

**The Challenges of Anti-Doping Education Implementation in Kenya: Perspectives from  
Athletes and Anti-Doping Educators**

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## **Abstract**

### **Background**

Kenyan athletes are at a significantly higher risk of doping, with research suggesting that their anti-doping knowledge is poor. WADA actively promotes education to prevent doping however, these efforts should account for regional contexts. The purpose of this study was to understand the challenges of anti-doping education by examining the experience that Kenyan athletes and educators have had with these programs.

### **Methods**

Semi-structured interviews were conducted with eleven long-distance runners and two anti-doping educators. Athletes and educators were included to understand the experience of delivering and receiving anti-doping education. Thematic analysis was performed on the data.

### **Results**

Three main themes were identified. First, the athletes questioned the quality of education and expressed skepticism about its effectiveness. Furthermore, issues of accessibility surfaced with elite athletes receiving priority. Second, in the absence of education, athletes relied upon coaches and managers as information sources, which opened avenues for athlete exploitation. Third, athletes perceived doping as prevalent and easy to engage in. Moreover, some athletes believed that the Anti-Doping Agency of Kenya and the Athletics Federation were colluding to protect some athletes and this perception challenged the legitimacy of these organizations.

### **Conclusions**

While efforts to deliver anti-doping education in Kenya have improved, sub-elite and developing athletes may be neglected. This leads to an overreliance on informal sources of information and the potential for athlete exploitation. In developing countries, anti-doping organizations may need to leverage the existing infrastructure of coaches to promote anti-doping education information delivery.

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## 1. Introduction

WADA has acknowledged education as a primary tool for doping prevention (Loland, 2017), and in their commitment to education developed the International Standard for Education (ISE) (Woolf, 2020), which became operational on January 1<sup>st</sup>, 2021. The ISE is a mandatory requirement for Code compliance, and signatories to the Code must plan, implement, monitor, and evaluate education programs (WADA, 2021a). How educational programs are implemented is likely to be affected by the circumstances and resources in individual countries. While research on anti-doping education has occurred in many Western countries, there has been sparse research exploring this topic from an African perspective. Unlike their Western counterparts, African countries may not have the same levels of resources, capabilities, or infrastructure to implement anti-doping education or meet the requirements of the ISE. Moreover, distinct cultural circumstances may prove important for anti-doping educational programs. Indeed, accounting for the cultural and social context in which doping may occur is necessary for anti-doping policy initiatives (Stewart & Smith, 2008). Hence, to understand the state of anti-doping education, and athletes' experience of anti-doping educational programming, the sport culture and social conditions should be considered. Some African countries have strong sporting foundations and traditions, and these factors may affect athletes' educational experiences and their susceptibility to dope. One such country is Kenya.

Kenyan athletes have dominated middle and long distancing running for over half a century, winning numerous Olympic medals and breaking world records. Kenyan athletes hold 15 World Records, 14 World Best Performances, and 4 Olympic Records (World Athletics, 2022) among many other accolades. Yet, many Kenyan athletes have also been sanctioned for doping. Since 2016, Kenya has been on the Athletics Integrity Unit's Category A list (Omulo,

2019), which identifies its athletes as being at the highest risk of doping. Indeed, at least 53 Kenyans athletes are currently serving doping-related sanctions (Athletics Integrity Unit, 2022). While cases of doping violations among Kenyan athletes have been rising significantly, research on doping, and even sport supplement use, and Kenyan athletes has been sparse. In reviewing the literature, only one peer-reviewed study on sport supplement use among Kenyan rugby players was discovered. Mse et al. (2009) reported that awareness of specific dietary supplements was very low and that supplements were not considered desirable nor affordable. Mse et al. (2009) appear to conflate awareness with use and interchangeably reported knowledge of a supplement as indicative of use. Of note, the authors concluded that rugby players need to be better informed on supplement use and appear to advocate for their adoption by stating that rugby coaches and teachers need to be provided training on supplement use and “its role in enhancing the nutritional status of players” (p. 1306). If followed, such a recommendation could increase the potential for unintentional doping from a contaminated product (Maughan, 2005).

