

Knowledge, Attitude and Coaching Style as Predictors of Doping Among Athletes of Oyo State Sports Council

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Abstract

Despite the attention given and development of advanced drug testing systems, both deliberate and inadvertent doping in sports is increasing in elite, amateur and school sports. Although World Anti-Doping Agency (WADA) is doing a lot to dampen the practice, yet there is increase of the malaise. It is against this background that the study investigated knowledge, attitude and coaching style as predictors of doping among athletes of Oyo State Sports Council. Descriptive survey research design was used. The participants for this study were two hundred and twenty (220) athletes of Oyo State Sports Council randomly sampled from various sports. Self-structured questionnaire was used to measure doping knowledge; the Performance Enhancement Attitude Scale (PEAS), Controlling Coach Behaviour Scale (CCBS) and The Moral Disengagement in Doping Scale (MDDS) were administered on the respondents. Reliability values of the instruments were 0.80, 0.78, 0.85 and 0.84 respectively. The data were analysed using multiple regression to test the hypotheses. There was a significant joint contribution of independent variables on doping ($F_{(3,216)} = 22.306$; $R = .486$, $R^2 = .237$, Adjusted $R^2 = .226$, $p < 0.05$). Two (2) out of three (3) independent variables had significant contributions ($p < .05$); attitude ($\beta = -.343$, $t = -5.239$) and coaching style ($\beta = -.255$, $t = -4.030$), knowledge ($\beta = -.029$, $t = -.485$, $p > .05$). However, knowledge had no significant contribution on doping. It was therefore recommended that strong anti-doping education programmes be given to sport coaches and encourage them to do their best to maintain the motivation of the athletes and remove an important determinant of cheating in sport.

Keywords: knowledge, attitude, coaching style, doping, athletes

Introduction

The issue of doping in sports has for more than half a century been of concern to athletes, sporting organisations,

lawyer and greater society alike. It would seem that not a year goes by now that one does not observe a high-profile athlete having doping to obtain the advantage

over their fellow athlete (Sturbios, 2010). As suggested by Lippi, Banfi, Franchini and Guidi (2008), doping now appears to be “an everyday problem”. In a number of cases the athlete seems to justify such actions as per the perceived demands of sport as if doping was necessary to perform at the required level (Cycling News, 2008; 2010). World Anti-Doping Agency (WADA) defines doping as the occurrence of one or more of the eight anti-doping rule violations stipulated in the WADA code. These substances and techniques are normally prohibited as they are considered as unfair means of winning against those who exhibit their natural potential in sports performance. (WADA, 2011)

Using prohibited substances for performance enhancement by athlete is a form of cheating behaviour which can jeopardize both their health and their careers. The most unfortunate aspect of drug use in sports is that sports superstars around the world, who are supposed to serve as role models to the youths are being caught using performance enhancing drugs. For instance, superstars like Asafa Powell; Sherone Simpson; Tyson Gay and Allison Randall were among five athletes who allegedly tested positive for banned performance-enhancing drugs during the Jamaican national championships in June, 2013 (The Nation Sporting life, July,

2013). Also, in Nigeria, there were reported cases of athletes tested positive to performance-enhancing drugs, most especially in weight lifting and athletics (Ojeikere, 2007). For instance, there were 15 reported separate cases of doping involving Nigerian athletes from 1985 to 2006. Also, three female Nigerian undergraduate athletes tested positive for anabolic steroids during the 12th IAAF World Athletics Championship in Berlin (Ojeikere, 2007).

Adequate knowledge about doping is important for athletes and sport participants at all levels in order to make useful and beneficial decision. Many studies reveal that athletes usually lack the proper knowledge in the field of doping (Backhouse, McKenna, Robinson & Atkin, 2006). Morente-Sanchez & Zabala (2013) review identified that athletes lack anti-doping knowledge, particularly around dietary supplements and the possible side effects of performance enhancing drugs. In their study Moran, Guerin, Kirby & MacIntyre (2008) reported that 62.6% of athletes of various nationalities said that, they had received information on banned substances in their sport, and 48.8% felt confident with their knowledge. Muwonge, Zavuga and Kabenge (2015) showed that two-thirds of Ugandan athletes replied in the affirmative to the question on whether they had received

information regarding banned substances in their sport. They further revealed that 47.3% of adolescent athletes and 57% of adult athletes respond that they had received information on banned performance-enhancing substances and, 39% and 53.4% exactly knew what those banned substances were for adolescent and adult athletes respectively. Chebet (2014) revealed that Kenyan elite athletes with more experience in higher levels of competition had a better knowledge since they are better exposed to officials or anti-doping officers.

