Paralympic athletes' perspective of doping self-regulatory efficacy in Nigeria

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ABSTRACT

Background Problems: With the high demands of sports and the crave for success despite diminishing strength with ageing in the presence of disability, athletes are tempted to contravene the ADRV. **Research Objectives**: The study aimed to study paralympic athletes' perspective of doping self-regulatory efficacy in Nigeria. **Methods**: Descriptive survey design was adopted for the study. A 13-item validated questionnaire (α= .74) was employed to collect data for the study. One-hundred and twenty-four male (81) and female (43) elite para-athletes (mean= 23.15 years, ±3.65) voluntarily participated in the study. ANOVA, PPMC, and Cramer's V Chi-Square Coefficient Contingency were used to determine the relationship and difference across age, gender and sport type and the extent of the para-athletes' likelihood to dope and confidence to avoid banned substances, respectively. **Findings and Results**: It indicated a significant effect of age on likelihood to dope at the $p < 0.05$ for all conditions ($F_{(1, 123)} = 45.84$, $p = 0.000$). Therefore, the null hypothesis was rejected. Findings indicated no significance across gender (0.091, $p > 0.05$), sport (0.280, $p > 0.05$), and age (0.263, $p > 0.05$) on the likelihood to dope. Although, significant among older (0.022), female (0.024) para-athletes. Cramer's V indicated a strong association when drugs would give immediate fitness ($\phi = 0.217$), ($\phi = 0.243$), and ($\phi = 0.263$) across age, gender, and sport type respectively. **Conclusion**: It is concluded among others that the para-athletes showed high self-efficacy and low likelihood to dope even in the presence of stressors. However, the ever-pressing need for the athlete's body longing need for nutrition, oxygen, rest and staying in shape and top form for competing increased the possibility to use a banned drugs for your injury recovery among some older athletes. Psychological interventions are suggested combat the likelihood to dope given the experience levels or psychological dispositions of athletes.

Keywords: Doping; efficacy; paralympic athletes; likelihood; self-regulatory

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INTRODUCTION

Research traditionally have focused on doping in able-bodied sport contexts, although disabled sport also represents a part of the organized sport. Even though the disabled community forms a small part, doping occurs and is an existing issue (WADA, 2021; Weber et al., 2022b). Doping has so marred sports that every now and then, there is an issue, sanction or rumor on doping among athletes or their trainers. The reasons behind doping, asides from gaining unfair advantage due to a "win at all cost" mentality, also includes criminal deterrence

and goal directed behavior (Mazanov et al., 2014). Ntoumanis et al. (2014), reported personal and psychosocial predictors of doping intention or usage. Other causes have been linked to athletes cultural, social, and financial dispositions as reported by (Adegbesan et al., 2023). These reasons were the basis for the formation of the World Anti-Doping Agency (WADA) in 2015, to formulate policies and regulate doping and anti-doping behavior among sports stakeholders. With several anti-doping activities and the formation of National Doping Organizations (NADOs) as a subset of WADA in member countries to uphold these rules as stated in Article 2.1 through Article 2.10 of the "Code", doping is still one of the biggest issues the competitive sports' world has to face (Overbye, 2016; WADA, 2021). The WADA Code upholds the virtues of procedural fairness.

Anti-Doping Rule Violations (ADRV) have increased significantly from 2013 with over 252 violations as opposed to preceding years from the beginning of this millennium (WADA, 2021). ADRV results in sanctions such as bans from sport, legal consequences and also negative physiological, psychological and economic effects. Therefore, doping prevention should be considered an important activity for all stakeholders in sport (able and disabled) to maintain athletes' health and well-being as well as the integrity of sports. In recent years anti-doping organizations have implemented various measures to deter elite athletes from using performance-enhancing drugs. One of the main challenges in the fight against doping is that the effectiveness of these anti-doping measures is still unknown especially in developing countries like Nigeria where they lack sophisticated equipment and modern scientific strategies to curb or eradicate doping in sports (Adegbesan et al., 2023; Ruwuya et al., 2022).

