.40
Legalizing performance enhancements would be beneficial for sports	2.81	1.60
Health problems and injuries sustained during to training are just as bad	2.91	1.46
Only the quality of performance should matter.	3.11	1.41
Overall mean	**2.32**	**0.70**

Table 4.10 shows means and standard deviations with respect to the items that measured attitudes towards doping and PES. The first three items with the lowest means and standard deviations indicating athletes' negative attitudes on statements leaning towards doping and PES use were: item on necessity of doping and PES for competition (1.68±1.08), doping is not cheating since everybody does it (1.91±1.20) and the item on use of recreational substances/drugs helping to overcome boredom during training (1.95±1.27). The three items with the highest means and standard deviations denoting athlete's positive attitudes to statements that encourage doping

and use of PES were: athletes feeling that only the quality of their performance is the only thing that mattered in sports (3.11±1.41), athletes being cognizant of the health problems that arise from doping and the use of PES (2.91±1.46) and on benefits of legalization of doping and use of PES in sports (2.81±1.60). Overall mean for all items was (2.32±0.70) denoting that most athletes in EMC were inclined towards statements that are against doping and PES use.

4.5 Normality Tests for PMCQ-2, TEOSQ and PEAS Questionnaires

Skewness and kurtosis tests and Shapiro-Wilk test were executed on the questionnaires to determine if the sample distribution of the data was normally distributed. The results of Skewness and kurtosis tests are presented in Table 4.11.

Table 4. 11*:* Skewness and Kurtosis Calculations

Questionnaire	Skewness	Kurtosis
PMCQ-2	-1.197	4.959
TEOSQ	-0.292	0.945
PEAS	.518	0.612

Results in the Table 4.11 shows that the distribution of data was not normal and this necessitated the choice of non-parametric inferential tests. The results of Shapiro-Wilk test are presented in Table 4.12.

Table 4. 12*:* Shapiro-Wilk test

Questionnaire	Statistic	Df	Sig.
PMCQ-2	.934	323	.000
TEOSQ	.985	323	.002
PEAS	.975	323	.000

Results in the Table 4.12 shows that the questionnaires used in the study yielded the following values w =0.934, df = 323, $p < 0.001$ for PMCQ-2questionnaire, w =0.985, df = 323, $p = 0.002$ for TEOSQ questionnaire and w =0.975, df = 323, $p < 0.001$ for PEAS questionnaire. This implied that the data was statistically

significantly different from a normal distribution data therefore the choice of non-parametric inferential tests.

4.6 Relationship between Motivational Climate and Attitudes towards Doping

4.6.1 Correlations between Mastery Climate and Attitudes towards Doping

The results on the relationship between Mastery Climate and Attitudes towards Doping are presented in Table 4.13

Table 4. 13: Correlations Between Mastery Climate and attitudes towards doping

			Mastery Climate	Attitude
Spearman's rho	Mastery Climate	Correlation Coefficient	1.000	-.242**
		Sig. (2-tailed)		.000
		N	323	323
	Attitude	Correlation Coefficient	-.242**	1.000
		Sig. (2-tailed)	.000	
		N	323	323

**. Correlation is significant at the 0.01 level (2-tailed).

The results in Table 4.13 indicated that there was a significant inverse relationship between mastery climate and doping attitude (*rho* = -.242; $p < 0.001$). Therefore, the null hypothesis that there is no significant relationship between motivational climate (mastery climate) and attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya was rejected.

4.6.2 Correlation between Performance Climate and Attitudes towards Doping

The results on the relationship between Performance Climate and Attitudes towards Doping are presented in Table 4.14

Table 4. 14: Correlations Between Performance Climate and attitudes towards doping

			Performance Climate	Attitude
Spearman's rho	Performance Climate	Correlation Coefficient	1.000	.362**
		Sig. (2-tailed)		.000
		N	323	323
	Attitude	Correlation Coefficient	.362**	1.000
		Sig. (2-tailed)	.000	
		N	323	323

**. Correlation is significant at the 0.01 level (2-tailed).

The results in Table 4.14 indicated that there was a significant positive correlation between performance climate and doping attitude (*rho* = .362; $p < 0.001$). Therefore, the null hypothesis that there is no significant relationship between motivational climate (Performance climate) and attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya was rejected.

4.7 Relationship between Goal Orientation and Attitudes towards Doping

4.7.1 Correlations between Task Orientation and Attitudes towards Doping

The results on the relationship between task orientation and attitudes towards doping are presented in Table 4.15.

Table 4. 15*:* Correlations between Task Orientation and Attitudes towards Doping

			Task Orientation	Attitude
Spearman's rho	Task orientation	Correlation Coefficient	1.000	-.158**
		Sig. (2-tailed)		.004
		N	323	323
	Attitude	Correlation Coefficient	-.158**	1.000
		Sig. (2-tailed)	.004	
		N	323	323

**. Correlation is significant at the 0.01 level (2-tailed).

The results in Table 4.15 are bivariate correlations between task orientation and attitudes towards doping indicating that there was a significant inverse relationship between task orientation and doping attitude (*rho* = -.158; *p* = 0.004). Therefore, the null hypothesis that there is no significant relationship between goal orientation (task orientation) and attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya was rejected.

4.7.2 Correlations between Ego Orientation and Attitudes towards Doping

The results on the relationship between ego orientation and attitudes towards doping are presented in Table 4.16

Table 4. 16: Correlations Between Ego Orientation and attitudes towards doping

			Ego Orientation	Attitude
Spearman's rho	Ego orientation	Correlation Coefficient	1.000	.362**
		Sig. (2-tailed)		.000
		N	323	323
	Attitude	Correlation Coefficient	.362**	1.000
		Sig. (2-tailed)	.000	
		N	323	323

**. Correlation is significant at the 0.01 level (2-tailed).

The results in table 4.16 indicated that there was a significant positive correlation between ego orientation and doping attitude (*rho* = .362; $p < 0.001$). Therefore, the null hypothesis that there is no significant relationship between goal orientation (ego orientation) and attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya was rejected.

4.8 Influence of Motivational Climate, Goal Orientation and Demographic variables of age, gender and length of experience on Attitudes towards Doping

To determine the influence of motivational climate (mastery and performance), goal orientation (task and ego) and demographic variables (age, gender and length of experience) on attitudes towards doping either individually or in combination, Binary logistical regression analysis was conducted. Before conducting Binary logistical regression analysis, athlete's doping attitude scores were dummy coded into binary/dichotomous scores. For instance, a score less than 2.5 in the 5- point Likert scale rated an athlete as least likely to dope and a score greater than or equal to 2.5 in the 5- point Likert scale rated an athlete as highly likely to dope. Classification Table with the Constant Model tests is presented in the Table 4.17

Table 4. 17: Classification Table with the Constant Model

Observed		Predicted		
		Attitudes		Percentage Correct
		Pro-doping	Anti-doping	
Attitudes	Pro-doping	0	111	0.0
	Anti-doping	0	212	100
Overall Percentage				65.6

Results in table 4.17 indicate that majority of the respondents 65.6% (212) were in the least likely to dope (Anti-doping attitudes) whereas 34.4% (111) were highly likely to dope (Pro-doping attitudes). This finding implies that regardless of the independent variables, it can be correctly assumed that 65.6% of the time, athletes in EMC will display anti-doping attitudes and 34.4% of the time, athletes in EMC will display pro-doping attitudes The results mean that even if one does not know anything about athlete's motivational climate (mastery and performance), goal orientation (task and ego) and demographic characteristics (age, gender and length of experience) influences, one would be 65.6% correct to pass the above assumption.