Nieper (2005) observed that the coaches provided most of the information regarding doping in sports, whereas Erdman, Fung, Doyle-Baker, Verhoef and Reimer (2007) noted that family/friends and team mates were the most common sources of information on the use of PES in a group of 582 high-performance Canadian athletes. Somerville, Lewis and Kuipers (2005) reported that the team doctor was the most popular source of information on PES during a survey of 196 British Olympic-level athletes. Sas-Nowosielski and Swiatkowski (2007) indicated that source of knowledge was television followed by the internet, peers, coach, and sport press, the role of the internet has become more important due to digitalization, whereby sources of information like Apps (i.e., WADA-App

or NADA-App in Germany) has become more important.

Athletes' attitudes toward doping refer to beliefs and dispositions held by the athletes toward the use of performance-enhancing substances and drugs (Zucchetti, Candela and Villosio, 2015). Athletes' doping attitudes are often used as a proxy for doping behaviours, because those who use banned drugs have more permissive attitudes towards doping than those who never dope (Petróczi and Aidman, 2008). A qualitative study of 15 track-and-field elite athletes revealed that athletes perceived doping as a normalized practice in competitive sport and maintained that most elite and professional athletes use performance enhancing substances, most of these athletes had admitted using prohibited drugs (Pappa and Kennedy, 2012).

Johnson, Sekhar, Alex, Kumaraswamy and Chopra (2016) revealed that apart from intentional doping, inadvertent doping may occur if the athletes practice self-medication without consulting the healthcare professionals. This is particularly common among athletes with medical knowledge. Morente-Sanchez and Zabala in their study revealed that the decision to take banned substances is influenced by the assumption that the competitors are also taking them. In other words, familiarity with banned

substances through exposure to or observation of others' doping practices may influence an athlete to ultimately decide to dope themselves.

Although there are various influential social agents in sport (e.g., parents, peers, medical personnel, sport scientists), undoubtedly coaches play a crucial role in shaping the psychological experiences and actions of athletes (Bartholomew et al., 2009; Smith et al., 2010). Coaches are viewed as having a strong influence in regulating athletes' behaviour and attitude. Based on self-determination theory, coaching behaviours can be viewed as two styles; autonomy-supportive and controlling. The autonomy-supportive coaching style refers to an approach where the coach gives the athletes an opportunity to participate in decision making, respect the views and feelings of athletes and allows players in choosing appropriate tactics and techniques (Mageau and Vallerand, 2003).

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associated with pro-doping attitudes. The controlling style, in contrast, refers to an approach whereby the coach behaves in an authoritarian and coercive way, uses strategies such as guilt induction, manipulation or threats, and gives little recognition to the perspectives and feelings of the athletes.

Autonomy-support from coaches enhances the satisfaction of basic psychological needs for autonomy, competence and relatedness and development of autonomous motivation (Gagne, Ryan & Bargmann, 2003; Hodge & Gucciardi, 2015). Therefore, athletes' pro-doping attitudes maybe weakened under autonomy-supportive climate. Therefore, autonomy-supportive coaching style might be negatively associated with pro-doping attitudes. The controlling style, in contrast, refers to an approach whereby the coach behaves in an authoritarian and coercive way, uses strategies such as guilt induction, manipulation or threats, and gives little recognition to the perspectives and feelings of the athletes (Bartholomew et al., 2010). Controlling coaches frequently act in a forceful, pressuring manner, coercing their athletes into particular ways of thinking, feeling, and behaving. These coaches use numerous strategies to influence their athletes, such as yelling, imposing opinions, making normative comparisons, issuing

calculating statements, and offering contingent affection (Bartholomew et al., 2009). Such a controlling interpersonal style can frustrate athletes' basic psychological needs; undermine their self-determined motivation; and produce maladaptive affective, cognitive, and behavioural outcomes, including favourable attitudes toward doping (Bartholomew et al., 2009; Hodge, Hargreaves, Gerrard, & Lonsdale, 2013).

Studies have indicated the controlling coaching style is more likely to be associated with antisocial behaviours among athletes. Tractlet, Roman and Moret, (2011) reported that the controlling coaching behaviour was associated with anti-social behaviour in football players. Hodge et al. (2013) showed that a controlling coaching style was positively associated with doping attitudes and doping susceptibility. Chen, Wang, Wang and Huang (2017) results demonstrated that a controlling coaching style positively predicted attitudes toward doping and the relationship was fully mediated by moral disengagement. Bartholomew et al. (2010) subsequently showed that controlling coaching environments can frustrate athletes' psychological needs, and predict in negative emotions, feelings of burnout, and disordered eating. Ntoumanis, Brooke, Barkoukis and Gucciardi (2015) found that

coaches had an aspiration to influence athletes' doping-related decisions, but they lacked the efficacy or were unable to articulate the specific means by which they can facilitate the fight against doping.

