Nigerian athletes’ perspective: Urine doping controls

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Abstract---Athletes who compete may be subjected to urine doping tests after each competition, training session, or at other occasions. Despite the restrictions and penalties, doping still manages to contaminate sports. Africans still have misgivings about anti-doping measures since they believe they were excluded from the regulatory process. The study's goal was to obtain empirical evidence on Nigerian athletes' attitudes toward urine doping prevention, influenced by; athletes' cultural, environmental, and emotional peculiarities. Participants included, 165(21.4 years, ± 2.1) athletes from 10 sports. Participation was voluntary. Mixed methods of quantitative and in-depth interviews were used to collect data. Descriptive statistics and testing for differences between categorical variables were calculated using a 2×2 table, chi2 and gamma tests. Findings indicated that; athletes voluntarily submitted to testing, with statistical significance for testing frequency (0.004) and age (0.022), but not for gender difference (0.66). Common themes in athletes' feedback were that their
cultural norms were violated, confidentiality, presence of an atmosphere of bias that could damage test results, and conventional doping tests causing psychological pain, suffering and shame. It was concluded that the peculiarity of athletes should be considered when developing global legislation.

**Keywords**--- Athletes, cultural, environmental, emotional-differences, Nigeria, urine doping.

1. **Introduction**

The World Anti-Doping Code and the corresponding prohibited list, published annually by the World Anti-Doping Agency (WADA), serve to unify and regulate anti-doping efforts worldwide. Athletes worldwide are required to submit doping control samples at anytime, anywhere, and without prior notice as part of the World Anti-Doping Agency’s (WADA) ongoing fight against doping. Although the advent of the biological passport, the collection of urine samples is a crucial step and analyzing athletes' pee is still the most popular method for identifying the ingestion of prohibited substances (Wagner, 2010). Elite athletes who want to take part in highly competitive national and international competitions according to Elbe and Overbye (2014) are obliged to attend doping tests at any time to determine if they have taken illegal performance enhancing drugs.

According to WADA (2009), using illicit or banned substances for performance enhancement can endanger athletes’ health and is considered a contravention of the World Anti-Doping Code because it is deemed to provide athletes an unfair advantage and go against the spirit of fair competition in sports. Surely, it is well recognized that there is a paucity of literature on athletes’ opinions of collecting urine samples for anti-doping tests. The literature in this field of study is at a low point, particularly with regard to athletes from sub-Saharan Africa, according to a meta-analytical review search.

According to Verroken and Mottram (2003), the technique of urine doping controls was initially implemented over 70 years ago and is used to identify amphetamine use. Because the tests were administered haphazardly, only during competitions, and the results were not very accurate, the early testing regime was deemed to be purely ceremonial (Verroken & Mottram 2003; Houlihan 2002). Since competitive testing was acknowledged to be of limited utility because athletes could calculate clearance times to pass the drug tests, criticisms followed. Out-of-competition testing programme were implemented in some countries about forty years ago, however, only a limited number of tests were performed and sometimes the athletes were given two days’ notice prior to a test. However, Corrigan and Kazlauskas (2000) reported that since the Sydney 2000 Olympics, athletes are not only tested after their competition but are also randomly selected for testing prior to the Olympics and out-of-competition, and the premise for this change was that some drugs, such as anabolic steroids, may be best detected during these phases.
Urine doping tests in Nigeria is the same with what obtains elsewhere globally, athletes participating in competitions can potentially face urine doping test after each competition, training session or at other time and are obliged to be available for testing any time and at any place without prior notice. The whereabouts rule was implemented in connection with the first WADC in 2004. The 60-minute time WADA (2009) slot was introduced in the revised code in 2009 further obligating athletes in the registered testing pool to report and be available for potential doping tests at one specific location one hour each day. Athletes who are a part of the registered testing pool have to log into Anti-Doping Administration and Management System and enter all possible locations they will be at for the upcoming 3 months. This process will allow every doping control officer to know where to find the athlete any day and at any time.