Besides this study, there have been two non-peer-reviewed studies on Kenyan athletes and their knowledge, attitudes, and use of supplements and performance enhancing drugs (PEDs) published. In a doctoral dissertation on Kenyan national and international level middle and long distance runners, Chebet (2014) reported that athletes’ knowledge of doping was below average. Knowledge was assessed using a 16-question true/false/don’t know format with mean scores below 50%, which would suggest knowledge was quite poor. Kenyan athletes appeared aware of their level of knowledge, with nearly half (46%) stating they were very poorly informed on drug testing procedures. Moreover, a sizeable minority (20%) of athletes had never received information on doping, and most (72%) had never attended an anti-doping workshop. Coaches though were identified as a frequent and preferred source for receiving anti-doping information,

which highlights the important role of coaches in Kenyan athletics. Self-reported use of supplements was low (21%), as was PEDs (4%), and attitudes toward doping were negative. Finally, many athletes (38%) stated they knew a colleague who used PEDs though this result should be interpreted with caution. The question posed was phrased to include any athlete in their country, which presumably could include well-known athletes who had been sanctioned as well as training partners or acquaintances.

The second paper was a report compiled for WADA by Boit et al. (2015). However, this report was based on the data from Chebet's (2014) doctoral dissertation. This fact is easily overlooked given that, although Chebet is included in the report (as the sixth author), her surname has changed. Moreover, some data in Boit et al.'s report (2015) is presented incorrectly. Boit et al. (2015) mistakenly stated that knowledge was assessed using a 5-point Likert scale, which would presumably be a level of agreement or confidence scale. This was not the case as confirmed from both appendices. This matters because, although the two papers are based on the same data, Boit et al. (2015) concluded from the results that athletes' knowledge of doping was sufficient, while Chebet (2014) described it initially as below average before concluding it was moderate. And as stated earlier, based on the format used, knowledge appears to be very poor. These observations provide further support for the need for more peer-reviewed studies of doping within an African context.

In addition to these studies, WADA's (2018) Intelligence and Investigations Department produced a report on 138 Kenyan athletes that tested positive for a prohibited substance between 2004 and 2018. The majority (86%) of athletes tested positive in competition, 95% of adverse analytical findings were attributed to distance runners, and for approximately one-third of those who tested positive for nandrolone or erythropoietin, this was their first drug test. Medical

personnel were identified as a source of prohibited substances though it was unclear if this was veracious, or an excuse provided by athletes for their positive test as medical records were not provided. It was concluded that doping was unsophisticated, opportunistic, and uncoordinated. Moreover, doping in Kenya was declared as “drastically different from other doping structures discovered elsewhere in the world” (p. 10), though this point was not elaborated upon. Finally, Kenyan athletes were observed to be “insufficiently educated on doping and/or willfully blind as to the consequences of doping” (p. 10), which further emphasizes the need for more research on this population.

Wekesa (2010) in his doctoral thesis assessment of doping regulation in Kenya acknowledged that doping poses a threat to the integrity of Kenyan sport. Moreover, he argued that the sport governance structures within Kenya have been too weak to address doping. Wekesa (2010) along with the Government of Kenya [GOK] (2014) Anti-Doping Taskforce, which he chaired, recommended that anti-doping educational efforts needed to be advanced at all levels of sport, and targeted at schools and medical support personnel. With the creation of the Anti-Doping Agency of Kenya (ADAK) in 2016, educational outreach efforts have been underway. And ADAK has partnered with the Kenya Institute of Curriculum Development to introduce anti-doping education into schools curricula (ADAK, 2018). However, the implementation of anti-doping education is complicated and not an easy endeavor (Woolf, 2020), especially given the limited resources allocated to sport in Kenya (Kipchumba & Chepyator-Thomson, 2015). For instance, historically, the training of sports teachers has arguably not prepared them to deliver information on anti-doping (Kamenju et al., 2016). Furthermore, most of the outreach programs that target athletes are conducted during sports events and are of short duration which may not be an ideal venue or format for conducting programming that seeks to

improve athletes' anti-doping knowledge. Thus, although efforts have been underway to improve anti-doping education among Kenyan athletes, it has been unclear what experience athletes have had of these endeavors.

Therefore, based on the above analysis, the purpose of this research was to understand the challenges of anti-doping implementation by focusing on the experience that Kenyan athletes and educators have had with these programs.

## **2. Material and Methods**

An exploratory qualitative research design was used, and semi-structured interviews were conducted to capture the perspective of athletes and anti-doping educators. Both athletes and educators were included to understand the experience of delivering and receiving anti-doping education, though the primary focus was on the athletes' experience. A purposive sampling technique followed by snowball sampling (Babbie, 2016) was used to recruit participants using the first author's network of gatekeepers and his connections with Athletics Kenya to identify prospective interviewees. University Research Ethics Review Board approval was obtained to conduct the study.