The athletes body that is ever in action, from practice to pre-competition, competition, post-competition to practice again, has an ever longing need for nutrition, oxygen, rest and staying in shape and top form for competing (Ntoumanis et al., 2017; Taware & Bansode, 2015). These create among sports-men especially para-athletes the need to boycott the natural process and capacity that diminishes as they age. Resulting to substance abuse, that contravenes the ethics of sport and the WADA, have detrimental health risks; behavioural disorder, infertility, withdrawal, mental distortion, ethical problems, and sometimes death from overdose (Mallia et al., 2016). Factors such as glamorization of body enhancements by media, emphasis on sports body, high financial expectations, perfectionism, depersonalization, economic backgrounds, and commercialization of sports, increase the tendency to dope (Clancy et al., 2023; Koc & Turkcapar, 2014; Muwonge et al., 2015; Ntoumanis et al., 2017).

Doping studies have stated that doping behavior is explained based on one or more theories (Hutchinson et al., 2018; Ring & Kavussanu, 2017), which explain human behavior and the effects of these behaviors based on ethical responsibility. These naturally implies, that when athletes show behavior within (conform) the framework of ethical codes, they feel good; otherwise (compliance) they feel bad. Various theories have been used to explain the reasons behind athlete's behavior in and outside ports settings. Two important theories are the Health Belief Model and Planned Behavior Theory. The Health Belief Model (Karl et al., 2022; Ring & Kavussanu, 2017) tries to explain a nexus between knowledge, attitude and behavior of people while the Planned Behavior Theory posit that behavior is the volition and intention of the athletes-behavior is intentional. However, the HBM is widely acceptable as empirical studies have confirmed its potency. Its constructs include all other motivational, attitudinal, and self-efficacy variables from other theories. Noteworthy, it points out that individual attitude (volitional) and acceptable norms (non-volitional) as major predictors of athletic behavioural responses. In congruence with these and athletic doping perceptions, Chan et al. (2015) and Psouni et al. (2015) revealed that perception of attitude is an important factor among the reasons for athletes' using doping, and it has also been found that attitudes and behaviors of coaches on this topic influence the attitudes and behaviors of the athletes and thus their use of doping substances. These imply that for athletes to dope or not, conform or not with the WADA, various factors (cues) within and out of the athletes control come into play.

The efficacy belief of athletes, is the belief an athlete has in his or her abilities to execute tasks with precision every time the need arises (Adegbesan et al., 2019). Studies have indicated that athletes high on efficacy are more likely to conform to norms and ethics of the sport as opposed to those that have low efficacy and see sport as an activity they have to comply. Compliance is common among amateur and intermediate athletic levels of competing (Kabiri et al., 2022; Pavlovic et al., 2015). Tsivitanidou et al. (2023) posited that

young athletes' knowledge about the problem of doping and its negative consequences were not considered sufficient making the not possess efficacy in making decision regarding doping. However, elite able-bodied and para-athletes have been sanctioned and at other times banned from the sport at the highest levels of competition (IAAF, Olympics, Paralympics, World Championships) (Shaw, 2019; Westmattelmann et al., 2018).