4.8.1 Influence of Motivational Climate and Goal Orientation on Attitudes towards Doping

To address objective six, which was to determine the influence of motivational climate (mastery and performance) and goal orientation (task and ego) on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya, binary logistical regression analysis was conducted. The null hypothesis was that there is no significant influence of motivational climate (mastery and performance) and goal orientation (task and ego) on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya. Athlete's attitudes towards doping scores were entered as dependent variable while the scores of motivational climate (mastery and performance) and goal orientation (task and ego) were entered as covariates in the

regression model. The results of the Classification Table with the influence of influence/contributions of motivational climate (mastery and performance) and goal orientation (task and ego) on attitudes towards doping is presented in Table 4.18.

Table 4. 18: Classification table showing the influence/contributions of motivational climate and goal orientation on attitudes towards doping (N=323)

Observed		Predicted		
		Attitudes		Percentage Correct
		Pro-doping	Anti-doping	
Attitudes	Pro-doping	42	69	37.8
	Anti-doping	24	188	88.7
Overall Percentage				71.2

The results in the Table 4.18 show that 37.8% of the athletes were correctly classified as having pro-doping attitudes and 88.7% were correctly classified as having anti-doping attitudes resulting in accurate prediction of 71.2% of the athletes' attitudes towards doping. This finding implies that when the contribution of independent variables (motivational climate [mastery and performance] and goal orientation [task and ego]) are factored in, there is an improvement on the 65.6% correct classification. The results mean if one know anything about athlete's motivational climate (mastery and performance) and goal orientation (task and ego) influences, one would be 71.2% correct to predict athletes attitudes towards doping. Binary logistical regression analysis (variables in the equation) showing the influence of motivational climate (mastery and performance) and goal orientation (task and ego) on attitudes towards doping results are presented in Table 4.19.

Table 4.19: Binary logistical regression analyses results showing the unique contribution of motivational climate (mastery and performance) and goal orientation (task and ego) on attitudes towards doping (N=323)

	B	S.E.	Wald	Df	Sig.	Exp(B)
Mastery Climate	.409	.275	2.214	1	.137	1.506
Performance Climate	-.740	.235	9.939	1	.002	.477
Task Orientation	.389	.275	2.004	1	.157	1.476
Ego Orientation	-.715	.199	12.903	1	.000	.489
Constant	1.781	1.065	2.799	1	.094	5.937

*Significant at .05 level

The Wald Chi-square statistic results in Table 4.19 revealed that in terms of the four predictor variables predictive ability and contribution, Ego Orientation χ^2 (df = 1, N=323) = 12.90; $p < 0.001$) and performance climate χ^2 (df = 1, N=323) = 9.94; p = 0.002) had significant contributions and prediction abilities to attitudes towards doping. On the other hand, mastery climate χ^2 (df = 1, N=323) = 2.21; p = 0.14) and task orientation χ^2 (df = 1, N=323) = 2.00; p = 0.16) had no significant contributions and predictions towards doping attitudes. Therefore, the null hypothesis that there is no significant influence of motivational climate (mastery and performance) and goal orientation (task and ego) on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya was rejected for performance climate and ego orientation. However, the null hypothesis was not rejected for mastery climate and task orientation.

In terms of odd ratios (Exp (B) values), when independent variables (mastery climate [1.506] and task orientation [1.476] scores are increased by one unit, odds of having anti-doping attitudes increases by a factor of 1.506 in mastery climate and 1.476 in task orientation. On the other hand, odds of having pro-doping attitudes reduces by a factor of .664 in mastery climate and .678 in task orientation. This finding implied that mastery climate scores were 2 more times able to predict anti-doping attitudes as

compared to pro-doping attitudes. Similarly, task orientation scores were 2 more times able to predict anti-doping attitudes as compared to pro-doping attitudes.

Performance climate and ego orientation contributions on anti-doping attitudes had exponentiation (Exp (B) values) of .477 and .489 respectively, showing that when performance climate and ego orientation scores are increased by one unit, odds of having anti-doping attitudes reduces by a factor of .477 in performance climate and .489 in ego orientation. On the other hand, odds of having pro-doping attitudes increases by a factor of 2.096 in performance climate and 2.045 in ego orientation. This finding implies that ego orientation scores were 2 times more able to predict pro-doping attitudes as compared to anti-doping attitudes. Similarly, performance climate scores were 2 times more able to predict pro-doping attitudes as compared to anti-doping attitudes.

4.8.2 Influence of age, gender and length of experience on attitudes towards doping

To address objective seven, which was to determine the influence of age, gender and length of experience on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya, binary logistical regression analysis was conducted. The null hypothesis was that there is no significant influence of age, gender and length of experience on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya. Athlete's attitudes towards doping scores were entered as dependent variable while the scores of age, gender and length of experience were entered as covariates in the regression model. The results of the Classification Table with the influence of age, gender and length of experience on attitudes towards doping is presented in Table 4.20.

Table 4. 20: Classification table showing the influence/contributions of age, gender and length of experience on attitudes towards doping (N=323)

Observed		Predicted		
		Attitudes		Percentage Correct
		Pro-doping	Anti-doping	
Attitudes	Pro-doping	0	111	0.0
	Anti-doping	0	212	100
Overall Percentage				65.6

Results in table 4.20 indicate that majority of the respondents 65.6% (212) were in the least likely to dope whereas 34.4% (111) were highly likely to dope. This finding implies that, contributions of age, gender and length of experience had no improvement on the 65.6% correct classification on attitudes towards doping. The results mean that even if one know anything about athlete's age, gender and length of experience, one would be 65.6% most of the time to correctly predict athletes' attitudes towards doping. Binary logistical regression analysis (variables in the equation) results showing the influence of age, gender and length of experience on attitudes towards doping are presented in Table 4.21.

Table 4. 21: Binary logistical regression analyses results showing the influence of age, gender and length of experience on attitudes towards doping (N=323)

	B	S.E.	Wald	Df	Sig.	Exp(B)
Gender(1)	.229	.249	.846	1	.358	1.258
Age	-.038	.025	2.409	1	.121	.962
Experience	.010	.032	.102	1	.750	1.010
Constant	1.323	.535	6.121	1	.013	3.753

*Significant at .05 level

The Wald Chi-square statistic results in Table 4.21 revealed that in terms of the three predictor variables influence on attitudes towards doping, age χ^2 (df = 1, N=323) = 2.41; p = 0.12), gender χ^2 (df = 1, N=323) = .85; p = 0.36) and length of experience χ^2 (df = 1, N=323) = 0.10; p = 0.75) had no significant influence/contributions on attitudes towards doping. Therefore, the null hypothesis that there is no significant

influence of age, gender and length of experience on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya was not rejected.

