

MOTIVATION AND DOPING; A META-COGNITIVE FRAMEWORK FOR UNDERSTANDING ATHLETES' ATTITUDE AND BEHAVIOUR

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ABSTRACT

Numerous scandals in relation to doping in major sport disciplines – athletics, cycling and swimming, continue to make news headlines on a consistent basis. The punitive approach undertaken by the World Anti-Doping Agency (WADA) has not resulted in a significant change in attitude and behaviour towards doping but has instead influenced an evasive attitude and behaviour among athletes, to continue the undesirable doping practice. A paradigm shift is necessary to identify the potential behavioural factors influencing athletes to dope so that proactive actions can be taken to reduce the likelihood of using performance enhancement drugs during particular stages of the athlete's sport lifecycle.

The framework presented in the research is a synthesis of three motivational perspectives: equity theory, hierarchy of needs theory, and intrinsic and extrinsic motivation theory, to provide a better understanding of the cognitive issues and motives influencing athletes to use performance enhancement drugs in sports.

Keywords: Anti-doping, equity theory, hierarchy of needs theory, intrinsic and extrinsic motivation, performance enhancement drugs.

INTRODUCTION

The World Anti-Doping Agency (WADA) formulated in November 1999 has been the premier institution in the fight against doping in sports. WADA's punitive approach to ban performance enhancing drugs (PEDs) in sports, seemingly with the desire to enhance or improve the image of sports, has left a gap in fulfilling the needs of the most important stakeholders in sports - the athletes. WADA has adopted a reactive approach to dealing with the issue of doping in sports by punishing athletes if caught. This approach has influenced an evasive attitude and behaviour among athletes who are willing to take the risk of doping to achieve a higher level of performance and hope not to be caught. Thus, the practice of doping continues to permeate major sport disciplines.

Brewer (2002) argued that advances in sport-medical science and the hyper-commercialization of sports are also contributory factors to the doping phenomenon. Pharmaceutical companies are producing different types of masking drugs, which may enhance athletes' performance but are not yet detectable in drug tests. Added to this, some pharmaceutical companies pay endorsement fees to athletes or provide sponsorships. The commercialization of sports whether endorsement deals or sponsorships, influences athletes' attitude and behaviour to perform at a consistently high standard including breaking records. Former professional cyclist, Rik van Steenbergen (Brewer 2002, 284) posited that "there are no such things as supermen," and doping is necessary if athletes are obligated to be fresh each time they compete (Brewer 2002). An athlete is more susceptible to doping when faced with a significant amount of PEDs on the market and influence from sponsors, athlete support personnel (ASPs) and others stakeholders to consistently perform at high standards. Anything short of a high performance from athletes is considered unworthy to spectators and sponsors.

Background of Athletes

Athletes come from all aspects of life and various socio-economic and

socio-cultural backgrounds in their quest for success. The level of success desired by an athlete varies from individual to individual and from country to country, depending on the opportunities available. Many athletes have sacrificed other social activities and even education, to concentrate on success in sports. Additionally, many top athletes in various communities have come from low income families, and as such they were determined to maintain a high performance in sports as a ticket out of the poverty/low income lifestyle.

Framework

To be effective in the fight against doping in sports, understanding the combination of motivational factors influencing the attitudes and behaviours of an athlete to use performance enhancing drugs (PEDs) during particular stages of the athlete's sport lifecycle should be considered in policy formulation done by the World Anti-Doping Agency (WADA). A meta-cognitive needs framework was developed to provide a better understanding of the deviant behaviour of athletes in pursuit of higher performance in sports. The framework synthesizes three motivational theories: equity theory, hierarchy of needs theory, and intrinsic and extrinsic motivation theories. This content-based perspective of motivation categorizes higher-level needs as intrinsic, while lower-level needs are considered to be extrinsic in nature (Bright 2009).