The athletes’ perspective of urine doping testing has increasingly become a part of athletes’ daily lives, and it is not something that is limited to big competitions (Elbe & Overbye, 2014). The time and place at which tests take place in line with the World Anti-Doping practice have become less and less predictable for athletes, and testing can even take place at their own homes. Several investigations, like those by Delanghe et al. (2014), Badoud et al. (2011), and Mareck et al. (2008), concentrate on the analytical problems with urine doping testing. They emphasize how important it is to continue to enhance the analytics but come to the conclusion that it is crucial to do testing more frequently and wherever at any time. More and smarter testing look like a highly logical and alluring anti-doping strategy, even from a deterrent standpoint.

Recently, research on doping control in sport while investigating how elite athletes perceive and trust the functioning of the doping testing system in their sport by Overbye (2016) sort to identify whether specific factors such as previous experience of testing and perceived proximity of doping have an impact on Danish athletes’ perceptions of the testing system. The study employed a web-based questionnaire (N = 645; response rate 43%) and used qualitative findings to elaborate on and explain quantitative results. Results from the study revealed that the athletes perceived past experience of testing to have a positive influence on trust in the concrete measures and if athletes experienced flaws during the control procedures, this could increase distrust and cause worry. The results also revealed that proximity of doping in an athlete’s sport influenced the athlete’s perception of the testing system. Particularly, athletes who need the testing system to be effective and to function well across the world show greater distrust of or dissatisfaction with the current testing system.

Coombs and Coombs (1991) investigated the impact of drug testing on the morale of mandatory participants through interviews and questionnaire responses of 500 intercollegiate athletes required to participate in a urine testing program. Perception of athletes in this study varied widely in their experiences. Most were not greatly affected, but some were embarrassed, humiliated, upset, and anxious about being inaccurately identified as drug users. Others experienced positive benefits, new information, a novel and interesting conversation piece, and a socially acceptable way to refuse drugs offered in friendship. Some athletes were of the opinion that testing benefited their athletic performance and school work and advocated for humanize and improve experience as well as a better
orientation about what to expect, more effective educational sessions, a warmer, more comfortable testing setting, more reasonable drug testing objectives, and more rigorous testing standards.

Researchers Strahler and Elbe (2009) and Elbe et al. (2012) studied psychogenic urine retention during doping controls and found that many athletes experience this clinical disorder of paruresis and psychogenic urine retention, which is the inability to urinate because of psychological reasons during doping controls. The majority of athletes, however, do not suffer from paruresis and only exhibit the inability to urinate during urine doping testing. In addition, Elbe et al. (2012) found that only 30% of the affected athletes displayed symptoms of the clinical condition paruresis, even though 60% of the responding athletes exhibited psychogenic urine retention during doping controls. Emotions perspectives associated with psychogenic urine retention during doping controls have also been investigated (Pitsch, 2009; Lundby et al. 2008). These is premised on the fear of a false positive test resulting from not reporting substances that have been consumed, contaminated foods or nutrition supplements, as well as urine tampering or errors from the laboratory.