In terms of odd ratios (Exp [B] values), the findings of the present study implies that for an additional year in age, odds of having anti-doping attitudes reduces by a factor of 0.962 and odds of having pro-doping attitudes increases by a factor of 1.04. In terms of gender, odd ratios reveal that male athletes were 1.26 times more likely to report anti-doping attitudes compared to their female counterparts. In terms of athlete length of experience, the findings of the present study implies that for an additional year in athlete length of experience, odds of having anti-doping attitudes increases by a factor of 1.01 and odds of having pro-doping attitudes reduces by a factor of 0.99. These results imply that a change in the independent variables (age, gender and length of experience) is most likely to result in change in athlete's attitudes towards doping.

CHAPTER FIVE: DISCUSSIONS

5.1 Introduction

The purpose of this study was to examine the influence of motivational climate and goal orientation on attitudes towards doping amongst Kenyan athletes in Elgeyo-Marakwet County. Secondly, the current study established the influence of selected demographic factors of age, gender, and length of experience on attitudes towards doping. The study was informed by the need to curtail the doping menace among Kenyan athletes and contribute to the global anti-doping system. The findings of this study shed light on the contribution of motivational climate and goal orientation on attitudes towards doping.

5.2 Athletes Perceptions of Coach Motivational Climate

This study revealed that Kenyan athletes in EMC perceived their motivational climate as being more mastery climate (4.17±0.62) compared to performance climate (2.88±0.62). This finding demonstrates that the environment created by coaches in EMC is characterized by greater emphasis on cooperative learning, where athletes are encouraged to learn and help each other develop skills and competencies geared towards athletes achieving their personal and team goals. Besides, each athlete in EMC feels valued by having an essential role in the team. In addition, coaches reinforce the need for the athletes to demonstrate effort and improvement both during practice and competitions rather than outshining their competitors. On the other hand, the low levels of performance climate denote that athletes in EMC perceive their coaching environment as not typified by coaches favouring talented

athletes, punishing athletes when they make a mistake, and encouraging intra-team rivalry and competition.

These findings demonstrates positive outcomes associated with mastery climate, as witnessed in previous studies (Gencer & Öztürk, 2018; Mwangi et al., 2019; Selfriz et al., 1992). These results suggest that athletes in EMC are working in an environment that promotes the development of skill and ability, self-referenced perceptions of competence, focus on learning and personal development, and believe that hard work and effort lead to success.

Within the ambit of doping and use of PES in sports, the significance of coach-created motivational climate places athletes in EMC at lower "risk" of doping or using PES due to their high mastery motivational climate. The findings of this study are in agreement with previous studies that have associated coach-created mastery climate to negative attitudes towards doping in sports, while coach-created performance climate linked to positive attitudes towards doping and cheating in sports (Allen et al., 2015; Bae et al., 2017; Hodge et al., 2013; Kavussanu, 2017; Moran et al., 2008; Stanger et al., 2018). These could be attributed partly to increased salient values in the training camps between the coaches and athletes in EMC and present anti-doping deterrence and preventive measures instituted by ADAK, including coach education and testing.

5.3 Athletes Perceptions of Success or Achievement Goal Orientation

Athletes in EMC reported a high task-orientation score (4.14±0.65) compared with a low ego-orientation score (3.07±0.79). This finding suggests that athletes in EMC value hard work, effort, learning, and personal improvement in assessing their

success and competence. The low scores in ego orientation denote that EMC athletes do not assess or judge their success through comparative performances, winning and outperforming competitors. This finding aligns with positive outcomes associated with high task orientation consistent with the previous studies (McArdle & Duda, 2002;Nicholls, 1984; Roberts et al., 1997).

Additionally, in consonance with previous studies in doping, the current study's finding places athletes in EMC at lower "risk" to PES use in sports. Earlier studies have associated ego orientation with maladaptive behaviours and pro-doping attitudes in sport, whereas task orientation has been associated with adaptive behaviours and negatively associated with doping attitudes in sports (Allen et al., 2015; Bae et al., 2017; Barkoukis et al., 2011; Ring & Kavussanu, 2018; Sas-Nowosielski and Swiatkowska, 2008). These findings show that athletes in EMC have a low propensity towards pro-doping attitudes and a high tendency towards attitudes towards anti-doping. These findings could be partly contributed by anti-doping education and sensitization forums instituted by ADAK coupled with testing, sanctions, and penalties that athletes face when caught doping or using PES.

5.4 Attitudes of Kenyan athletes towards doping

Athletes' attitudes towards doping were low, with PEAS yielding an overall mean for all items (2.32±0.70), indicating that most EMC athletes were inclined towards statements that promote anti-doping. This finding demonstrates a general intolerance towards PES use among the athletes. The low scores on attitudes towards doping are consistent with previous studies using PEAS (Allen et al., 2015; Morente-Sánchez & Zabala, 2013; Mwangi et al., 2019; Petroczi & Aidman, 2009).

As indicated in Table 4.10, most athletes in EMC displayed negative attitudes on items that focused on the use of PES in training and competition. For instance, most athletes in EMC do not find it necessary to use PES for competition (1.68±1.08). It can be inferred that athletes in EMC value hard work, effort, and ability during training as a means for success and winning during competitions in athletics. Similarly, athletes displayed negative attitudes on the statement, "doping is not cheating since everybody does it" (1.91±1.20). This finding portrayed by athletes in EMC could be a protective factor to future doping. However, the same could be a risk factor to future doping if it is held by senior athletes who junior athletes view as role models. It is assumed that athletes who think or suspect that other athletes are using PES and are allowed to use PES are more likely to use performance enhancers in the future (Kamenju, 2011) and more so to junior athletes if senior athletes are using.

However, some athletes portrayed some predispositions towards doping by agreeing on the statements that encourage the use of PES. For example, some athletes in EMC indicated a mean score of (3.11±1.41) on the statement "only the quality of performance should matter." They also indicate that the health problems arising from prohibited substances are just as bad as those resulting from sports activities (2.91±1.46). In agreement with these statements, these athletes need to be aware that it is not just the quality of the performance that matters in athletics; how an athlete progresses from training to competitions is essential. Similarly, these athletes ought to be knowledgeable on the health implications arising from the use of PES and associated consequences.

5.5 Relationship between Motivational climate and Goal Orientation on Attitudes towards Doping

It was hypothesized there would be no significant relationship between motivational climate and attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya. However, the findings of the current study indicated that there was a significant inverse relationship between mastery climate and doping attitude (*rho* = -.242; $p < .001$). This finding implies that when athletes score highly in statements appraising mastery climate, the same athletes will score low in statements appraising attitudes towards doping. Therefore, mastery climate was negatively linked to pro-doping attitudes. On the other hand, performance climate and doping attitude indicated a significant positive correlation/relationship between performance climate and doping attitude (*rho* = .362; $p < .001$). This finding implies that when athletes score highly in statements appraising performance climate, the same athletes will score highly in statements appraising attitudes towards doping. Therefore, performance climate was positively associated with attitudes towards pro-doping. Therefore, the null hypothesis that there would be no significant relationships between motivational climate (mastery and performance) and attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya, was rejected.

The results of the current study corroborate previous studies in motivational climate where performance climate had been shown to be significantly associated with doping intentions among the athletes, whereas mastery climate to be significantly associated with anti-doping intentions Allen et al., 2013; Allen et al., 2015; Bae et al., 2017; Backhouse & McKenna, 2012; Mwangi et al., 2019; Sage & Kavussanu, 2008).