MOTIVATION

Athletes are motivated to do drugs as a result of a need, which can be as a result of a "physiological or psychological imbalance" (Luthans 1995, 141). The intensity of the drive to use PEDs is determined by the incentive to be achieved, which will ultimately alleviate the need. Once that need has been satisfied, another physiological or psychological deficiency will emerge (Maslow 1943). "Although psychological needs may be based on a deficiency, sometimes they are not," as some may induce an athlete to increase

the amount of stimulation (Luthans 1995, 141). Various theorists have tried to understand the cycle of needs that an individual passes through during their life, with Maslow and his Hierarchy of Needs Theory, being one of the earliest of behavioural scientists. He was of the opinion that “the strongest ‘felt needs’ determine behaviours of individuals at given times” (Iguisi 2009, 142). Motivation is seen as the force that directs an athlete’s behavior (Perry and Porter 1982; Wright 2001; Steers *et al.* 2004), as well as the persistence and intensity of their actions (Wright 2001; Steers *et al.* 2004), so as to satisfy specific needs. The motive or drive of an athlete contributes to both acceptable and unacceptable behaviour, since “motives often affects a person’s perception, cognition, emotion, and behaviour” (Reiss 2004, 179). Motives represent what the individual wants or expects from their actions (Wright 2001).

A careful analysis is needed of the influences on athletes’ attitude and behaviour to use performance enhancing drugs (PEDs) during athletes’ sport lifecycle because they can be motivated by health concerns, performance enhancement and/or social norms (Bilard *et al.* 2010). Another motive as highlighted by Frederick-Recascino and Schuster-Smith (2003) was the environment. The environment in which the behaviour takes place can influence the type of motivation at a particular time or period. Frederick-Recascino and Schuster-Smith (2003) describe a highly controlling environment as one that consists of many rules and sanctions, which limits an athlete’s autonomy and in turn facilitates an external locus of causality. An environment where threats, deadlines, directives, and competition pressure exist can undermine the intrinsic motivation of individuals, as they are perceived as controllers of their behaviour (Ryan and Deci 2000). Autonomy provides the environment for people to feel that they are in control of their actions and give them the satisfaction of accomplishing a task due to their own initiative as well as competence. According to Ryan and Deci (2000, 54) “orientation of motivation concerns the underlying attitudes, goals that give rise to action-that is, it concerns the why of actions”. The ‘why’ can be looked at based on the factors or reward structures that influence the behaviour of an athlete within a given setting. The

actions of athletes can be influenced by internal gratification or external compensation for the desired outcome. Figure one shows a meta-cognitive needs framework which synthesizes three motivational theories: equity theory, hierarchy of needs theory, and intrinsic and extrinsic motivation theory to determine the influences on athletes' attitude and behavior. A brief explanation of each theory follows the framework and then a discussion of the framework based on the stage of the athlete's sport lifecycle.

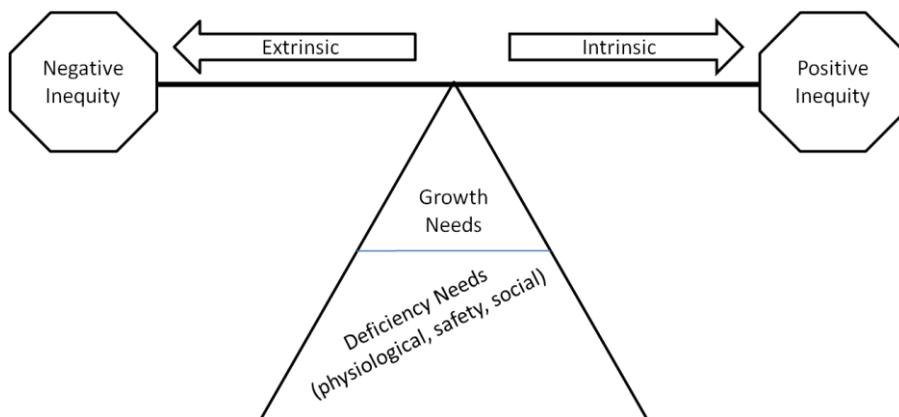


Figure 1 – meta-cognitive needs framework (Edwards and Gobin 2016)