Urine testing according to Elbe and Overbye (2014) happens without warning, possibly even just after athletes have gone to the toilet, or after a competition when athletes are still too tense to relax and urinate. Moreover, the procedure itself might cause an unnatural situation of stress because athletes are pressured to complete the test within a certain time. Urine sample collection is not just a clinical process though but also has major social process components. Krugers & van Bottenburg (2022) identified one of the standards as the International Standard for Testing and Investigations. The International Standard for Testing and Investigations establishes mandatory standards for test distribution planning, notification of athletes, preparing for and conducting sample collection, administration of samples and documentation, and transport of samples to WADA-Accredited Laboratories for analysis (WADA, 2015; 2020). It describes in detail how urine sample collection should work from a technical and control perspective, with clear objectives, responsibilities, requirements and process steps. It is the product of a physical interaction between the doping control officer, and the athlete. Explicitly athletes are notified by a doping control officer or chaperone about their selection for doping control. Athletes are meant to go through the documentary procedures which also include the signing of form confirming that they understand their rights and responsibilities. According to WADA (2015) a minimum amount of 90mL of urine will need to be provided. The delivery of an adequate amount of urine can take quite some time especially when athletes are dehydrated (Corrigan & Kazlauskas 2000). The athletes disrobe from knees to navel and from his/her hands to elbow to provide an unobstructed view of the passing of the sample. A doping control officer of the same gender will observe the urine leaving your body, choose a sample collection kit from the selection provided. Split the sample in the A and B bottles. Pour urine up to the line in the B bottle first. Next, fill the A bottle and leave a small portion in the collection vessel. Seal the A and B bottles. The doping control officer will measure the specific gravity of the sample to ensure it is not too diluted to analyze. If it is too dilute, the athlete may be required to provide additional samples. Athletes complete the Doping Control Form, by providing personal information and noting
any substances he/she may be taking, the prescription medication, over the counter medication and supplements as well as noting any concerns or comments, if any, about the doping control. Athletes are also to confirm that the information, recorded, numbers and sample code are correct. Samples will be sent to a WADA accredited laboratory for analysis in strict confidentiality and will be tracked to ensure their security. Athletes A sample will be analyzed and your B sample will be securely stored for further testing if required. The laboratory will send the results to the responsible anti-doping organization and WADA.

Preceding the formation of WADA in 1999, Africans were not adequately incorporated. The only African country present – South Africa - only went there as attendees (Hanstad, Smith & Waddington, 2008). The Supreme Council of Sport in Africa was enforced to adhere only after conclusions have been reached. However, the compliance of the Western-European formulated anti-doping policies have bound African athletes strictly – or so it seems. The fact that the cultural, environment, physiological and psychological peculiarities of Africans were not considered, it is viewed as another means of colonization and western cultural imposition (Ruwaya, Juma & Woolf, 2022; Houlihan, 2002).

The environment in Africa makes it easy for doping to occur and the lack of education makes anti-doping strategies harder to implement. Another factor highlighted by Juma, Woolf and Bloodworth (2022) was the enabling environment for athletes exploitation by trainers and coaches. Also, the cultural factors, as well as an environment that encourages doping and violation of doping rules as reported by Bergsgard et al., (1996) and Backhouse et al., (2017), play an important role in shaping perceptions and attitudes toward doping. A higher percentage of Africans especially Kenyans have been sanctioned for doping related offences. Shame has always been revered by Africans in that they feel they are always judged by norms and beliefs. Shame is a state of experiencing incongruence of judgement by others or set norms (Mayer, Viviers & Tonelli, 2017). It is a disruptive intimate emotion that results in negative self-evaluation in the presence of others. These negative evaluations might impact negatively on the mental health and well-being in work places, cause reduced self-esteem, self-worth and efficacy (AbuAlRub & Al-Asmar, 2014). Several cultures in Africa, perceives shame as an emotion that could lead to degradation, silence and even suicide since it is mostly felt as a violation of norms, and a failure to meet set societal expectations (Bryan, Ray-Sannerud, Morrow & Etienne, 2013).

Long before colonialism, according to Ruwaya, Juma and Woolf (2022), Africans had engaged in and enjoyed sports at festivals and mostly as a passage rite for boys into manhood which was supervised by elders and kinsmen who had achieved such. Participants were allowed to dope by swallowing stimulants, applauded for participations. All these were seen as fairness as supporting the true spirits of sports. Some athletes, predominantly in football employed “spiritual doping” through the use of talismans (Kovac, 2016). Some believe that all these practices might not violate the antidoping rules if the cultural beliefs and environment were considered before co-opting Africans into it. It would have readily been embraced in its earlier stages and creating antidoping structures would have easily developed in sub-saharan Africa (Toohey & Antony, 2017). It is
noteworthy to examine the perspectives of athletes to urine doping from an African angle.