It was hypothesized there would be no significant relationship between goal orientation and attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya. In the present study, the results of bivariate correlations using Spearman's rank correlation indicated that there was a significant inverse relationship between task orientation and doping attitude (*rho* = -.158; *p* = .004). This finding implies that when athletes score highly in statements appraising task orientation, the same athletes will score low in statements appraising attitudes towards doping. Therefore, task orientation was negatively linked with attitudes supporting doping. On the other hand, ego orientation and attitudes towards doping among the athletes indicated a significant positive correlation between ego orientation and doping attitude (*rho* = .362; *p* < .001). This finding implies that when athletes score highly in statements appraising ego orientation, they will score highly in statements appraising attitudes towards doping. Therefore, ego orientation was positively associated with pro-doping attitudes. Therefore, the null hypothesis that there is no significant relationship between goal orientation (task orientation and ego orientation) and attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya, was rejected.

The current study corroborated previous studies that have showed ego orientation to be significantly and positively related to attitudes towards pro-doping, while task orientation is significantly and negatively related to pro-doping attitudes (Allen et al., 2015; Bae et al., 2017; Barkoukis et al., 2011; Ring & Kavussanu, 2018; Sas-Nowosielski & Swiatkowska,2008).

The findings of this study where mastery climate and task orientation were associated with anti-doping attitudes and performance climate and ego orientation

associated with pro-doping attitudes could be attributed partly to increased salient values in the training camps between the coaches and athletes in Kenya. In addition, the present anti-doping deterrence and preventive measures instituted by ADAK and AK that include coach and athlete education and testing in Kenya could have contributed to these findings.

5.6 Influence of Motivational Climate, Goal Orientation and Demographic variables of age, gender and length of experience on Attitudes towards Doping

The findings of the present study revealed that the majority of the respondents, 65.6% (212), were the least likely to dope, whereas 34.4% (111) were highly likely to dope. These findings imply that given a chance, 34.4% of the athletes will engage in doping, and 65.9% will not engage in doping in the future.

5.6.1 Influence of Motivational Climate and Goal Orientation on Attitudes towards Doping

It was hypothesized there would be no significant influence of motivational climate (mastery and performance) and goal orientation (task and ego) on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya. The Wald Chi-square statistic results demonstrated that performance climate (p = 0.002) and ego orientation (p < 0.001) made significant contributions and prediction abilities to attitudes towards doping (highly likely to dope category). On the other hand, mastery climate (p = 0.14) and task orientation (p = 0.16) made no significant contributions and predictions towards doping attitudes (Highly likely to dope category). This finding suggests that both performance climate and ego orientation made positive contributions and predictions towards doping intentions. In contrast, mastery climate

and task orientation made negative contributions and predictions towards doping intentions among athletes in Elgeyo-Marakwet County, Kenya. Therefore, the null hypothesis that there would be no significant influence of motivational climate (mastery and performance) and goal orientation (task and ego) on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya, was rejected for performance climate and ego orientation. However, the null hypothesis was not rejected for mastery climate and task orientation.

The findings of the current study in motivational climate corroborate previous studies where performance climate had been shown to predict doping intentions among the athletes, whereas mastery climate has been shown to negatively predict doping intentions among the athletes (Allen et al., 2013; Allen et al., 2015; Backhouse & McKenna, 2012; Bae et al., 2017; Mwangi et al., 2019; Sage & Kavussanu, 2008). Similarly, goal orientation findings in the present study showed that ego orientation significantly predicted doping intentions among the athletes, whereas task orientation negatively predicted doping intentions. These findings were in support of earlier studies in goal orientation were athletes who reported high ego orientations and low task orientations had more favourable attitudes toward doping and therefore associated with doping intentions (Allen et al., 2015; Bae et al., 2017; Barkoukis et al., 2011; Ring & Kavussanu, 2018; Sas-Nowosielski and Swiatkowska, 2008). It follows, then, that creating and fostering a coach-created motivational climate that promotes mastery climate as opposed to performance climate could aid in anti-doping efforts. Similarly, teaching positive values and behaviours associated with task orientation on the part of the athletes instead of ego orientation may also aid in anti-doping efforts.

5.6.2 Influence of age, gender and length of experience on attitudes towards doping

It was hypothesized there would be no significant influence of age, gender, and length of experience on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya. The Wald Chi-square statistic results showed that in terms of the three predictor variables influence/contribution on athletes' attitudes towards doping, age ($p = 0.12$), gender ($p = 0.36$) and length of experience ($p = 0.75$) made no significant influence/ contribution on athletes' attitudes towards doping. Therefore, the null hypothesis that there is no significant influence of age, gender, and length of experience on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya, was not rejected. These findings implied that irrespective of age, gender, or length of experience, athletes in EMC had the same attitudes towards doping and PES use in sports. This finding could be attributed to the fact that most of the athletes in EMC trained together in the same coaching environment and attend seminars, anti-doping education sensitization forums, and athletics events together irrespective of age, gender, and length of experience. In addition, athletes in EMC training in the same coaching environment meant that they could learn, interact, receive and exchange doping information freely.

Regarding the influence of age on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya, this study found young and old athletes to have the same attitudes towards doping. The findings of this study were, however, in contrast to previous studies where age was reported to influence doping intentions by young athletes having pro-doping attitudes as compared to older athletes (Boit et al., 2012; Mwangi et al., 2019; Rintaugu & Mwangi, 2020; Singhammer, 2012).

Similarly, the present study contradicts Kim and Kim (2013), who found out that older athletes showed higher doping likelihood than younger athletes. However, the current study was consistent with Devcic et al. (2018) among Slovene swimmers, where age did not influence the doping susceptibility of the swimmers. These findings imply that athletes in EMC, irrespective of age, have gained knowledge on doping issues and have had positive outcomes in their athletic participation. Hence, both young and old athletes were reported to have had similar attitudes on doping.

On the influence of gender on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya, the findings of this study demonstrate that both male and female athletes in EMC have similar attitudes towards doping. In comparison to previous studies, this study supports previous studies elsewhere in Africa and Kenya where gender did not influence athletes attitudes towards doping (Boit et al., 2012; Kamenju et al., 2016; Muwonge et al., 2015; Mwangi et al., 2019; Rintaugu & Mwangi, 2020). However, this study contradicts studies outside Africa, where male athletes have been reported to have more permissive attitudes towards PES and doping than female athletes (Bloodworth et al., 2012; Devcic et al., 2018;Lata & Mondello,2010; Petróczi, 2007;Sas-Nowosielski & Budzisz,2018;Sas-Nowosielski & Swiatkowska,2008; Soltanabadi, et al, 2015). This finding among Kenyan athletes in EMC could be attributed to the fact that both male and female athletes might have similar knowledge of doping issues courtesy of male and female athletes training in the same coaching environment, attending athletic meets together, and experiencing the same coaching education.