According to the World Anti-Doping Agency, the ADRV 2.2, which relates to the use or attempted use by an athlete of a prohibited substance or method (WADA, 2015a) is dependent on a number of factors. Coaches are perceived as important social agents in sport, who could significantly shape athlete outcomes (Potrac et al., 2013). Theories and coaching models, for example the doping confrontation efficacy (DCE) model proposed by Sullivan et al. (2015) suggests that coach's confidence is an important antecedent of coach behaviors which reflects in the development of athletes under their care and their perceptions of various concepts of sports (Boardley, 2018). According to the DCE model, beliefs, athlete attitudes towards doping have been examined as a possible outcome of athlete perceptions of coach DCE beliefs towards doping as reported by (Sullivan & Razavi, 2017). Coaching efficacy represents coaches' belief in their ability to impact the learning and performance of athletes. This coach's efficacy rubs off on to athlete's development and confidence in their ability to confront doping (Sullivan et al., 2015). The leadership style adopted by coaches whether confrontational or empathic, may communicate messages (e.g., win at all costs or play for fun) through their actions or words that potentially promote justification or not, of doping by athletes. Possessing very poor knowledge on key anti-doping control systems led to a perceived lack of self-efficacy to work with players on doping related issues from studies (Patterson & Backhouse, 2018; Šukys, 2018).

Very few studies till date have been based on parasport and the causes of doping and anti-doping behavior. Nevertheless, a few studies (Blank et al., 2021; Weber et al., 2022a, 2022b) have stated risk and protective factors as predictors of doping behavior in parasport. They suggest factors such as a lack of education, pressure due to professionalism, high financial gains, injuries and the existence of loopholes in the system to influence doping in parasport. Athletes, especially those at the elite level of competition in Africa still hold bias towards WADC's doping, anti-doping measures and testing as they feel excluded from the decisions to begin testing, categories of banned substances, and methods for testing (Adegbesan et al., 2023; Ruwuya et al., 2022). The argument holds that The Supreme Council of Sport in Africa was enforced to adhere only after crucial conclusions had been reached and that the rules were generally westernized. 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 (Ruwuya et al., 2022). Nevertheless, in Africa, especially among Nigerian athletes, compliance and submission to these laws have been total. This might be due to the poor publicity of sports in Africa, low financial games, not wanting to stay in isolation and above all, developing countries like Nigeria are still fully dependent on Western resources and exposure to be able to attain stardom (Juma et al., 2022; Patterson & Backhouse, 2018). For these reasons; the cultural factors, environmental, psychological and economic factors, play an important role in shaping perceptions and attitudes toward doping by encouraging doping and violation of doping rules (Adegbesan et al., 2019, 2023; Backhouse et al., 2018). This study seeks to know whether these factors will also be predictive of doping likelihood and doping self-efficacy regulatory among paralympics in Nigeria.

In contrast to other studies, this study focuses on paralympic athletes' perspectives on doping self-regulatory efficacy and their likelihood to take banned substances. Participants likelihood to use banned substances and confidence in their ability to avoid doping with respect to several cues (coaches, other athletes, peers, goals and aspirations). Their responses were moderated against age, sports category and gender. The athletes' perceptions on these variables are important for empirical evidence on the predictors ofathletes confidence in doping or avoiding it. Therefore, hypotheses were tested to guide the study to ascertain whether there will be no significant difference between the likelihood to use banned substances and the categorical variables (age, gender and sport category) among elite para-athletes in Nigeria. Secondly, the effect of age on likelihood to dope among elite para-athletes in Nigeria. The last hypothesis sought to determine if there was a significant difference between para-athletes efficacy to avoid using banned substances and the moderating variables.

METHOD
Design
Descriptive survey design was adopted for the study. A 13-item validated close-ended questionnaire covering likelihood of taking banned substances (6 items) and confidentiality to avoid using banned substance (7 items) answered on a 5-likert response format (1= strongly disagree,… 5= strongly agree) was used to collect data from the respondents. Some items were adapted from World Anti-doping Agency research package (WADA, 2015b), while others emanated from reviewed literature on doping. To ensure content and face validity, the questionnaire was developed based on current literature and in consultation with experts' psychometricians familiar with professional sport, a sport physician, sport psychologist, as well as a health and a sport scientist. Based on their feedback, some items were expunged while some were reviewed. The test-retest method within a week interval was done for reliability (α = .74).