Also, the increase in the funding of the social scientific aspects of research by the World Anti-Doping Agency in recent time gives rise to the concern that this aspect of doping control system needs to be examined the more considering the psychosocial implications to the athletes’ participation in sports. This present study is leaning on foundational studies on the experiences of athletes with control procedures and the difficulties athletes face with urinating, and whether specific factors such as previous experience of testing and perceived proximity of doping have an impact on athletes’ perceptions of the testing system (Overbye, 2016; Elbe & Overbye, 2014, 2015; Elbe & Brand 2014; Elbe et al. 2012). Despite the fact that few studies have focused on how doping tests interfere with athletes’ privacy or personal liberty (Teetzel 2007; Schneider & Butcher 2001) and athletes’ increasing dissatisfaction with the doping control system in general (Palmer et al. 2011), it is worthy of note that no scholarly attention has been given to more general experiences of athletes from sub-Saharan Africa on urine sample collection control system. Hence, making a global generalization from inferences based on existing data from the western part of the globe may generate more criticism more so that culture, environment, and the value and emotional laden nature of the sample collection process of interactions between the doping control officer and athletes. The aim of this study is to analyze a sample of elite athletes in Nigeria, how they perceive urine doping controls, and if differences exist concerning gender, age, previous experience with doping tests and sport type.

2. Method

2.1 Participants

Athletes who had undergone doping tests were recruited for the study. 190 athletes initially volunteered and were sampled. However, 165 athletes returned or filled their questionnaires correctly. Regardless of the nature of the study, 86.8% of the initial participants made up the final sample. Mostly, male athletes made up the group that did not return their questionnaires. The lifestyle of elite athletes that does not leave much free time for answering surveys resulted in the over 13% that could not make the final sample. The average age of these athletes was 21.4 years (S.D ±2.1), 79 athletes were younger than 20. The gender distribution was 95 males (57.6%) and 70 females (42.4%). A total of 10 sports were represented which included contact or non-contact, and individual or team sports. 32.1% participated in team sports (e.g., football, volleyball), 44.8% in power and speed sports (e.g., power lifting, sprint), 20% in endurance sports (e.g., marathon, triathlon), 3.1% combat (e.g., judo, karate). 78.7% (130) of the participants had been tested more than three times within the last three years. The majority, 160 athletes (96.9%), were tested within the last year, 3% had not been tested in over three years.

2.2 Procedure

The instrument was administered to the participants across the country and retrieved after one week. The questionnaire items were explained to the athletes
before administration. In-depth interview was conducted for 25 athletes by the research team. Retrieved questionnaires and responses from the interview were coded and analyzed.

2.3 Ethical considerations

All participants provided informed consent and were ensured of the confidentiality and anonymity of their responses. Ethical approval was obtained from the Social Science Ethical Committee, University of Ibadan, Ibadan, Oyo state. Athletes were free to withdraw from participation at any point during the survey as well as completing specific questions.

2.4 Design and Instrument

Descriptive survey design was adopted for the study. Qualitative and quantitative data were collected via both closed- and open-ended questions about how athletes experience a doping control. The closed ended questions were adapted from that used by Elbe and Overbye (2014). In the closed ended questions, athletes were asked about their experience with doping control in relation to the seven different issues raised in literature and stated by Elbe and Overbye (2014). The first item assessed their acceptability of doping tests, another inquired how they were disposed to disclosing their dieting and supplements uptake. One item related to the fear of a false positive result, and the four other items targeted stress, integrity issues and suspicion when being tested. The following closed ended questions about the athletes’ experience with doping control were answered with either ‘yes’ or ‘no’

1. I think it is fine that I am doping-tested.
2. I am careful to declare all information about any diet supplements, vitamins or medicine I have taken when I am at a doping control.
3. Sometimes I am afraid of being tested positive, even though I haven’t taken any illegal substances.
4. I think it is stressful because I sometimes have difficulty to urinate.
5. I feel it offends my privacy, when there is a doping control at my house.
6. I feel my personal integrity is violated because someone is watching me when I urinate.
7. Sometimes I feel under suspicion when I am tested.