Concerning the influence of the length of experience on attitudes towards doping among athletes in Elgeyo-Marakwet County, Kenya, the current study found Kenyan

athletes in EMC to have the same attitudes towards doping irrespective of athletes' length of experience. The findings of this study were in agreement with the recent study by Mwangi et al. (2019) among East Africa University athletes where athletes playing experience had no significant influence on doping intentions. Similarly, this study agrees with previous studies among Kenyan athletes, where athletes' length of experience did not influence doping attitudes (Boit et al., 2012; Kamenju et al., 2016). However, this study was in contrast to Sekulic et al. (2017), who reported kickboxers having an extended length of experience in sports competitions to be more susceptible to doping than kickboxers who had a short sporting experience. Kenyan athletes in EMC portraying similar doping attitudes irrespective of their athletic length of experience could be due to equal opportunities athletes are accorded. These equal opportunities could be training opportunities, participation in mega competitions and tournaments, coaching education, awareness, and indiscriminate reward systems on athletes.

CHAPTER SIX: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Summary

Th purpose of this study was to examine the influence of motivational climate and goal orientation on attitudes towards doping amongst Kenyan athletes in Elgeyo-Marakwet County. It examined athletes' perceptions of coach motivational climate, athlete perceptions of success or goal orientation and athletes' attitudes towards doping. It also explored the influence of age, gender, and length of experience on athlete's attitudes towards doping. The athletes' motivational climate was assessed using an adapted version of the Perceived Motivational Climate in Sport Questionnaire (PMCSQ-2), while athlete's goal orientation was assessed through the Task and Ego Orientation in Sport Questionnaire (TEOSQ). Athletes' attitudes towards doping was assessed using a modified Performance Enhancement Attitude Scale (PEAS).

Data was analysed using descriptive statistics to organize and summarize the data to understand its distribution, Spearman's rank correlation was calculated to determine the relationship between motivational climate and goal orientation on attitudes towards doping, and binary logistical regression analysis was computed to find out the significant influence of motivational climate, goal orientation and demographic variables (age, gender, and length of experience) on attitudes towards doping.

A total of 323 respondents took part in this study, with the majority of the respondents 126 (39%) aged between 19 and 23 years. In terms of gender, males were 215 (66.6%) while females were 108 (33.3%), and in terms of athlete length of

experience, the majority of the respondents, 195 (60.4%), had athletic Length of Experience between 1 and 5 years.

6.1.1 Athletes Perceptions of Coach Motivational Climate

Athletes in Elgeyo-Marakwet, county, Kenya perceived their motivational climate as a more mastery climate than a performance climate. In terms of mastery climate subscale perceptions, athletes had the highest mean in cooperative learning, followed by effort/improvement, and the important roles had the lowest mean score. On the other hand, athletes perceived their motivational climate to promote intra-team rivalry, followed by punishment for mistakes, whereas unequal recognition had the least mean score in Performance climate.

6.1.2 Athletes perceptions of success or goal orientation

Athletes in Elgeyo-Marakwet, county, Kenya perceived their success or goal orientation as more task-oriented than ego-oriented. These findings showed that athletes in EMC assess their competence and success through personal development and improvement through effort, learning, and hard work. In contrast, low ego orientation scores indicate that athletes do not assess their competence or success through comparative performances about others (normative), such as outperforming others and winning.

6.1.3 Attitudes towards doping

Athletes in Elgeyo-Marakwet County returned an overall mean score of 2.32±0.70 in the doping attitude scale. This finding demonstrates a negative and general intolerance on attitudes towards PES use and doping among the athletes in EMC.

6.1.4 Relationship between Motivational climate and Goal Orientation and Attitudes towards Doping

Motivational climate and goal orientation were found to have significant relationships on athlete's attitudes towards doping. Mastery climate and task orientation were found to be associated with athletes' attitudes towards anti-doping. In contrast, performance climate and ego orientation were found to be associated with athletes' attitudes towards pro-doping.

6.1.5 Influence of Motivational climate and Goal Orientation on Attitudes towards doping

Performance climate and ego orientation made significant contributions on athlete's attitudes towards doping, whereas mastery climate and task orientation made no contributions/influence on athletes' attitudes towards doping. These findings suggests that both performance climate and ego orientation made positive contributions and predictions towards doping intentions. In contrast, mastery climate and task orientation made negative contributions and predictions towards doping intentions among athletes in Elgeyo-Marakwet County, Kenya.

6.1.6 Influence of age, gender and length of experience on attitudes towards doping

The results indicated that age, gender, and length of experience had no significant influence on athlete’s attitudes towards doping.

6.2 Conclusions

Based on the findings of the study, the following conclusions are made;

6.2.1 Conclusions on Athletes Perceptions of Coach Created Motivational Climate

The conclusions on the athlete's perceptions of coach created motivational climate are as follows:

i. Athletes in EMC exhibited high status on mastery climate as compared to performance climate.
ii. Athlete perceptions of coach created motivational climate in EMC showed coaches to value cooperation, reward effort, and appreciate the important role of each athlete. The low mean scores of performance climate indicate that coaches in EMC treat all athletes in the team equally, view mistakes as part of learning, and aspects of intra-team rivalry discouraged.
iii. High status on mastery climate compared to performance climate placed the athletes in EMC to high anti-doping intentions.

6.2.2 Conclusions on Athletes perceptions of success or goal orientation

The conclusions on the athlete's perceptions of success or goal orientation are as follows:

i. Athlete perceptions of success or goal orientation showed that athletes in EMC exhibited high mean scores in task orientation and low mean scores in ego orientation status.
ii. Athlete perceptions of goal orientation revealed that athletes in EMC judge their competence and success through hard work, effort, learning, improvement and limit judging their success and competence through comparative performances such as outperforming others and winning.

iii. The high status of task orientation compared to ego orientation is linked to high anti-doping attitudes, which may mean that athletes in EMC have anti-doping intentions.

6.2.3 Conclusions on Attitudes towards doping

Athletes in EMC had negative attitudes towards doping implying that athletes in EMC have positive attitudes towards anti-doping.

6.2.4 Conclusions on the relationships between Motivational climate and Goal Orientation and Attitudes towards Doping

Perceptions of coach mastery motivational climate and athlete perceptions of task goal orientation were associated with attitudes leaning towards anti-doping intentions. On the other hand, perceptions of coach performance climate and athlete perceptions of ego goal orientation were linked to athletes' attitudes leaning towards pro-doping intentions.

6.2.5 Conclusions on the influence of Motivational climate and Goal Orientation and Attitudes towards Doping

Performance climate and ego orientation were positive predictors towards doping intentions, whereas mastery climate and task orientation were negative predictors towards doping intentions among athletes in Elgeyo-Marakwet County, Kenya.

6.2.6 Conclusions on the influence of age, gender and length of experience on attitudes towards doping

Age, gender, and length of experience were found not to influence athlete's attitudes towards doping.

6.3 Recommendations

Based on the conclusions of the study, the following recommendations are made for practice, policy and further research.

6.3.1 Recommendations for practice

The following are recommended as possible areas for practice:

i. ADAK can use this information in understanding the motivational orientations of the athletes and hence be able to sensitize, educate, and even encourage recruitment of coaches and other Athlete Support Personnel (ASP), who will be able to encourage a suitable environment for clean sport participation.

ii. The study recommends greater attention in Anti-doping education on athletes who are prone to doping by ADAK, AK, NOCK, and other sports governing bodies in National or County governments. This will provide an opportunity for athletes to reverse pro-doping attitudes and promote anti-doping attitudes.

iii. The study recommends more emphasis on coach education and athletes who are prone to doping by ADAK and AK. The findings of this study recommend more emphasis on coach education which promotes mastery climate aspects as well as fostering aspects of task orientation on the athletes

as opposed to performance climate and ego orientation aspects as this may aid in anti-doping efforts.

iv. The study recommends further scrutiny from various stakeholders such as ADAK, AK, NOCK and research institutions on the lack of significant influence of age, gender, and length of experience on attitudes towards doping among Kenyan athletes in EMC.