Participants
One-hundred and twenty-four male (81) and female (43) elite parasport athletes made up the sample for the study. The athletes were purposively selected after meeting the inclusion criteria and indicating interest to participate. Elite athletes consisted of professional athletes who were registered under each state's sports council and had represented at least once at the regional, national, and international level. Participation was by voluntary admittance after the objective of the survey had been explained to the athletes. The para- athletes were in the age range of 25-39 years. The mean age and standard deviation of the para-athletes were 23.15 ± 3.65 across all five sports categories: racket games (19), ball games (43), track and field events (52), combat (6), while aquatic sports (4).

Data Collection
Face-to-face method was adopted to collect data. The respondents were approached individually in their training locations across the six geographical zones in Nigeria. They were informed the purpose of the research and also told that they could opt out should they find any aspect of the process not acceptable to them. The athletes were assured that their identity would not be linked with their responses and only group data would be reported. The questionnaire was thereafter handed over to the athletes to self-complete. Given that the outcome measures (doping) which is considered sensitive in nature, a temporary stall was set up where the athletes completed the hard-copy questionnaire without distraction in regulations for doping research WADA (2015a). This was to ensure their privacy. To ensure clarity and comprehension, the three research assistants who could speak the three Nigerian languages translated and explained some technical concepts and words to the respondents. The data was collected over a period of two weeks. This is due to the items on the questionnaire required an average of thirty minutes to respond to and the target population had busy schedules (training). One-hundred and twenty-four questionnaires were returned filled.

Ethical Consideration
After explaining the research objectives and volunteers had signified interest to be part of the study, the 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, with approval (UI/NRF/2022/0013). Athletes were free to withdraw from participation at any point during the survey as well as completing specific questions.

Statistical Analysis
Data were analyzed using IBM SPSS 19 software. Descriptive statistics of frequency counts and percentages was used to analyze the demographic data of respondents. ANOVA and PPMC were used to identify the difference and relationship across variables. Cramer's V was used to determine the extent of the para-athletes' likelihood of taking banned substances and confidence in their ability to avoid using banned substances.

RESULTS AND DISCUSSION

The demographic data of the respondents were collected through the questionnaire. Data collected included gender, age, and sport type of the respondents. Frequency, percentages, mean, and standard deviation were used to report the collected data.

Table 1. Summary of Gender, Age, and Sports Category of Para-Athletes

Item	Variable	Frequency	Percent (%)	
Gender	Female	43	34.76	
	Male	81	65.3	
Age (years)	20-24 years	12	9.7	
	25-29 years	67	54.0	Mean = 23.15 years ± 3.65
	30-34 years	35	28.2	
	35-39 years	10	8.1	
Sports Category	Racket games	19	15.3	
	Ball games	43	34.7	
	Track & field events	52	41.9	
	Combat sports	6	4.8	
	Aquatic sports	4	3.2	

As indicated in table 1, majority (65.3%) of the para-athletes were male, while few (34.7%) were female. Most (54.0%) of the para- athletes were in the age range of 25-29 years, while the respondents between 35-39 years were the least (8.1%). The mean age and standard deviation of the para-athletes were 23.15 ± 3.65. The table also revealed that most (41.9%) of the para-athletes engaged in track and field events, while aquatic sports had the least (3.2%).

Table 2. Summary of Results on Para- athletes' Likelihood of Taking Banned Substances Differentiated by Age, Sport Category, and Gender (n=124)

S/N	Statements	Age	Sport Category	Gender
	Regarding sport, what is likelihood of taking banned substances when the chances of being caught is extremely small:			
1.	………I would use a performance enhance drug to enhance the recovery of my injury even though I know the substance is illegal or has been banned	0.091	0.280	0.263
2.	……… because the chance of being caught for the use of a banned drug is small, it is good to use such drug since it would make me recover faster from any injury	0.173	0.448	0.544
3.	……… are you likely to use a banned drugs for your injury recovery	0.046*	0.919	0.369
4.	……… because I want to enhance my performance in the forthcoming competition, I would use a banned drug that would enhance my performance	0.396	0.656	0.097
5.	……… this game/competition is important to me I would engage in the use of banned drugs to enhance my fitness	0.224	0.610	0.124
6.	……… I don't feel I have the necessary fitness for this competition, I may have to use this banned drug because I know I would not be caught	0.022*	0.865	0.024*