Furthermore, 25 athletes were given the opportunity to elaborate on their answers in an open question. The open-ended questions were constructed around cultural beliefs, environmental and emotional dispositions and whether athletes favoured other types of tests. These variables are peculiar to sub-Saharan – Nigerian – athletes.

2.5 Data processing and statistics

Data were analyzed using IBM SPSS 19 software. Descriptive statistics and tests for differences between categorical variables were calculated using $2 \times 2$ tables and chi$^2$ and gamma test. Two-tailed p-values less than 0.05 were considered statistically significant.
3. Results

Table 1: Demographic Distribution

<table>
<thead>
<tr>
<th>Item</th>
<th>Variable</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>20 and below</td>
<td>79</td>
<td>47.9</td>
</tr>
<tr>
<td></td>
<td>21-25 years</td>
<td>81</td>
<td>49.1</td>
</tr>
<tr>
<td></td>
<td>26-30 years</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Sex</td>
<td>Female</td>
<td>70</td>
<td>42.4</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>95</td>
<td>57.6</td>
</tr>
<tr>
<td>Sports type</td>
<td>Team</td>
<td>53</td>
<td>32.1</td>
</tr>
<tr>
<td></td>
<td>Power &amp; speed</td>
<td>74</td>
<td>44.8</td>
</tr>
<tr>
<td></td>
<td>Endurance</td>
<td>33</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Combat</td>
<td>5</td>
<td>3.1</td>
</tr>
<tr>
<td>Test frequency</td>
<td>Once</td>
<td>17</td>
<td>10.3</td>
</tr>
<tr>
<td></td>
<td>Twice</td>
<td>18</td>
<td>10.9</td>
</tr>
<tr>
<td></td>
<td>Three times and above</td>
<td>130</td>
<td>78.7</td>
</tr>
<tr>
<td>Test</td>
<td>0-1 year</td>
<td>160</td>
<td>96.9</td>
</tr>
<tr>
<td></td>
<td>2-3 years</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>4 years and above</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Majority of the athletes (83%) agree to give themselves up to be tested. 75% reported to be careful while declaring the type of supplements and diet they had been on when at a doping center. There was significant difference across age. The type of sport was a predictor (0.001) of fear of a false positive in doping test results. 59.4% of athletes in the study area, Nigeria do not suffer paruresis or difficulty urinating. However, gender and type of sport were significant here. This does not mean it was non-existent because 4.6% majorly females reported to have had difficulty urinating during doping tests. Athletes were more comfortable to have doping tests carried out in their homes. They (77.6%) do not see it as an infringement of their private space. Over 60% of the athletes do not feel their integrity violated nor under suspicion even if the tests were repeatedly carried out. Nevertheless, one-third of the respondents reported that it violated their integrity (65) and made them suspicious of themselves (56) even when they were not involved in doping. Differences concerning gender, age, and sport type can be found concerning statements from data collected.

Table 2: Athletes’ experiences of doping-testing differentiated by gender, age, sports category and test frequency (n=165)