The first author, and interviewer, was born and raised in Kenya and spent most of his formative years in a cosmopolitan region in North Rift, Kenya. He played sports competitively and recreationally in school, and later worked as an officer in a sport institution in Kenya. Thus, he has had experience interacting with athletes, support personnel, and administrators and has developed a robust network of sport stakeholders. He holds that doping is a complex phenomenon mediated by factors in the society beyond athletes' control that ought to be investigated and appreciated. Hence, the interviews were conducted in a nonjudgmental manner. Being a youthful Kenyan, the participants found him conversational and relatable. The

insignificant age difference between the participants and the first author seemingly reduced potential power-imbalance dynamics and allowed for open conversations. While sharing their experience upon completion of the interview, most participants noted that they felt that someone was genuinely interested in their opinions.

## **2.1 Participants**

Eleven middle and long distance runners (seven male, four female, mean age = 34.55, SD= 4.99) and two male anti-doping educators participated in the study. The age of the sample is reflective of the generally older age of distance runners compared to other sports. Moreover, the competitive experience of the sample enabled reflections on educational efforts that followed from the formation of ADAK. Athletics was chosen as the sport of focus given the high prevalence of doping locally (WADA, 2018) and internationally (WADA, 2021b). Five of the eleven athletes were classified as elite (had represented the country) and six of the eleven athletes were classified as sub-elite (had never represented the country but competed at national events) based on Swann et al.'s (2015) athlete classification system. All participants had experience with anti-doping control and/or anti-doping education delivered by ADAK. The two anti-doping educators were regularly engaged in ADAK's anti-doping education activities. This selection requirement was used to ensure that participants were positioned to provide detailed accounts of their experience of anti-doping education.

## **2.2 Procedure**

Apart from one phone interview with one anti-doping educator, all interviews were conducted in person and at a quiet location convenient to participants. An information sheet was provided that described the interview along with an informed consent form that was signed and collected. Three interviews were conducted in Swahili based on the participants' preference,

while the rest were in English. The first author conducted the interviews and translated the three Swahili interviews scripts to English before analysis. He is a Kenyan and fluent in both Swahili and English, two widely spoken languages in Kenya. Two interview guides were developed. For athletes, who were interviewed first, the interview guide explored the challenges they face as competitive athletes, their perception of doping, their experience with anti-doping education, and interactions with ADAK. For the anti-doping educators, their challenges and aspirations with program delivery were discussed along with concerns raised by athletes. Interviews lasted 38 minutes and 20 seconds on average and were recorded and transcribed verbatim. The first author assigned each participant a popular name (pseudonym) from a community in Kenya. For ease of identification, both anti-doping educators were assigned a pseudonym that began with the letter E (Ebei and Ekiru).

In the interviews with participants, we drew upon their experience of anti-doping education programs. Based on the ISE (WADA, 2021a), WADA differentiates between the types of anti-doping education and how it is delivered. In brief, this includes awareness raising (where topics and issues related to clean sport are highlighted), information provision (i.e., up-to-date material), values-based education (activities designed to development one's personal values and principles), and anti-doping education (training on anti-doping topics designed to build clean sport competency). The interviews were conducted prior to the implementation of the ISE, however, participants' experiences included awareness and information provision (via outreach programs delivered at sporting events), and anti-doping education (provided on demand and upon invitation). Value-based education, as defined and as presented below, was targeted to school children. While the athletes were unable to comment on value-based education, the anti-doping educators did raise it in conversation.

### **2.3 Data analysis**

Braun and Clarke's (2006) six steps of thematic analysis were used to manually analyze the data and develop three themes (Concerns with Education, Role of Managers/Coaches, Perceptions of doping). The first author became familiar with the data through the process of manual transcriptions, followed by reading and re-reading the transcripts. Based on the reading, initial codes were generated (step 2). The third step involved reviewing the transcripts to create themes, followed by a process where the themes were reviewed, named, and defined (steps 4 and 5 respectively). Inter-rater reliability was used by having the first and third authors independently analyze one transcript before discussing and agreeing on the initial codes and themes generated (Smith & McGannon, 2018). A preliminary report was created (step 6). The second author assisted with the refinement and presentation of the themes, particularly the identification of subthemes, and the final production of the report. The findings were reported in thick, rich descriptions to create verisimilitude statements that could produce for the readers the feeling that they have experienced, or could experience, the events being described (Creswell, 2013). This also allows for naturalistic generalizability (Smith, 2018), as it potentially enables the reader to relate to the themes vicariously, or if their background so permits (i.e., experience with anti-doping education or research), through their prior experience.