Significant at 0.05*

Table 2 showed that there was no significant difference between the likelihood to use banned substances and the categorical variables; age, gender, and sport category. However, there was a significant difference on the fact that the para- athletes are likely to use a banned drugs for their injury recovery based on age (0.046, $p < 0.05$). There was a significant difference on the fact that the para- athletes do not feel they have the necessary fitness for this competition, they may have to use the banned drugs because they knew they would not be caught, based on age (0.022, $p < 0.05$) and gender (0.024, $p < 0.05$), while sport category (0.865, $p > 0.05$) did not.

Table 3. ANOVA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.327[a]	.107	.105	.47375

a. Predictors (Constant), Age

Table 4. Relationship between Likelihood to Dope and Age

	Sum of Squares	df	Mean Square	F	Sig.
Regression	10.288	1	10.288	45.838	.000[b]
Residual	85.961	123	.224		
Total	96.249	124			

b. Doping Likelihood

The table indicates that there was a significant effect of age on likelihood to dope at the $p < 0.05$ for all conditions ($F (1, 123) = 45.84$, $p = 0.000$), the effect size (η^2) was 0.11 indicating a medium effect. This indicates that though age is significant in predicting the likelihood to use banned substances.

Table 5. Cramer's V Chi-Square Coefficient Contingency to Determine the Extent of the Para- athletes' Likelihood of Taking Banned Substances (n=124)

S/n	Statement Regarding sport, what is likelihood of taking banned substances when the chances of being caught is extremely small:	Variable	Cramer's V	Remark
1.	………I would use a performance enhance drug to enhance the recovery of my injury even though I know the substance is illegal or has been banned	Age	0.230	Strong
		Sport Category	0.184	Strong
		Gender	0.251	Strong
2.	……… because the chance of being caught for the use of a banned drug is small, it is good to use such drug since it would make me recover faster from any injury	Age	0.263	Very strong
		Sport Category	0.220	Strong
		Gender	0.273	Very strong
3	……… are you likely to use a banned drugs for your injury recovery	Age	0.202	Strong
		Sport Category	0.152	Moderate
		Gender	0.269	Very strong
4.	……… because I want to enhance my performance in the forthcoming competition, I would use a banned drug that would enhance my performance	Age	0.187	Strong
		Sport Category	0.190	Strong
		Gender	0.277	Very strong
5.	……… this game / competition is important to me I would engage in the use of banned drugs to enhance my fitness	Age	0.217	Strong
		Sport Category	0.243	Strong
		Gender	0.263	Very strong
6.	……… I don't feel I have the necessary fitness for this competition, I may have to use this banned drug because I know I would not be caught	Age	0.208	Strong
		Sport Category	0.210	Strong
		Gender	0.153	Strong

Decision rule: > 0.25-1.00 = Very strong; > 0.15-0.25 = Strong; > 0.10-0.15 = Moderate; > 0.05-0.10 = weak, 0.0.05 = very weak association

The table measured the strength of the association across the moderating variables (age, sport type, gender). Cramer *V* indicated a very strong association when using substances for quick recovery from injuries ($\phi = 0.263$, $\phi = 0.273$), a strong association when drugs would give immediate fitness ($\phi = 0.217$), ($\phi = 0.243$) and ($\phi = 0.263$) respectively. However, there was very strong association of all items with gender. Only when measuring, the likely use of banned drugs for your injury recovery showed a moderate association against sport type ($\phi = 0.152$).