6.3.2 Recommendations for policy

Policymakers and stakeholders such as ADAK, Athletics Kenya, NOCK, Ministry of Sports and Culture, County Governments in collaboration with other partners are recommended to develop a comprehensive anti-doping strategy geared towards the following: -

i. ADAK is recommended to strengthen their anti-doping strategy that buttresses aspects of mastery climate on the coach and aspects of task orientation on the athlete as this will indeed help promote anti-doping attitudes and thereby limit pro-doping attitudes.

ii. ADAK is recommended to strengthen their anti-doping strategy geared towards immediately reversing pro-doping attitudes and promoting anti-doping attitudes.

iii. ADAK, AK, NOCK, and other Sports governing bodies in National or County governments are recommended to collaborate with research institutions to help in coming up with evidence-based information and materials to help in the building of effective and objective preventive and deterrence approaches on doping.

6.3.3 Recommendations for further research

The following are recommended as possible areas for further research:

- Future studies to determine if athletes' perceptions of motivational climate and goal orientation and attitudes towards doping are different during training or competition needs to be carried out.
- There is also a need to examine differences in the influence of motivational climate and goal orientation on attitudes towards doping on athletes in other athletics events like sprints and field events.
- The current study was only limited to EMC athletes. There is, therefore, a need to replicate the current study among all Kenyan athletes coming from different counties.
- This study recommends future studies on other salient variables attributed to attitudes towards doping like peer pressure, accessibility to doping substances, or personality types of athletes, among other variables
- Follow-up studies on the current study are recommended to explore how the various psychological variables of motivational Climate and goal orientation relate to actual doping behaviour.
- Future studies should replicate the present study in other sports disciplines.

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APPENDICES

APPENDIX A: INFORMED CONSENT FORM

Dear athlete,

My name is Kevin Kiprotich Kipchumba. I am a Post Graduate student currently taking a M.Sc. Degree, in Exercise and Sports Science at Kenyatta University, School of Public Health and Applied Human Sciences. I am required to carry out a research study as part of the requirements for me to fulfil in order to graduate. The topic of my research is **"Influence of Motivational Climate and Goal Orientation on Attitudes towards Doping among Athletes in Elgeyo-Marakwet County, Kenya".** You have been chosen as part of 323 athletes drawn from eight athletic camps in Elgeyo-Marakwet County. The results of the study will provide a new information that will help in coming up with interventions in tackling the growing problem of doping in our Country.

Study Procedures
In this study, my research assistants and I will provide a self-administered questionnaires to you for you to answer (You will be assisted in case you are unable to read or write). Your Participation in this study is voluntary and you will be required to fill the questionnaire by ticking the most appropriate answer that represents you. You may ask questions related to the study at any time. You may also stop being in the study at any time without any consequences.

Discomforts and Risks
Some of the questions you will be asked may subject you to psychological discomfort. If this happens, you may request for more time to respond to the specific questions or refuse to answer these questions if you so choose.

There will be no risks involved during research process since the questionnaires will be self-administered and only those who request to be assisted will be helped out by the research assistants. There will be no chemicals or drugs that will be ingested or administered.

Benefits
If you participate in this study you will help us to know the motivational orientations of Kenyan athletes and attitudes towards doping. The information gained from this study will provide a new found information that will help in coming up with interventions in tackling the growing problem of doping in our Country

Confidentiality
The data collected through this study will be treated as confidential and will only be used for the purpose of this study. You are **NOT** supposed to write your name at anywhere on the questionnaire. The questionnaires will be kept in a locked cabinet for safe keeping and the information you will give will be kept confidential. Do not hesitate to ask any question in case there is anything unclear to you. Your responses in this study are very important and you are highly encouraged to participate.

Contact Information
If you have any questions you may contact Prof. Elijah Rintaugu on 0727 649 790 or Dr. Francis Mwangi on 0722 761 379 or the Kenyatta University Ethical Review Committee Secretariat on chairman.kuerc@ku.ac.ke, secretary.kuerc@ku.ac.ke, ercku2008@gmail.com

Participant's Statement

The above information regarding my participation in the study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction. My participation in this study is entirely voluntary. I understand that my records will be kept private and that I can leave the study at any time. I also understand that there is no payment for participating in this study.

Name of Participant……..…

_____ _____

Signature or Thumbprint Date

Investigator's declaration

I, the undersigned, have explained to the participant in a language he/she understands the procedures to be followed in the study and the risks and benefits involved.

Name of the researcher……..

Researcher signature..... Date.....

APPENDIX B: INFORMED ASSENT FORM

My name is Kevin Kiprotich Kipchumba. I am a Post Graduate student currently taking a M.Sc. Degree, in Exercise and Sports Science at Kenyatta University, School of Public Health and Applied Human Sciences. I am required to carry out a research study as part of the requirements for me to fulfil in order to graduate. The topic of my research is **"Influence of Motivational Climate and Goal Orientation on Attitudes towards Doping among Athletes in Elgeyo-Marakwet County, Kenya".** The results of the study will provide a new information that will help in coming up with interventions in tackling the growing problem of doping in our Country.

Procedures to be followed

Participation in this study will require you complete a questionnaire which will be collected by the researcher or the research assistant. Participation is voluntary. One can withdraw from participation without any consequences and still benefit from the information gathered as well as the findings. However, you are allowed to ask any question related to the study at any one time. You may also stop being in the study at any time without any consequences.

Confidentiality

The data collected through this study will be treated as confidential and will only be used for the purpose of this study. You are **NOT** supposed to write your name at anywhere on the questionnaire. Any identification information from questionnaires will be destroyed immediately after data collection. Therefore, it will be difficult to tell which questionnaire responses were whose. The results will be strictly for the purpose of this study and publication in journals. Your responses in this study are very important and you are highly encouraged to participate.

Contact Information

If you have any questions, you may contact Prof. Elijah Rintaugu on 0727 649 790 or Dr. Francis Mwangi on 0722 761 379 or the Kenyatta University Ethical Review Committee Secretariat on chairman.kuerc@ku.ac.ke, secretary.kuerc@ku.ac.ke, ercku2008@gmail.com

Rewards for Participation

There will be no payment for any input in this study. However, if you participate in this study, you will help us to know the motivational orientations of Kenyan athletes and attitudes towards doping. The information gained from this study will provide a new found information that will help in coming up with interventions in tackling the growing problem of doping in our Country

Participant's Statement

The above information regarding my participation in the study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction. I have decided to participate in this study voluntarily without being forced. I understand that my records will be kept private and that I can leave the study at any time. I also understand that there is no payment for participating in this study.

Name of Participant……..…

_____ _____

Signature or Thumbprint Date

Researcher's statement

I, the undersigned, have explained to the participant in a language he/she understands the procedures to be followed in the study and the risks and benefits involved.