<table>
<thead>
<tr>
<th>S/N</th>
<th>Variable</th>
<th>%Yes replies</th>
<th>% No replies</th>
<th>Gender</th>
<th>Age</th>
<th>Sports Category</th>
<th>Test Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I think it is fine that I am tested</td>
<td>83.0</td>
<td>17.0</td>
<td>0.660</td>
<td>0.004*</td>
<td>0.093</td>
<td>0.022*</td>
</tr>
<tr>
<td>2.</td>
<td>I am careful to declare all information about any diet supplements, vitamins or medicine I have taken when I am at a doping control</td>
<td>75.2</td>
<td>24.8</td>
<td>0.165</td>
<td>0.002*</td>
<td>0.024*</td>
<td>0.069</td>
</tr>
<tr>
<td>3.</td>
<td>Sometimes, I am afraid of</td>
<td>50.3</td>
<td>49.7</td>
<td>0.311</td>
<td>0.583</td>
<td>0.001*</td>
<td>0.006*</td>
</tr>
<tr>
<td>S/N</td>
<td>Variable</td>
<td>%Yes replies</td>
<td>% No replies</td>
<td>Gender</td>
<td>Age</td>
<td>Sports Category</td>
<td>Test Frequency</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------------------------------</td>
<td>--------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------</td>
<td>-----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>4.</td>
<td>I think it is stressful because I sometimes have difficulty to urinate</td>
<td>40.6</td>
<td>59.4</td>
<td>0.000*</td>
<td>0.442</td>
<td>0.003*</td>
<td>0.016*</td>
</tr>
<tr>
<td>5.</td>
<td>I feel it offends my privacy when I have is a doping control at my house</td>
<td>22.4</td>
<td>77.6</td>
<td>0.638</td>
<td>0.453</td>
<td>0.019*</td>
<td>0.179</td>
</tr>
<tr>
<td>6.</td>
<td>I feel my personal integrity is violated because someone is watching me when I urinate</td>
<td>39.4</td>
<td>60.6</td>
<td>0.916</td>
<td>0.161</td>
<td>0.074</td>
<td>0.144</td>
</tr>
<tr>
<td>7.</td>
<td>Sometimes, I feel under suspicion when I am tested</td>
<td>34.5</td>
<td>65.5</td>
<td>0.845</td>
<td>0.102</td>
<td>0.093</td>
<td>0.052*</td>
</tr>
</tbody>
</table>

Notes: In the table ‘missing values’ have been eliminated. Significance of cell differences (×2): *p < 0.05; **p < 0.01.

Figure 1: Summary of responses on closed ended questions
Source: Authors

Figure 1 showed responses [yes and no] of the respondents to the closed ended questions. Majority of the respondents (83%) feel its fine to be tested for doping and younger athletes were more (17%) that felt some bias in getting tested. Mostly power and combat sport athletes were part of the 125 athletes who reported to filter information concerning diet and supplements they consumed. There was little variation (0.6%) in fear experienced by respondents from this study. It also showed mostly female athletes, athletes who have undergone doping test at least
2 times suffer paruresis when going for tests. Integrity and fear of been judged by others was significant on frequency of tests among athletes from the study.

Table 3: Athletes’ statements to open ended question (n=51)

<table>
<thead>
<tr>
<th>Thematic</th>
<th>No of respondents</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural beliefs</td>
<td>12</td>
<td>It is not right to undress before someone who is not your spouse in the African context. Telling me what to do is rude. It is considered a shame to be invited to test.</td>
</tr>
<tr>
<td>Environmental factor</td>
<td>6</td>
<td>No free movement during doping control procedure except with permission. I do not trust doping officers because my urine can be contaminated. I am not placed on supervised diet, so I might dope without knowing. I get information from team mates. Some coaches encourage doping.</td>
</tr>
<tr>
<td>Emotional</td>
<td>15</td>
<td>Assisting me to urinate makes me feel childish. I feel belittled if I have to do tests repeatedly. If a false negative comes up, I will be seen as a cheat even when I am exonerated.</td>
</tr>
<tr>
<td>Other</td>
<td>18</td>
<td>I would prefer to use a urine marker where I will give my urine unsupervised. A urine marker will prevent contamination and will not contradict my cultural beliefs</td>
</tr>
</tbody>
</table>