### **3. Results**

Table 1 summarizes the profiles of the participants. All the elite runners and three of the six sub-elite runners were full-time athletes. The remaining three were otherwise employed; two of whom worked for disciplined forces (i.e., police/military), such roles common for very good athletes in Kenya. Three themes were identified from the data: (1) concerns with anti-doping

education programs, (2) the role of coaches/managers in anti-doping, and (3) perceptions of doping. Each of these themes, along with corresponding subthemes are presented hereunder.

#### INSERT TABLE 1

### **3.1 Concerns with Anti-Doping Education Programs**

Anti-doping education programs in Kenya focus on awareness raising, information provision, educating athletes and character development through values-based education. The status afforded education by ADAK was emphasized by an anti-doping educator, Ebei, who declared, “Education is the face of the Anti-Doping Agency of Kenya. There is nothing more that has placed the Agency in the face of Kenya than education.” ADAK provided education via workshops, values-based education (VBE), and outreach programs. Ebei noted that workshops normally targeted elite athletes and athlete support personnel (e.g., coaches, medical staff), while VBE targeted school-going children, where activities would be incorporated into the classroom to promote the Spirit of Sport Values. Both educators had positive views of ADAK’s educational efforts. Ekiru explained that “The agency has done a good job because they are introducing a values-based education in schools through the curriculum in conjunction with the Kenya Institute of Curriculum Development.” Ebei also liked that VBE was delivered in a fun-oriented approach where children learn the values in the WADA Code through play. Outreach programs were regularly delivered at sport events throughout the country to raise anti-doping awareness and included a 10-point quiz for attendees to complete. Ebei estimated 66,000 athletes are exposed to these efforts, which Ekiru described as “a speedy session.” Despite these efforts, three concerns with anti-doping education programs were identified.

#### **3.1.1 Skepticism of Effectiveness**

First, athletes expressed skepticism as to the effectiveness of educational programs. Though the anti-educators opined that the outreach programs were impactful (based on performance indicators, such as number of athletes served), athletes sharply disagreed with this assertion. Athletes described the outreach programs as ten-or-so-minute sessions that were too basic and shallow, and consequently inadequate as a source of anti-doping information. Nyaboke, thought the sessions were superficial, even for new participants. Additionally, Otieno believed that ADAK was primarily interested in achieving its performance indicators and stated, “They are not after benefiting the athletes. They’re interested in taking the roll call of the number of athletes who attended.”

The duration and content of outreach programs led educators to speculate that an unintended consequence was the creation of false confidence. The ten-point ADAK quiz used for education was thought to inadvertently give athletes the impression that they were sufficiently informed about anti-doping. Ekiru alluded to this false confidence as he shared his opinion:

What I am saying is that this athlete only went through 10 questions, then he says he knows what anti-doping is. When an anti-Doping Control Officer comes to test this athlete, the athlete does not know his or her rights. He or she does not know that they are supposed to comply. He or she says the Agency is unfair. It is the athlete who is unfair to himself.

The educator’s sentiment highlights the limits of outreach programs that may be more focused on awareness raising and information provision rather than developing athletes’ anti-doping knowledge. This fed into the next concern of programming – its design and delivery.

### **3.1.2 Design and Delivery of Programs**

Concerns were raised that anti-doping education program was packaged in a way that athletes could not process information and utilize it in decision making. Wanjiku suggested that education programs should account for an athlete's capability. She said that "Some of these athletes come from very remote areas. Some grasp concepts faster than other athletes." Language barriers were also raised as a limitation on effective education. Kimeli held that "...some of them have not gone to school, you should teach them in the language that they understand." Ebei echoed Kimeli's sentiments when he explained that "...we have athletes who are very good and talented but are not able to communicate in any other language apart from the mother tongue." Most Kenyan speak three languages; English, Swahili, and their mother tongue or local dialect, of which there are at least 42 variations. However, for some talented athletes who were born and raised in remote areas, their mother tongue may be their primary language and their proficiency in English and Swahili may be poor. While English and Swahili are the widely spoken languages in Kenya, anti-doping education material is predominantly available in English, and this may not be legible for some athletes. In such instances, translation of material from English to Swahili or mother tongue is necessary but rarely done and consequently this inhibits effective communication. Ebei described the difficulty he faces when delivering educational material to a group of athletes and when explaining the sample collection equipment. He said "...you always have to rely on somebody...to communicate. Communication between the two of you, or the athlete interacting with the equipment is very hard."