Table 6. Summary of Results on Para-athletes' Confidentiality to Avoid Using Banned Substances Differentiated by Age, Sport Category, and Gender (n = 124)

S/N	Statements			
	Regarding sport, how confident are you in your ability to avoid using banned substances:	**Age**	**Sport Category**	**Gender**
1.	...when most athletes in your sport use them	0.212	0.393	0.493
2.	...when you feel down physically	0.311	0.443	0.605
3.	...when you have been told to improve your performance	0.039*	0.798	0.912
4.	...when pressure to do so by others	0.111	0.856	0.405
5.	....to improve your performance, even if it will not have any adverse side effects	0.099	0.629	0.573
6.	....before an important competition even when you can get away with it	0.020*	0.224	0.346
7.	.... to get results more quickly, even if no one would ever know	0.148	0.671	0.898

Significant at 0.05*

Table 5 showed that there was no significant difference in confidence that the para-athletes have in their ability to avoid using banned substances across the moderating variables. There was a significant difference however, in the confidence that the para-athletes have in the confidence such athletes have in their ability to avoid using banned substances to improve performance based on age (0.039, $p < 0.05$), while sport category (0.798, $p > 0.05$) and gender (0.912, $p > 0.05$) did not. Similarly, there was a significant difference in confidence the athletes have before an important competition, even when they could get away with it based on age (0.020, $p < 0.05$), while sport category (0.224, $p > 0.05$) and gender (0.346, $p > 0.05$) did not respectively.

Table 7. Summary of Results on Cramer's V Chi-Square Coefficient Contingency to Determine the Extent of the Para-athletes' Confidence in their Ability to Avoid Using Banned Substances

S/N	Statement	Variable	Cramer's V	Remark
	Regarding sport, how confident are you in your ability to avoid using banned substances:			
1.	...when most athletes in your sport use them	Age	0.219	Strong
		Sport Category	0.164	Moderate
		Gender	0.219	Strong
2.	...when you feel down physically	Age	0.271	Very Strong
		Sport Category	0.227	Strong
		Gender	0.271	Very Strong
3	...when you have been told to improve your performance	Age	0.212	Strong
		Sport Category	0.143	Moderate
		Gender	0.093	Weak
4.	...when pressure to do so by others	Age	0.234	Strong
		Sport Category	0.227	Strong
		Gender	0.178	Strong
5.	....to improve your performance, even if it will not have any adverse side effects	Age	0.227	Strong
		Sport Category	0.222	Strong
		Gender	0.189	Strong
6.	....before an important competition even when you can get away with it	Age	0.205	Strong
		Sport Category	0.180	Strong
		Gender	0.124	Moderate
7.	.... to get results more quickly, even if no one would ever know	Age	0.233	Strong
		Sport Category	0.191	Moderate

S/N	Statement	Variable	Cramer's V	Remark
	Regarding sport, how confident are you in your ability to avoid using banned substances:			
		Gender	0.231	Strong

Decision rule: > 0.25-1.00 = Very strong; > 0.15-0.25 = Strong; > 0.10-0.15 = Moderate; > 0.05-0.10 = weak, 0.0.05 = very weak association.

In using Cramer *V* to determine the strength of association across the test indicated at least a strong association across most items of the instrument. A very strong association was reported across age ($\phi = 0.271$) and gender ($\phi = 0.271$) when asked about athlete's confidence level when physically exhausted. When para-athletes are been told to improve their performances reported a weak association with gender ($\phi = 0.093$) and a moderate one with sports category ($\phi = 0.143$).

Table 8. PPMC between Confidence to Dope and Moderating Variables

Variables	Pearson	Confidence	Gender	Age	Sport
Confidence		1			
Gender (Male/Female)	Correlation	.038	1		
	Sig. (2-tailed)	.034**			
Age	Correlation	-.088	-.040	1	
	Sig. (2-tailed)	.083	.430		
	Correlation	.623**	.319**	-.313**	1
Sport Category	Sig. (2-tailed)	.000	.000	.000	

**Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

The table summarized the relationship between variables in the study. The correlation indicated a significant negative correlation between confidence to dope and age (r = -.088, p = .083, p < .01). It also revealed a significant relationship between confidence to dope and other variables; gender (r = .038, p= .034), sport category (r = .623, p = .002).