Note: Author’s interpretation

4. Discussion

In response to the first question on athletes’ perception of doping test, most of them (83%) agreed to give themselves up to be tested which is in line with previous studies of always favouring a doping test (Elbe & Overbye, 2013). This study did not find significance in gender difference as reported by Elbe and Overbye (2013). However, frequency of tests in regards to going for doping tests, and age were significant. The result showed that older athletes were willing to give themselves up to be tested. This showed they had adequate knowledge about doping and its consequences. Agreeing with Erdman et al (2007) and Waddington et al (2005) on the fact that knowledge is predicted by the education individuals are exposed to. It is globally known that; an individual’s state of knowledge is influenced by how much education they receive. Most athletes from this study showed awareness of doping and its consequences, though there was little to no formal education on doping and antidoping practices since athletes mostly get information from their team mates and news outlets after defaulting athletes have been sanctioned by WADA, it was however adequate as they mostly agreed to give themselves up to be tested. This is also in congruence with similar studies outside Africa. A report about Canadian and UK athletes found that over 68% of athletes reported having ample knowledge on doping practices and its consequences (Muwonge et al., 2015; Erdman et al., 2007). Therefore, anti-doping education remains the most important way in winning the fight against doping.
Three-quarter reported to being careful divulging information regarding supplements and dieting at a doping center. There was significant difference across age. Younger athletes were careful because their careers were just beginning. Younger athletes in this study had enough knowledge on doping which agrees with the finding of Danjuma et al (2015) who reported that 80% of youths shared knowledge and awareness of conventional substance abused and used for performance enhancement. However, it negates findings from previous studies (Pavlovic et al., 2015; Peters et al., 2009; Erdman et al., 2007) that young athletes’ knowledge about the problem of doping and its negative consequences were not considered sufficient.

The sports type was a significant predictor of the fear of a false positive in doping test results. Athletes that might have not doped but for repeated testing might fear failing the tests which is detrimental to athletic performance. Fear exudes mental and physiological characteristics which impedes performance (Weinberg & Gould, 2011). Due to the environment where results might be contaminated by coaches or trainers or wrong samples presented, respondents feared a false positive result (Ruwaya, Juma & Woolf, 2022). A false positive doping test can terminate an athlete’s career due to the environment, shaming, cultural rejection, negative societal reception, the loss of sponsors and no damage control. The implication of a false positive test result therefore is understandable from these points.

More than half of the respondents do not suffer paruresis or difficulty urinating (Kuoch et al., 2017) during doping tests. Findings from this study opposes previous findings (Overbye, 2013; Peters, Postler, & Oberhoffer, 2013; Elbe et al., 2012). Nevertheless, over 66 athletes reported they experienced difficulty. However, not having difficulty urinating when presenting for a doping test does not automatically rule out its possibility. Athletes from the study were more comfortable to have doping tests carried out in their homes. They do not see it as an infringement of their private space. More than 40% mostly females in athletics felt it infringed on their privacy. This agreed with Elbe and Overbye (2013) on invasion of privacy being significant across gender. There was also found significant difference among team sport participants (sport type) which also agrees with their finding.

Majority of the athletes did not feel violation of their integrity nor under suspicion even if the tests were repeatedly carried out. This negates the findings of (Ruwaya, Juma & Woolf, 2022; Houlihan, 2001) who stated that Africans feel targeted by doping regulations and perceived it as another form of colonization or cultural imposition.

4.1 Thematic Responses

Africans especially Nigerians have willingly given themselves up for testing whenever they are called upon. Although most Nigerian athletes would always favour a doping test some (17%) frowned at it was against their cultural norms:
“It is not right to undress before someone who is not your spouse in the African context”
“It is considered a shame to be invited to doping test”

Their assertions align with athletes’ strong ties to their norms and view the procedures in doping tests as a violation of such norms. Agreeing with findings that the peculiarities of African athletes (cultural, environment, emotional) were not considered before drafting the anti-doping rules, which to them seems like another means of colonization (Ruwaya, Juma & Woolf, 2022). It also aligns strongly with the assertion of Toohey and Antony (2017) that athletes’ beliefs will not be violated if culture is taken into cognizance when developing doping rules.