Athletes expressed a desire for education to have been delivered earlier in their career and for it to be more detailed. Wanjala explained this succinctly by stating "After basic, let the educators go deeper." Kimeli, who had competed abroad, compared his education experience

with his counterparts from other countries, and registered his dissatisfaction with the anti-doping education in Kenya:

There is no need for beating around the bush. What the Agency is doing is asking whether doping is right or wrong. We are looking for a detailed education. They must be so open to athletes and tell them that there are supplements as well as drugs. They should also distinguish between technology and doping but they're not very clear and honest when it comes to that. They combine drugs and supplements and tell us that we should not use them. When you go abroad, athletes know that these are supplements and these are drugs.

Yet Ekiru shifted the responsibility of education to athletes. He averred that “What we usually do is give them a skeleton. We give them basic information, but then it is also their responsibility to get information.” One of the challenges expressed by both educators and athletes was the time afforded to education and where it was delivered. Several athletes thought educating them at their training centers rather than at the sporting venues would be better. They opined that such an approach would provide them opportunities for in-depth discussions which lacked in the outreaches. This observation led to a third concern that involved the accessibility of education.

### **3.1.3 Accessibility**

In addition to language barriers negatively impacting the accessibility of education, spatial and the resultant financial barriers hindered accessibility. Athletes explained that having education delivered during sporting events relied on athletes competing and traveling to these events. For those not competing, it could be financially challenging to attend, making these sessions inaccessible. Moreover, several athletes complained that ADAK and Athletics Kenya

(AK) limited anti-doping education to elite athletes only. Kimeli and Otieno explained that only elite athletes like themselves had unfettered access to education, such as detailed workshops, while other levels of athletes had to make do with the outreach sessions. Several athletes remarked on a recently held Athletics Integrity Unit anti-doping education session that was limited to elite athletes who represent the country. For his part, Kimeli opined that “In Kenya, the only people who I know have adequate information on doping are the ones who have good competition times”. Additionally, Mutua was convinced that “They (ADAK) are not doing enough because they are concentrating on the elite athletes”. In calling for improved access to education, Nyaboke suggested that ADAK “...should not focus on athletes who have won big races and forget the upcoming athletes.” Through these discussions, it appeared that ADAK and AK were effectively servicing the elite athletes through workshops and the youth athletes through value-based education in schools. However, many athletes did not fall into either category, which meant they may have been under served educationally. Thus, several athletes decried the supposed imbalance regarding access to anti-doping information. They explained that an unintended consequence of this situation was it forced them and other athletes to rely on unofficial sources of information, such as friends, teammates, and of course, coaches. Elite populations being a priority for anti-doping education, is of course, not a new phenomenon around the world. Here, however, there appears to be a big gap between those educated in schools, and those top runners who receive education. That leaves highly talented runners in their age groups, progressing (hopefully) to the elite level not educated with regard to doping matters.

### **3.2 The Role of Coaches/Managers**

With the apparent gaps in education, coaches/managers’ proximity to athletes made them valuable sources of information. Athletes use the term manager and coach interchangeably, and

more often than not, most coaches doubled up as their managers. Together with coaches/managers, retired athletes were also identified as trusted personnel. These individuals were readily available to provide anti-doping information to athletes. Mogaka explained that “Coaches and senior athletes (retired) are valuable sources of information on doping”. On her part, Nyaboke attributed the information and knowledge she had on doping to her coach. Retired athletes who also double as unofficial trainers are relied on to provide anti-doping information along with training advice.