Findings on the likelihood to use banned substances when the chances of getting caught was slim indicated no significance across gender (0.091, p > 0.05), sport category (0.280, p > 0.05), and age (0.263, p > 0.05) when used for faster recovery from injuries even though they knew the substance was illegal or has been banned based. In the same light there was no significance in the likelihood to dope to improve performance while preparing for a forthcoming important game or competition. However, there was significance across age (0.046) among older athletes who reported a possibility to use a banned drugs for your injury recovery. This aligns with previous studies that as the athlete's body ages, the ever longing need for nutrition, oxygen, rest, and staying in shape and top form for competing increase (Ntoumanis et al., 2017; Taware & Bansode, 2015) which could encourage the uptake of banned substances.

There was also a significance in responses across age (0.022) and gender (0.024) on a reduced self-efficacy on possessing the necessary fitness level for competition. Results indicated a significant effect of age on likelihood to dope at the p < 0.05 for all conditions (F (1, 383) = 45.84, p = 0.000). Therefore, the null hypothesis was rejected. The finding indicates that older para-athletes (30-34 years), especially females, do not possess ample psychological skills to help combat the likelihood to dope given their experience levels or psychological dispositions. Agreeing with literature (Clancy et al., 2023; Koc & Turkcapar, 2014; Muwonge et al., 2015; Ntoumanis et al., 2017) that the emphasis on sports body, high financial expectations, perfectionism, depersonalization, economic backgrounds, and commercialization of sports, increase the tendency to dope among para-athletes. This finding also throws more light to the theory postulated in (Ring & Kavussanu, 2017), that doping behavior was predictive of whether athletes conform or comply while joining a group. Being disabled, and the media's emphasis on "sports image" or "sports body", with little to no endorsements by para-athletes, they already feel short-changed and hence, result to doping to meet such outrageous standards. These implies that for athletes to dope or not, conform or not with the WADA, various cues within and out of the para-athletes control come into play (Chan et al., 2015).

Measuring the strength of the association across the moderating variables (age, sport type, gender), Cramer *V* indicated a very strong association when using substances for quick recovery from injuries ($\phi = 0.263$, $\phi = 0.273$), a strong association when drugs would give immediate fitness ($\phi = 0.217$), ($\phi = 0.243$) and ($\phi = 0.263$) respectively. However, there was very strong association of all items with gender. Only when measuring, the likely use of banned drugs for your injury recovery showed a moderate association against sport type ($\phi = 0.152$).