Name: Kevin Kiprotich Kipchumba

Signature.....

Date.....

APPENDIX C: ATHLETES QUESTIONNAIRE

This survey asks for your attitudes and opinions on sport issues. Participation in this survey is voluntary. No question is compulsory. There are no right or wrong answers. We just want your opinion. All your responses are strictly confidential. Do not write your name on this survey.

Your participation in completing this survey is very much appreciated.

Instructions:

For most questions, there is a choice of answers. Simply pick the one that's true or you and circle the number corresponding to it. There are some questions where you need to write in an answer. For these questions, a space will be provided for you.

It is important that you answer every question as best as you can. There are no right or wrong answers, we just ask you to be completely honest.

Section A: Personal Data

Please fill in the blank, tick the box, or circle the appropriate response when responding to the items below.

Gender; Male [ ] Female [ ]

Date of Birth; _____

Length of Experience:

Age initially started Athletics: _____ Years

Section B: Athletes Perceptions of Coach Motivational Climate

Directions: Please think about how it has felt to participate on your athletics team throughout this season. What is it usually like on your team? Read the following statements carefully and respond to each in terms of how you view the typical atmosphere on your team. Perceptions naturally vary from person to person, so be certain to take your time and answer as honestly as possible. Circle the number that best represents how you feel
The numbers stand for:

1=strongly disagree 2=Disagree 3= Neutral 4= Agree 5= strongly agree

Q	In This Athletics Team…	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	The coaches wants us to try new skills/Movements	1	2	3	4	5
2	The coaches gets mad when an athlete makes a mistake	1	2	3	4	5
3	The coaches gives most of his or her attention to the stars	1	2	3	4	5
4	Each athlete contributes in some important way.	1	2	3	4	5
5	The coach believes that all of us are crucial to the success of a performance	1	2	3	4	5
6	The coach praises athletes only when they outperform other athletes.	1	2	3	4	5
7	The coach thinks only lead athletes contribute to the success of a performance	1	2	3	4	5
8	Athletes feel good when they try their best.	1	2	3	4	5

9	Athletes are not selected for the best roles if they make mistakes.	1	2	3	4	5
10	Athletes at all skill levels have an important role in performances	1	2	3	4	5
11	Athletes help each other learn.	1	2	3	4	5
12	Athletes are encouraged to outperform the other athletes	1	2	3	4	5
13	The coach has his or her own favorites	1	2	3	4	5
14	The coach makes sure athletes improve on skills they're not good at	1	2	3	4	5
15	The coach yells at athletes for messing up.	1	2	3	4	5
16	Athletes feel successful when they improve.	1	2	3	4	5
17	Only the best athletes get praise	1	2	3	4	5
18	Athletes are punished when they make a	1	2	3	4	5

	mistake					
19	Each athletes has an important role	1	2	3	4	5
20	Trying hard is rewarded in training sessions and competitions	1	2	3	4	5
21	The coach encourages athletes to help each other	1	2	3	4	5
22	The coaches makes it clear who he or she thinks are the best athletes.	1	2	3	4	5
23	Athletes are 'psyched' when they do better than their fellow athletes in a match	1	2	3	4	5
24	If you want to be picked for a competitions you must be one of the best athletes	1	2	3	4	5
25	The coach emphasizes always trying to do your best.	1	2	3	4	5
26	Only the top players 'get noticed' by the coach	1	2	3	4	5

27	Athletes are afraid to make mistakes.	1	2	3	4	5
28	Athletes are encouraged to work on their weaknesses.	1	2	3	4	5
29	The coaches favour some athletes more than others	1	2	3	4	5
30	On this team, the focus is to improve each game/practice.	1	2	3	4	5
31	The Athletes really 'work together' as a team when it comes to competitions.	1	2	3	4	5
32	Each athlete feels as if they are an important team member.	1	2	3	4	5
33	Athletes help each other to get better and excel.	1	2	3	4	5

Section C: Athletes Perception of Success or Achievement Goal Orientation

Directions: Please read each of the statements listed below and indicate how much you personally agree with each statement by circling the appropriate response.
The numbers stand for:

1=strongly disagree 2=Disagree 3= Neutral 4= Agree 5= strongly agree

Q	**I feel most successful in athletics when....**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**

1	I'm the only one who can do the play or skill.	1	2	3	4	5
2	I learn a new skill and it makes me want to practice more.	1	2	3	4	5
3	I can do better than my friends.	1	2	3	4	5
4	The others can't do as well as me.	1	2	3	4	5
5	I learn something that is fun to do.	1	2	3	4	5
6	Others mess up *and* I don't.	1	2	3	4	5
7	I learn a new skill by trying hard.	1	2	3	4	5
8	I work really hard.	1	2	3	4	5
9	I score the most points/goals/hits, etc.	1	2	3	4	5
10	Something I learn makes me want to go and practice more.	1	2	3	4	5
11	I'm the best.	1	2	3	4	5
12	A skill I learn really feels right.	1	2	3	4	5
13	I do my very best.	1	2	3	4	5

Section D: Attitude to Doping Assessment

The statements below represent what athletes may think about doping. Please circle in the number that best reflects your agreement. There is no right or wrong answer.

The numbers stand for:

1=strongly disagree 2=Disagree 3= Neutral 4= Agree 5= strongly agree

Q		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Use of enhancing-substance/drugs in sports is necessary to be competitive	1	2	3	4	5
2	Doping is not cheating since everybody does it.	1	2	3	4	5
3	Athletes often lose time due to injuries and drugs can help make up the lost time.	1	2	3	4	5
4	Only the quality of performance should matter.	1	2	3	4	5
5	Athletes in my sport are pressured to take performance enhancing substances/ drugs.	1	2	3	4	5
6	Athletes who take Social/recreational substance/drugs use them because they help them in sports situations.	1	2	3	4	5
7	Athletes who take recreation substances /drugs should not feel guilty about breaking the rules and taking performance-enhancing substances/drugs.	1	2	3	4	5

8	The risks related to doping are exaggerated.	1	2	3	4	5
9	Athletes have no alternative career choices, except sport	1	2	3	4	5
10	Athletes have no alternative career choices, except sport. Recreational substances/drugs boost an athlete‟s morale to train and compete at the highest level.	1	2	3	4	5
11	Doping is an unavoidable part of the competitive sport. Recreational substances/drugs help to overcome boredom during training.	1	2	3	4	5
12	Recreational substances/drugs help to overcome boredom during training.	1	2	3	4	5
13	There is no difference between drugs and fiberglass poles, and speedy swim suit that are all used to better performance	1	2	3	4	5
14	Media should talk less about performance-enhancing substances/drugs.	1	2	3	4	5
15	The media exaggerates the doping issues out of proportion.	1	2	3	4	5
16	Health problems and injuries sustained during to training are just as bad	1	2	3	4	5
17	Legalizing performance enhancements would be beneficial for sports	1	2	3	4	5

APPENDIX D: TABLE 2.2: SAMPLE SIZE CALCULATION (95% CONFIDENCE LEVEL)