The use of banned substances to enhance performance occurs in sport. Doping is cheating, and not "fair play". It renders medical risks. Elite athletes have an enormous desire to win at all costs. Doping has brought the lawyers into the sporting world, meaning that an athlete (accurately) accused of doping often seeks juridical assistance to find a way to avoid being banned, with the loss of honour, work (if professional) and money. Consequently, an innocent athlete accused of doping might need a legal adviser to prove his/her innocence. Also, possession and use of doping agents is according to national laws prohibited in most countries and might carry a penalty of fines or imprisonment.

The athletes of Oyo State Sports Council perform at various national competitions and some of the athletes represent the country in international competitions. Every effort is being put in place by athletes, coaches and sports management to see that the individual athlete and teams improve on their skills and outshine their opponents, but the results have not been promising in recent times. The researchers observed during the

training periods of these athletes in various sports and these athletes were found of using performance enhancement drugs and drink supplements to boost energy, avoid fatigue and manage pain. The researchers believe that this behaviour by the athletes can only produce an immediate result, while forgetting the adverse effects that could produce on human health and loss of honour. It is on this premise that the study was aimed at investigating knowledge, attitude and coaching style towards doping among athletes of Oyo State Sports Council.

Hypotheses

The following hypotheses were tested;

1. There is no significant relative contribution of knowledge, attitude and coaching style on doping among athletes of Oyo State Sports Council, Adamasingba.
2. There is no significant joint contribution of the independent variables (knowledge, attitude and coaching style) on dependent variable (doping) among athletes of Oyo State Sports Council, Adamasingba

Methodology

The descriptive research design of survey type was used for this study. The population for this study comprised

athletes of Oyo State Sports Council, Adamasingba. The sample size for this study was two hundred and twenty (220) athletes from the State Sports Council. Simple random technique was used to select two hundred (220) athletes from various sports (Athletics = 52, Ball games = 69, Combat games = 33, Racket games = 36, Swimming = 14 & Weightlifting = 16). The instruments include self-structured Doping Knowledge Questionnaire (DKQ) to measure general knowledge and sources of information about doping from the respondents. The 14-items DKQ were measured on four-point likert scale ranging from strongly disagree (1) to strongly agree (4); Standardized Scale of the Performance Enhancement Attitude Scale (PEAS) by Petróczi (2002) was adapted to measure athletes' attitudes toward doping. The PEAS consists of 17 attitude statements, which were measured on a six-point Likert-type scale ranging from strongly disagree (1) to strongly agree (6). No neutral middle point was offered, and all 17 items were scored in the same direction; Controlling Coach Behaviour Scale (CCBS) developed by Bartholomew, Ntoumanis & Thøgersen-Ntoumani (2010) was used to elicit information on athlete's perception of their coaches' style, the 16-items were on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree); and The Moral

Disengagement in Doping Scale (MDDS) developed by Kavussanu, Hatzigeorgiadis, Elbe & Ring, (2016) was used to measure moral disengagement and moral identity of athletes in doping. The 6-items were on a 7-point Likert scale, ranging from 1 (not at all likely) to 7 (very likely). Reliability values of the instruments were 0.80, 0.78, 0.85 and 0.84 respectively. The questionnaires were completed anonymously, and participants were guaranteed that their responses would be kept strictly confidential and used only for research purpose. Participants were asked

to answer all questionnaires honestly and independently. The instruments were administered and collected on the spot after the athletes' usual training in various sports. Two (2) hypotheses were tested. Data collected were analysed using inferential statistics of multiple regression

Results

H₀ 1: There is no significant relative contribution of knowledge, attitude and coaching style to doping among athletes of Oyo State Sports Council, Adamasingba

Table 1: Regression summary showing relative contribution of the independent variables to the prediction of doping

Model	Unstandardized coefficients		Standardized coefficients	T	Sig.
	B	Std.error	Beta		
Constant	1.139	2.910		.391	.696
Knowledge	-.038	.082	-.029	-.485	.643
Attitude	-.174	.033	-.343	-5.239	.000
Coaching style	-.138	.034	-.255	-4.030	.000

Table 1 reveals that two out of three factors (attitude and coaching style) are potent predictors of doping. The strongest predictor of doping is coaching style ($\beta = -.255$, $t = -4.030$, $p < .05$) followed by attitudes ($\beta = -.343$, $t = -5.239$, $p < .05$), except knowledge ($\beta = -.029$, $t = -.485$, $p > .05$). Therefore, the null hypothesis is

rejected. This implies that attitude and coaching style are predictors of doping by 34.3% and 25.5% respectively.