Para-athletes' confidentiality to avoid using banned substances from the study indicated no significance across age, gender, and sport category when most team mates' dope, when physically exhausted, advised by significant others or encouraged to dope when they know its adverse effects. This indicates that para-athletes from the study showed high self-efficacy and self-worth even under all the listed stressors. The link between the athlete's knowledge, perception of stressors and eventual planned behavior was not influenced by external cues. That is, behavior was the volition of the athlete as proposed by the theory of planned behavior (Hutchinson et al., 2018). In congruence with previous summations indicating that athletes high on efficacy were more likely to conform to norms and ethics of the sport as opposed to those that have low efficacy and see sport as an activity they have to comply (Kabiri et al., 2022; Pavlovic et al., 2015). Compliance is common among amateur and intermediate athletic levels of competing. Nonetheless, there was significance across age when they have been sanctioned to improve your performance (0.038, p > 0.05) and when they could easily get away unnoticed before a competition (0.020, p > 0.05), their confidence to dope was depleted. Equally, hypothesis testing indicated a significant negative correlation with age (r = -.088, p = .083, p < .01) and a positive significant relationship with gender (r = .038, p = .034), and sport category (r = .623, p = .002). This indicates that although the athletes possessed high self-efficacy towards using banned substances, as they age, they could engage in doping to stay at their best. The leadership style adopted by coaches whether confrontational or empathic, may communicate messages (e.g., win at all costs or play for fun) through their actions or words that potentially promote justification or not, of doping by athletes. For example, the doping confrontation efficacy (DCE) model or autocratic approach, suggests that coach's confidence is an important antecedent of coach behaviors which reflects in the development of athletes under their care and their perceptions of various concepts of sports (Boardley, 2018; Sullivan & Razavi, 2017). Coaching efficacy represents coaches' belief in their ability to impact the learning and performance of athletes. This could rub off on the confidence of athletes, as seen in various ADRVs by athletes support personnel who initiate doping among athletes under their care (de Vlieger, 2017; Šukys, 2018; Vakhitova & Bell, 2018). The cultural beliefs of Africans were the participants of this study fall, was predictive of their confidence in contravening anti-doping laws, even though they hold some bias to such laws (Adegbesan et al., 2023; Ruwuya et al., 2022). The cultural factors, environmental, psychological and economic factors, play an important role in shaping perceptions and attitudes toward doping by encouraging doping and violation of doping rules as reported in Backhouse et al. (2018) is negated by the finding from this study.

In using Cramer *V* to determine the strength of association across the test indicated at least a strong association across most items of the instrument. A very strong association was reported across age ($\phi = 0.271$) and gender ($\phi = 0.271$) when asked about athlete's confidence level when physically exhausted. This disagrees with previous research (Ntoumanis et al., 2017) that para-athletes need to boycott the natural physiological processes and capacity that diminishes as they age by their acceptance to dope. When para-athletes are been told to improve their performances reported a weak association with gender ($\phi = 0.093$) and a moderate one with sports category ($\phi = 0.143$).

CONCLUSION

There is no research that is void of limitations, however, researchers try as much as possible such limitations not to affect the final results from the study. The level of insecurity; banditry, kidnappings, killings in the northern geographical zone of the study made some areas (volatile) not to be accessible. The researchers employed some research assistants in such places along with security details to ensure safety while administering the questionnaires. The language barrier was averted by employing translators in the dialect of the athletes. Although the challenges, the findings of this study is generalizable to para-athletes in Nigeria and

Western Africa that share similar characteristics. However, the findings might be different among able-bodied cohort.

The likelihood of using banned substances among para-athletes from the study was very low. It is also concluded that the ever-pressing need for the athlete's body longing need for nutrition, oxygen, rest and staying in shape and top form for competing increased the possibility to use a banned drugs for your injury recovery among some older athletes. Para-athletes from the study possessed high efficacy and built resistance against doping. Para-athletes' confidentiality to avoid using banned substances from the study indicated no significance across age, gender, and sport category even if most team mates' dope, they are physically exhausted, advised by significant others or encouraged to dope when they know its adverse effects. This indicates that the para-athletes showed high self-efficacy and self-worth even under all the listed stressors. The link between the athlete's knowledge, perception of stressors and eventual planned behavior was not influenced by external cues.

The efficacy of athletes is subject to internal and external stressors. The need for continuous education on doping and anti-doping violations was stressed by the findings from the study. The findings of this study have revealed the need for individuals and teams to employ experts to boost the efficacy of athletes and reduce the likelihood to dope by organizing seminars, symposium, and developing intervention programmes to help keep para-athletes abreast with modern trends in sports doping. Nevertheless, finding indicates that older female para-athletes, do not possess ample psychological skills to help combat the likelihood to dope given their experience levels or psychological dispositions. Therefore, psychological interventions to help boost the athletes' psyche is suggested.

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CONFLICT OF INTEREST

The authors declare no conflicting interest.

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