The role of coaches/managers extended beyond training and anti-doping information. Most athletes interviewed believed that the coaches/managers were the most important people in their circle whose impact went beyond training to providing invaluable life advice. Hassan noted that he would quickly turn to his coach for any advice. Coaches spend considerable time with athletes and, in turn, enjoy immense trust. Such reliance could be detrimental. In demonstrating the trust that coaches enjoy, Hassan noted that “Some athletes are innocent; they get these substances by accident from their managers or coaches who give them drinks, for example, energy drinks, and they don’t have time to read through [the ingredients].” Nyaboke echoes Hassan’s sentiments by noting how athletes fail to do due diligence during crucial moments. He notes that “Whenever they (athletes) are given forms to fill, for example, they can only understand yes and no in the form. The manager tells an athlete to answer ‘no’ regardless of the question.” Nyaboke, on her part, held that a coach would always have the interest of an athlete at heart. She said that “If the manager says it (substance) is good, I will take it. If he says no, I won’t take it. A coach will not lie to you because they have stayed with you for a long time.”

Yet the reliance and trust afforded to coaches/managers opened opportunities for athletes to be exploited, particularly as they benefited financially from athletes’ success. And in fact,

athletes were convinced that most managers and coaches were motivated by money and were less concerned about their welfare as athletes. Though Mutua strongly believed that most coaches would not allow athletes to dope, he held that some might encourage one to use drugs. Otieno was candid on the predatory tendencies of the coaches/managers. He held that, “these coaches and managers want to make money through me, so I have to be careful.” He went further and explained:

Many managers are messing the life of athletes, which is not good. I feel bitter sometimes because I have seen many athletes who are affected by doping... As leaders, we encourage athletes to run clean. We remind them of the pressure that comes from coaches and managers who want them to run better and tell them that they need to be able to handle the pressure. We also remind them that the coaches and managers are after money and they want to use them to get money.

Fellow athlete, Mutua was quick to note the existence of rogue coaches. He opined that, “I think most of the coaches would not allow you to dope. Other coaches like (name redacted) might encourage you to dope... We have good coaches and bad ones.”. Mutua’s and Otieno’s sentiments that some coaches promoted PED use were echoed by Ekiru who noted that:

...the coach or the Support Personnel encourages them to dope because they know when this athlete wins, there’s some percentage of the money that they get. So for them, they can do anything because, after all, they’re not the ones who are taking the substance into the system. It is not their health that is at risk — it is the health of these athletes.

Thus, the relationship between the coach/manager and the athletes was marked by trust, but also suspicion. They are an important source of anti-doping information, and in some cases, translation of anti-doping materials. Their proximity in the lives of athletes gave rise to reliance,

which could enable exploitation. Such societal distinctions are important observations for anti-doping education, which leads to the final theme identified.

### **3.3 Perceptions of Doping**

The athletes' intrapersonal experiences with anti-doping education coupled with their social interactions with fellow athletes and coaches/managers fueled their cultural perception of doping. Athletes believed that doping was widespread in athletics and that it was easy to access PEDs. They also alleged that some of the athletes who dope are protected by unspecified persons within the AK and the ADAK. These three perceptions may hinder ADAK's anti-doping efforts because it raises legitimacy and credibility issues.

First, most athletes believed that doping was more prevalent in athletics compared to other sports. Various reasons were fronted to support this perception. Nyaboke suggested the desire for quick money since athletics was an individual sport, while Hassan believed that the high number of athletes in Kenya and the stiff competition fueled the desire to dope among athletes. Wanjiku was quick to note that "...it is the order of the day. I think most of my colleagues in athletics are doping." This perceived prevalence fueled athletes' perception of PEDs accessibility.

Second, athletes held that it was easy for an athlete to dope. Most athletes alleged to know fellow athletes who used PEDs and where these were obtained. Unlike the WADA (2018) report, where medical personnel were identified as the source for PEDs, managers were mentioned as primary conduits. Otieno explained that "Many managers are messing the life of athletes, which is not good" Access to PEDs was also unsolicited. Hassan noted that he had been approached to enhance his performance by an organization he did not name. He explains that "I've been approached by companies who advise you and tell you that it is good if you take this substance. It

will give you the energy and it will keep you in shape.” In sharing his near experience with prohibited substance use, Kimeli noted that:

There was a time I had an injury and went to Eldoret because I was told I could get full treatment there. I even went to Kapsabet. There is a group of cartels out rightly telling you that they have been treating so and so. They ask you for 100,000 (est. \$1,000) and promise to treat you.

Athletes, therefore, knew fellow athletes that doped, where and how PEDs could be obtained, and even how much they cost.