Extrinsic/Intrinsic motivation theory

Deci (1972, 113) posits that “a person is intrinsically motivated if he performs an activity for no apparent reward except the activity itself. Extrinsic motivation on the other hand, refers to the performance of an activity because it leads to external reward.” Therefore, the reward derived by an athlete from activities will determine whether the type of motivation influencing his or her behaviour is intrinsic or extrinsic.

Hierarchy of needs theory

Maslow was of the opinion that as individuals develop, they prioritize which group of needs are to be fulfilled (Steers *et al.* 2004) in a hierarchical manner (Kolltko-Rivera 2006). He also posited that

the first three needs are deficiency needs, while the upper two are growth needs (Wahba and Bridwell 1976; Steers *et al.* 2004). Maslow was also of the opinion that an individual's needs could be grouped, and that these needs will fall under the various categories, progressing from the lowest to the highest (Maslow 1943; Iguisi 2009). The lower level needs identified by Maslow were physiological, safety/security, and social needs while the higher level needs were self-esteem and self-actualization needs.

Equity Theory

“Justice is a function of the proportionality of outcomes to inputs of the person and comparison targets” is the central assumption of equity theory (Van Yperen 1997, 318). However, the conclusion that there is inequity does not have to be real; it is the individual's perception that matters, which ultimately affects their behaviour. “The theory suggests that when individuals find themselves in an inequitable situation, they have several options to cope with this lack of reciprocity” (Van Yperen 1997, 318). The actions that can be taken by the individual include “restoration of actual or psychological equity, altering the comparison target, and leaving ‘the field’ (i.e. dropping out)” (Van Yperen 1997, 318). Inequity can be either positive or negative – mismatches which favour the individual or the comparison others, respectively” (Disley *et al.* 2009, 57).

ATHLETES SPORT LIFECYCLE: MOTIVATION AND DOPING

There are three stages of an athlete's sport lifecycle; the initial stage, the competitive stage and the elite or professional stage. Table one below highlights the stage of the athlete sport lifecycle and the needs influencing their attitude and behaviour at each stage. Each stage and the needs or motive influencing an athlete's attitude and behaviour will be explained in the discussion that follows.

Table 1: Athlete sport lifecycle and needs influencing attitude and behaviour

Sport Lifecycle Stage	Hierarchy of Needs	Equity theory	Intrinsic/Extrinsic motivation
Initial stage	Lower level needs	Felt positive inequity	Intrinsic
Competitive stage	Lower level needs	Felt positive/negative inequity	Intrinsic/Extrinsic
Elite/Professional stage	Lower level needs	Felt negative inequity	Extrinsic

The Initial Stage in Sports

The motives for persons initially participating in sports varies from athlete to athlete. Some athletes would have started sports for the challenge it offers them, while others for the skills it allows them to develop, and some for the pleasure that it provides. Such motives can be seen as intrinsic in nature as they are controlled by the athlete, who will determine how challenging they would like the activity to be, or how much skill they are desirous of achieving. Intrinsic motivation has been defined by Pelletier *et al.* (1995, 36) as “performing an activity for the pleasure and the satisfaction that one experiences while learning, exploring, or trying to understand something new”. The extent of the activity is hence self-determined, which is an important factor in determining the type of motivation influencing the athlete’s behaviour. Casual or non-competitive sports participation based on these motives is also unregulated, and as such to what degree and when the activity is undertaken, is at the discretion of the individual. Autonomy in this context causes athletes to find great pleasure in the involvement in sports, and look forward with great expectation for the next occasion. These athletes are also likely to persist as a result of the pleasure derived from the activity. Ryan *et al.* (1997, 338) postulated that the “spontaneous enjoyment of an activity leads to increased persistence and to reduced stress and positive psychological feelings”. However, not all athletes will start various sporting activities for one of the earlier stated reasons.