The lack of a trusting environment created by some trainers, coaches and officials was also reported that:

“I do not trust doping officers because my urine can be contaminated.”
“I am not placed on supervised diet, so I might dope without knowing.”
“I get information from team mates”
“Some coaches encourage doping”

From the open-ended interview, respondents in this study reported mostly getting information about doping from other team mates and that some coaches encouraged athletes to use some substances. Agreeing with the finding from Kristen and Naidoo, (2019) that over 50% football athletes reported to have been pressured to dope by media, coaches and parents. Since the gains of sports have laid too much emphases on winning at all costs and there was no room to encourage a fair try, some athletes are left with the option of winning at all cost. This agrees with the finding of Dumbili, Ebueyi and Ugoeze, (2021) who reported a rise in the availability and use of psychoactive substances in the Nigerian environment without control is a major wrong. Cutting across age, gender, and profession, Nigerians -especially younger ones- have turned to the use these substances for pleasure and enhancement purposes. These substances are widely encouraged as they are seen at social gatherings and sport arenas. Asides from training grounds -during practice- where the watchful eyes of sponsors and coaches are on athletes, it is important to rid the society of substances that could later be found to be WADA banned substances. Giving the right and adequate information to athletes would reduce their intention to dope (Erickson et al., 2015; Melzer, Elbe &Brand, 2010). There is however, a need for continual re-education which would greatly benefit participants from this study. The emotional trauma and the damage control after going for a doping test and reporting a false negative was almost impossible:

“If a false negative comes up, I will be seen as a cheat even when I am exonerated.”

In Africa, people always adhere to their beliefs and norms not only because of being tied to their roots (beliefs, norms, culture) but the stigma, being labeled an outcast or the shame resulting from deviating from such “roots”. The open-ended interview responses agree with studies (Mayer, Viviers & Tonelli, 2017; Bryan et al., 2013; AbuAlRub & Al-Asmar, 2014) due to Africans perspective on shame, which could lead to a reduced sense of accomplishment, silence and at times
suicidal thoughts, since shame felt as a violation of norms, and a failure to meet societal expectations.

Some athletes also reported to favour alternative methods for doping tests, especially the urine marker test. It is perceived as reliable as it would not contradict their cultural norms, samples being contaminated nor infringe on their privacy. Studies agree that, a urine marker can reduce the negative impact of providing a urine sample for drug testing (Gauchel et al., 2003; Huppertz et al., 2004) in relation to feelings of embarrassment, infringement of privacy, and stress associated with the collection process.

“I would prefer to use a urine marker where I will give my urine unsupervised.”
“A urine marker will prevent contamination and will not contradict my cultural beliefs.”

However, as reported in Elbe et al. (2015), prior to implementation, athletes would need even more information about the exact contents of the markers and potential negative side effects, as some athletes still have bias on the constituents of the marker.

5. Conclusion

It is concluded that sub-Saharan athletes have their biases towards doping tests due to their cultural, religious and social beliefs. A greater understanding of the athletes’ perspective; knowledge, cultural beliefs, attitudes and practices- towards doping is crucial for the development of efficient prevention programmes. In other parts of the world which is lacking in sub-Saharan Africa inclusive of Nigeria, athletes have access to more advanced training facilities, resources to acquire more sophisticated doping substances or methods, a greater access to databases of knowledge on doping and its consequences. Therefore, the results of findings from privileged climes cannot be extrapolated in its entirety to the Nigerian situation, where facilities, poor methods to detect doping are not potent. Therefore, the peculiarity of the Nigerian situation should be catered for along cultural, environmental and emotional lines with relation to doping. It is suggested to consider the socio-cultural beliefs and norms that are peculiar to certain individuals and find the best means of co-opting them into global ethics and laws.

Conflict of Interest
The researchers declare no conflict of interests

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