H₀ 2: There is no significant joint contribution of the independent variables (knowledge, attitude and coaching style) on dependent variable (doping)

Table 2: Multiple regression summary showing the joint contributions of independent variables to the prediction of doping

R= .486 ^a		Adj.R ² =0.226			
R ² =0.237		Std.Error=6.91955			
Model	Sum of square	df	Mean square	F	Sig.
Regression	3204.038	3	1068.013	22.306	.000 ^b
Residual	10342.121	216	47.880		
Total	13546.159	219			

Table 2 reveals that the joint contributions of the knowledge, attitude and coaching style on doping. The multiple regression model reveals $R=.486$, $R^2=.237$, adjusted $R^2=.226$. The three independent factors account for 22.6 % (adjusted $R^2=0.226$) variance in doping. Factors accounting for the remaining variance are beyond the scope of this study. Therefore, there is a significant joint contribution of the independent variables to the predictors of the dependent variable; $F_{(3,216)}=22.306$, $p<0.05$. Hence, the null hypothesis is rejected.

Discussion

The results of this study revealed that knowledge was not a significant predictor of doping among athletes of Oyo State Sports Council. This could be attributed to the academic level of the athletes and few numbers of athletes that participate at international competition who have been exposed to anti-doping agencies. This corroborates with the study

of Chebet (2014) who revealed that Kenyan elite athletes with more experience in higher levels of competition had a better knowledge since they are better exposed to officials or anti-doping officers. Morente-Sanchez and Zabala (2013) identified that athletes lack anti-doping knowledge, particularly around dietary supplements and the possible side effects of performance enhancing drugs. Nieper (2005) observed that the coaches provided most of the information regarding doping in sports, whereas Erdman, Fung, Doyle-Baker, Verhoef & Reimer (2007) noted that family/friends and team mates were the most common sources of information on the use of performance enhancing substances in a group of 582 high-performance Canadian athletes,

Also, the study revealed that attitude was significant predictors of doping among athletes of Oyo State Sports Council. This is in line with the study of Pappa & Kennedy (2012) that athletes perceived doping as a normalized practice

in competitive sport and maintained that most elite and professional athletes use performance enhancing substances, most of these athletes had admitted using prohibited drugs. The study further coincides with the study of Johnson, Sekhar, Alex, Kumaraswamy & Chopra (2016) that apart from intentional doping, inadvertent doping may occur if the athletes practice self-medication without consulting the healthcare professionals. This is particularly common among athletes with medical knowledge. Morente-Sanchez and Zabala revealed that the decision to take banned substances is influenced by the assumption that the competitors are also taking them. The doping attitudes among athletes of Oyo State Sports Council could be attributed to the result of complex and dynamic internal and external influences such as athlete's personality and social environment. Also, athletes may involve in doping based on the premise that some contemporary athletes are found of using it and easy access to performance-enhancement substance could be a factor.

Coaching style was significant predictors of doping among athletes of Oyo State Sports Council. This is in agreement with the study of Chen, Wang, Wang & Huang (2017) who demonstrated that a controlling coaching style positively predicted attitudes toward doping and the

relationship was fully mediated by moral disengagement. Bartholomew et al. (2010, 2011) subsequently showed that controlling coaching environments can frustrate athletes' psychological needs, and predict in negative emotions, feelings of burnout, and disordered eating, while Ntoumanis, Brooke, Barkoukis & Gucciardi (2015) found that coaches had an aspiration to influence athletes' doping-related decisions, but they lacked the efficacy or were unable to articulate the specific means by which they can facilitate the fight against doping. The great demands and high expectations of coaches from the athletes could promote illegal and unethical involvement in doping, while coaches need to focus on helping the athletes to improve his/her performance rather than threatening or coercive.

Conclusion

This study investigated knowledge, attitude and coaching style as predictors of doping among athletes of Oyo State Sports Council. Based on the findings of this study, it was concluded that, attitude and coaching style were significant predictors of doping among athletes of Oyo State Sports Council. In addition, knowledge was not a significant predictor of doping among athletes of Oyo State Sports Council.

Recommendations

Based on the findings of this study, the following recommendations were made;

1. Athletes of the Oyo State Sports Council should be educated on anti-doping programmes and implications of doping to their physical and mental health and their athletics career.
2. There should be an establishment of counseling centers for various sports to allow the athletes to benefit from counseling on doping in order to change their attitudes against doping.
3. Coaches should always be ready to go for secondary training and continue learning to increase knowledge and improved coaching style since only those who perceive to be competent will actively address the topic and appear more trustworthy, thereby helping athletes develop and modify their own set of values.
4. Coaches and other sports staff found of any doping misconduct should be sanctioned and banned as it is well recognized at international level, while team physicians, trainers, coaches, parents, and others in the athlete entourage should be well informed

and trained in recognizing the signs and symptoms of drug abuse, including changes in physical health and behaviours.

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