Some athletes commenced participation to promote good health, others for the fame that can be derived, while some do it for the

material benefits – prizes to be won, opportunities to travel, scholarships, association with others who are involved in the activity, as well as recognition for being involved in such activities. These motives are extrinsic in nature since they are often controlled by others, and even when not controlled by third parties, are for the instrumental value rather than the activity itself. Though “some physical activities may be more conducive to intrinsic” (Ryan *et al.* 1997, 337), rather than extrinsic motivation, such as those mentioned in the previous paragraph, sports can be undertaken for either intrinsic or extrinsic motives.

Regardless of the intrinsic reason, the continued participation in sports as a result of the motives earlier stated will contribute to skills development of the athlete, as challenging activities become more routine overtime. The enhancement of competence provides further satisfaction for the athlete, while reducing the effect of intention on the behaviour (Chatzisarantis *et al.* 2006). The increase in competence may influence the athlete to participate in competition not necessarily for the reward that can be derived from such events, but as a means of assisting the athlete to evaluate his/her competence, by making a comparison with others involved in the same activity. Successful performance will therefore lead to greater satisfaction as competence improves. The improvement in competence may result in positive comments either directly or indirectly by others involved in the same activity. Verbal comments by anyone to the athlete at that stage or period of participation are seen merely as compliments and not a reward. Frederick-Recascino and Schuster-Smith (2003, 243) posited that “positive information presented within a low perceived control atmosphere will enhance self-determination and therefore increase intrinsic motivation”. However, if participation was undertaken for the purpose of gaining recognition, or even health reasons, then such comments would be a reward controlled by a third party and hence extrinsic in nature.

‘Felt positive inequity’ occurs at this stage, where the athlete feels that the internal satisfaction derived from achievements far outweigh the external rewards such as financial gains and travelling. Even though

an athlete may be aware of performance enhancement drugs, the use of such is not expected at this stage, since no immediate benefit is likely to occur. An exception to the group that is extrinsically motivated are those athletes using drugs because of health concerns as was found in the study by Bilard *et al.* (2010). However, the use of drugs by athletes (intrinsically motivated) to enhance their performance will result in a reduction in their intrinsic motivation. The use of drugs would be an acceptance of a lack of competence by the athlete, which will contribute to a reduction in the pleasure of doing the activity. The activity will also become less challenging, further reducing the amount of pleasure provided by the activity. A reduction in the pleasure derived from the activity as a result of the use of drugs at this stage of sports would be inconsistent with the motive of the athlete which is intrinsic in nature. Figure two summarizes that at the initial stage of an athlete's sport lifecycle, the athlete feels positive inequity, intrinsically motivated and needs level to be satisfied are deficiency needs. The athlete is most likely not to use PEDs at this stage.