Population Size	Margin of Error			
	0.05	0.035	0.025	0.01
50	44	47	48	50
100	80	89	94	99
150	108	126	137	148
200	132	160	177	196
250	152	190	215	244
300	169	217	251	291
400	196	265	318	384
500	217	306	377	475
600	234	340	432	565
700	248	370	481	653
800	260	396	526	739
900	269	419	568	823
1000	278	440	606	906
1200	291	474	674	1067
1500	306	515	759	1297
2000	322	563	869	1655
2500	333	597	952	1984
3500	346	641	1068	2565
5000	357	678	1176	3288
7500	365	710	1275	4211

10000	370	727	1332	4899
25000	378	760	1448	6939
50000	381	772	1491	8056
75000	382	776	1506	8514
100000	383	778	1513	8762
250000	384	782	1527	9248
500000	384	783	1532	9423

APPENDIX E: NOTABLE SPORTS PERSONALITIES IN ELGEYO-MARAKWET COUNTY

S/NO	NOTABLE SPORTS PERSONALITIES IN ELGEYO-MARAKWET COUNTY
1	Sally Barsosio
2	Richard Chelimo
3	Abraham Cherono
4	Vivian Cheruiyot
5	Ezekiel Kemboi
6	Viola Kibiwot
7	Hilda Kibet
8	Edna Ngeringwony Kiplagat
9	Lornah Kiplagat
10	Brimin Kipruto
11	Wilson Kipsang Kiprotich
12	Moses Kiptanui
13	Frankline Ngelel
14	Evans Ruto

APPENDIX F: TRAINING SCHEDULE FOR RESEARCH ASSISTANTS

S/NO	ACTIVITY	TIME	REMARKS
1	Arrival and Registration	8.30am-8.40am	Ok
2	Familiarizing with the Questionnaire	8.40am-9.00am	Ok
3	Filling the Questionnaire	9.00-9.30am	Ok
4	Questionnaire administration Protocol	9.30-9.50am	Ok
5	Data Management	9.50-10.10am	Ok
6	Research Assistants Professional Ethics/Code of Conduct	10.10-10.30am	Ok
7	Tea Break	10.30-11.00am	Ok
8	Closing and Debriefing	11.00-11.20am	Ok

APPENDIX G: RESEARCH AUTHORIZATION FROM KENYATTA UNIVERSITY GRADUATE SCHOOL

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 020-8704150

Our Ref: H108/26442/2015 **DATE: 13th August, 2019**

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

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MR. KIPCHUMBA KEVIN KIPROTICH – REG. NO. H108/26442/15

I write to introduce Mr. Kipchumba Kevin Kiprotich who is a Postgraduate Student of this University. He is registered for M.Sc. degree programme in the **Department of Physical Education, Exercise and Sports Science.**

Mr. Kipchumba intends to conduct research for a M.Sc. thesis Proposal entitled, **"Influence of Motivational Climate and Goal Orientation on Attitudes towards Doping among Athletes in Elgeyo-Marakwet County, Kenya."**

Any assistance given will be highly appreciated.

Yours faithfully,

KENYATTA UNIVERSITY OFFICE OF DEAN 13 AUG 2019 GRADUATE SCHOOL P.O. BOX 43844-00100 NAIROBI

PROF. ELISHIBA KIMANI
DEAN, GRADUATE SCHOOL

HI/eww

APPPENDIX H: RESEARCH AUTHORIZATION FROM KENYATTA UNIVERSITY ETHICAL REVIEW BOARD

Kenyatta University
P.O Box 43844-00100
Nairobi-Kenya

REF: KU/ERC/APPROVAL/VOL1/7

Date: 17th September, 2019

Kipchumba Kevin Kiprotich

P.o Box 43844-00100

Nairobi

Dear Mr. Kipchumba,

RE: INFLUENCE OF MOTIVATIONAL CLIMATE AND GOAL ORIENTATION ON ATTITUDES TOWARDS DOPING AMONG ATHLETES IN ELGEYO-MARAKWET COUNTY, KENYA

This is to inform you that ***KENYATTA UNIVERSITY ETHICS REVIEW COMMITTEE*** has reviewed and approved your above research proposal. Your application approval number is **PKU/1074/I1124.** The approval period is ***10th September, 2019-10thSeptember, 2020.***

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by ***KENYATTA UNIVERSITY ETHICS REVIEW COMMITTEE***.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to ***KENYATTA UNIVERSITY ETHICS REVIEW COMMITTEE*** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to ***KENYATTA UNIVERSITY ETHICS REVIEW COMMITTEE*** within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely

KENYATTA UNIVERSITY
OFFICE OF THE CHAIRMAN
23 SEP 2019
ETHICS REVIEW COMMITTEE
P.O. BOX 43844 - 00100 NAIROBI

Prof. Judith Kimiywe

CHAIRPERSON - KENYATTA UNIVERSITY ETHICS REVIEW COMMITTEE.

APPENDIX I: RESEARCH AUTHORIZATION FROM NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION (NACOSTI)

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **717167**

Date of Issue: **19/August/2019**

RESEARCH LICENSE

This is to Certify that Mr.. KEVIN KIPCHUMBA of Kenyatta University, has been licensed to conduct research in Elgeyo-Marakwet on the topic: INFLUENCE OF MOTIVATIONAL CLIMATE AND GOAL ORIENTATION ON ATTITUDES TOWARDS DOPING AMONG ATHLETES IN ELGEYO-MARAKWET COUNTY, KENYA for the period ending : 19/August/2020.

License No: **NACOSTI/P/19/985**

717167

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearence from relevant Government Agencies
5. The License does not give authority to tranfer research materials
6. NACOSTI may monitor and evaluate the licensed research project
7. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one of completion of the research
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science, Technology and Innovation
off Waiyaki Way, Upper Kabete,
P. O. Box 30623, 00100 Nairobi, KENYA
Land line: 020 4007000, 020 2241349, 020 3310571, 020 8001077
Mobile: 0713 788 787 / 0735 404 245
E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke
Website: www.nacosti.go.ke

APPENDIX J: RESEARCH AUTHORIZATION FROM ELGEYO-MARAKWET COUNTY

COUNTY GOVERNMENT OF ELGEYO MARAKWET
OFFICE OF THE COUNTY SECRETARY

All correspondence to be
Addressed to; County Secretary

P.O BOX 220 – 30700, ITEN
TEL: 05342277
Email: emcounty2013@gmail.com

Your Ref: .....
Our Ref: EMC/ADM/69/330

DATE: 9th September,2019

Kevin K. Kipchumba
Kenyatta University
C/O PEESS Department
P.O. BOX 43844-00100
Nairobi, Kenya

RE: PERMISSION TO CONDUCT RESEARCH IN ELGEYO MARAKWET COUNTY.

Mr. Kevin K. Kipchumba a student at Kenyatta University wishes to conduct a research project on influence of Motivational Climate and goal orientation on attitudes towards doping among athletes in Elgeyo Marakwet County, Kenya.

He has been granted permission to go ahead with research project within Elgeyo Marakwet County. This is therefore, to request all institutions and individuals within our County to accord him the necessary assistance

Thank you.

PAUL CHEMMUTTUT
COUNTY SECRETARY/HEAD
OF COUNTY PUBLIC SERVICE

THE COUNTY SECRETARY
ELGEYO MARAKWET COUNTY
P. O. Box 220-30700, ITEN
Email: info@elgeyomarakwet.go.ke

C.C

H.E Governor
County Commissioner