Third, there was also a perception of collusion between ADAK and AK officials to protect some athletes who dope. Kimeli speculated on this point when he proclaimed,

I don't understand how a running organization or team can have five or more people who have tested positive for doping and the organization is still going on. Maybe, they have a connection with a person in Athletics Kenya or at the Anti-Doping Agency of Kenya.

That these types of sentiments existed was acknowledged by Ebei, who expressed as much with his statement:

Within the Educators, we've been asking ourselves, are our colleagues in the other departments, testing and compliance, doing due diligence? That is the question that we are always pondering on. Of course, some of these claims reach us. The Athlete Support Personnel whisper these things.

These perceptions fuel doubt in the minds of athletes and have the potential to negatively affect ADAK's credibility in running anti-doping education programs and its legitimacy as anti-doping agency..

#### 4. Discussion

Kenyan athletes, particularly in athletics (WADA, 2018), are at a significant risk of doping. Yet few research studies have focused on Kenyan athletes and the factors that may drive and prevent doping. Education has been identified as a central pillar for anti-doping programming and with the launch of the ISE, signatories of the Code will be required to plan, implement, monitor, and evaluate their education programs. Although ADAK has made considerable efforts to improve education among Kenyan athletes, historically athletes' knowledge of such matters has been poor (Chebet, 2014). With new efforts afoot, this study provided insights into athletes' experience of anti-doping education, while also highlighting the challenges of implementing a comprehensive educational program in a country where the sporting infrastructure has historically been underdeveloped (GOK, 2014; Wekesa, 2010).

ADAK has only been in existence since 2016 and with any nascent organization, resource restrictions would have limited any educational rollout efforts. It is understandable that elite athletes would be a priority as they are more vulnerable to doping, while also being actual or potential representatives of the country. An immediate course of action would most likely have been to ensure these athletes were better informed about anti-doping and the Code. The athletes from this study suggest as much, though even here there were criticisms raised when comparisons were made with peers from other countries and their access to education. In contrast, the partnership with the Kenya Institute of Curriculum Development (ADAK, 2018) would be a long-term strategy where youth receive VBE, such that a clean sport ethos would develop in the next generation of athletes. Moreover, this strategy would have circumvented resource limitations by leveraging existing infrastructure resources of schools and teachers, who would be required to deliver this curriculum.

This leaves the outreach programs at sporting events as a main way in which many athletes are introduced and formally educated on anti-doping. Prior to ADAK, many athletes were receiving little, if any formal anti-doping education (Chebet, 2014). Delivering education at events would have been another means to circumvent resource limitations, as a small staff of anti-doping educators could be employed to serve a large, somewhat captive audience of athletes. The educators considered outreaches as impactful due to its wide reach and high attendance rates. However, the results from this study demonstrate the weakness of this approach and how it may negatively affect ADAK's reputation and credibility.

As revealed, these programs were criticized on the length and depth, and hence considered ineffective, and potentially detrimental as it may promote false confidence in one's knowledge. Moreover, while it may have been convenient to have an anti-doping educator deliver material to a group of athletes at an event, this did not account for diversity in language fluency or prior educational or school experience. These factors fueled dissatisfaction with educational programs, which were magnified by the perceived imbalance of educational access. Contributing to this sentiment was the perception that PEDs use is widespread, easily acquired, and that some athletes receive protected status regarding anti-doping violations. Such claims were not without precedent (see International Association of Athletics Federations (IAAF) Vs Asbel Kiprop, 2018). Events and experiences like these have the potential to foster mistrust between doping control authorities and athletes (Overbye, 2016).

For many athletes, an important source of information, and even translation, was coaches/managers. For Kenyan athletes, coaches have been identified as a preferred source for receiving anti-doping information (Chebet, 2014). In other contexts coaches have been reported as influential agents of anti-doping attitudes, and trusted to provide nutritional advice (Nieper,

2005). In a previous research (Engelberg & Moston, 2016), coaches believed that doping was cheating, 'harmful' and dangerous to physical and/or mental and psychological health and consequently supported anti-doping efforts. Hence, it appears that coaches may be an untapped resource that could have been better utilized to educate athletes. Not only would this circumvent issues of limited resources, reach, and time, but it could also address issues of comprehension due to either language or aptitude barriers. The concern is that coaches/managers' knowledge of anti-doping may also be inadequate (Engelberg et al., 2019), and greater efforts would have been needed to educate this group. Yet, unlike the teachers in schools, coaches/managers may not be obligated to engage in this type of personal development. Thus, there may be a need to incentivize coach education, such as via a certification program, or make it mandatory (though this may be challenging to enforce). While there are concerns that coaches/managers may take advantage of their relationship with athletes to promote and benefit from athletes' use of PEDs, previous research has suggested, at least in other contexts, that such occurrences are relatively rare (Pitsch et al., 2007). However, moving forward, it may be prudent to emphasize to coaches and other athletic support personnel their responsibility to the Code and their requirement to be in compliance.

In conclusion, this study demonstrated that while ADAK appears to serve the anti-doping educational needs of elite and future athletes, a large segment of current athletes may not be receiving adequate attention. While outreach programs may have been a logical means to raise awareness and reach many athletes, these were perceived as insufficient for educational purposes. Moreover, dissatisfaction with educational access and delivery, coupled with perceptions of doping prevalence and favorable treatment of select athletes, created challenges to ADAK's legitimacy. Coaches and managers were revealed to be a resource that could potentially

overcome many limitations of anti-doping education outreach, though this would require additional investment.

There are several limitations to the current study. First, the athletes were experienced, and a younger cohort of developing athletes may have had a different experience of educational programming. However, it bears emphasis that in the Kenyan sport development system, athletes progress from shorter to longer distances, resulting in longer distance runners, such as marathoners, being older by design. Second, none of the athletes were knowingly users of PEDs, and the perspective and insights provided by those who use PEDs would have been valued. Third, two of the athletes were employed by discipline forces and their training and profession may have influenced their answers. Finally, only two educators were interviewed, though the two selected had extensive experience to which to draw upon. While this study has provided insights into the challenges of a nascent organizations' efforts to deliver anti-doping education and athletes experience of these efforts, future research is needed. Given WADA's (2018) declaration that doping among Kenyan athletes is distinct from other countries, future research should investigate how Kenyan athletes are socialized into doping, and the role that coaches/managers have in this regard. In addition, future research should focus on how coaches/managers can be better utilized to provide anti-doping information and foster anti-doping attitudes, particularly in countries where anti-doping organizations function under conditions of severe resources limitation. Such findings would be important for new, small, and under resourced organizations in other regions of the world.

## **Conclusion**

Anti-doping education is a primary tool for doping prevention. Thus, it is crucial to understand athletes' experiences with educational activities to improve them. In this study, we explored the challenges of anti-doping education implementation by focusing on the experiences

of a population that has received scant research attention (Kenyan middle and distance runners) even though this same population has been subjected to numerous ADRV. Educators' input was also sought to develop deeper insights into challenge of implementing anti-doping education in Kenya. Anti-doping education programming in Kenya is improving, However, while the elite athletes have greater access to anti-doping education, a large population of athletes survives on limited outreaches that focus on awareness raising and short exposure to education.

Subsequently, they rely on informal sources of information that potentially increases their risk of doping and exploitation. We suggest that with anti-doping programs that lack infrastructure and resources, the education of coaches and managers (who, after all, are subject to the Code) may provide a means to enhance the provision of anti-doping education.

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	<b>Interviewee Pseudonym</b>	<b>Gender</b>	<b>Status</b>	<b>Age in 2019</b>	<b>Interview Time (minutes)</b>
<b>1.</b>	Nyaboke	Female	Sub-Elite Athlete	27	20
<b>2.</b>	Wanjiku	Female	Elite Athlete	36	29
<b>3.</b>	Mogaka	Male	Sub-Elite Athlete	33	21
<b>4.</b>	Kimeli	Male	Elite Athlete	39	51
<b>5.</b>	Mutua	Male	Sub-Elite Athlete	28	27
<b>6.</b>	Hassan	Male	Elite Athlete	40	27
<b>7.</b>	Halima	Female	Sub-Elite Athlete	28	21
<b>8.</b>	Wanjala	Male	Sub-Elite Athlete	40	38
<b>9.</b>	Otieno	Male	Elite Athlete	36	20
<b>10.</b>	Cherono	Female	Sub-Elite Athlete	34	80
<b>11.</b>	Sabuni	Male	Elite Athlete	39	48
<b>12.</b>	Ebei	Male	Anti-Doping Educator	-	62
<b>13.</b>	Ekiru	Male	Anti-Doping Educator	-	54
	<b>Average</b>			<b>34.55</b>	<b>38.31</b>
	<b>SD</b>			<b>4.99</b>	<b>19.18</b>