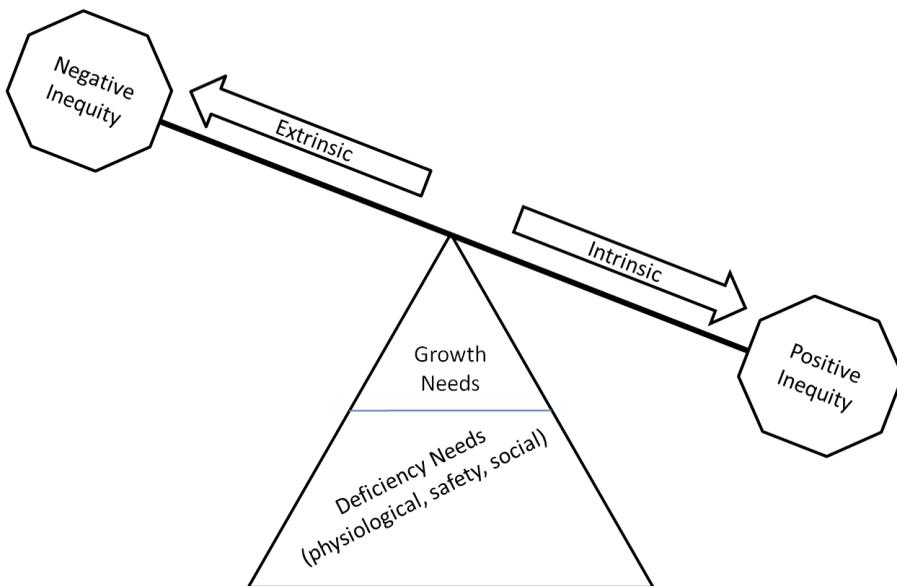


Figure 2 – initial stage of athlete's sport lifecycle (Edwards and Gobin 2016)

The Competitive Stage in Sports

Improved competence at the level prior to competition will provide opportunities for athletes to progress to a higher level, such as participating in a team so that the athlete can continue to develop his or her skills. For a 'competitive athlete,' matters such as equipment, nutrition, clothing, transportation and training conditions are at the physiological or basic level. With limited success and the prospect of becoming a high performer, an athlete has a strong chance of securing a place on a recognized team. Being on the team will assist in the alleviation of these earlier needs, or concerns for the athlete, since these basic needs/issues would be taken care of by the team. Athletes intrinsically motivated will consider placement on a team as positive feedback on their competence, which may be different from a basic need. An athlete who is not economically challenged will not have the same types of needs as one who is challenged, and as such the alleviation of physiological needs will not be a priority.

At the competitive level of sports, the sport environment can be categorized as being either task-oriented or outcome-oriented (Frederick-Recascino and Schuster-Smith 2003). The type of orientation will therefore contribute to the type of motivation influencing the behaviour of the athlete. "Individuals who are task-oriented focus on the challenge and process of the competitive event, and are typically able to maintain their intrinsic motivation. Task-oriented individuals give importance to the feelings and experiences their active engagement provides them, regardless of outcome" (Frederick-Recascino and Schuster-Smith 2003, 244), as such even at this more advanced stage of sports, intrinsic motivation can still be the dominant force. However, the same cannot be postulated for outcome-oriented individuals. These individuals are "particularly focused on the end result of their competitive situation, namely winning or beating an opponent, therefore they resort to comparing themselves to others" (Frederick-Recascino and Schuster-Smith 2003, 244). The activity is undertaken by these athletes for the instrumental value rather than the activity itself, since the end result of winning or beating an opponent is their primary motive. As such,

“outcome-oriented individuals adopt a more extrinsic motivational orientation” (Frederick-Recascino and Schuster-Smith 2003, 244).

The primary motive for some athletes participating in sports may have been for the enjoyment of the activity. This motive may change over time as the activity itself loses its value as the individual tries to maintain his/her position on the team. Depending on the extent of economic support that the athlete is receiving from the team, and the need for such support, the activity may become the means for continued participation in the sport. At this phase of an athlete's career, the team becomes more important than the individual, even though the individual has to perform for the team's success. Also at this level of sports social affiliation is important as the team is likely to perform at its optimum if there is strong bonding. Though there is a feeling of competence at this level, self-determination would have been reduced, because of a loss of control over their individual participation in sport, which is determined by the team. In addition to self-determination - which is an important factor in intrinsic motivation, being reduced or lost, the activity is no longer undertaken for its own value, but for the instrumental value. Thus sports become less intrinsically motivated, and more extrinsically motivated.

At this stage of sports, an influential coach or even the desire of the athlete to be part of the group can influence their use of performance enhancement drugs (PEDs) (Moller 2010). Outcome-oriented athletes who are extrinsically motivated are more likely to do whatever is needed to win an event or beat a competitor. These athletes do not participate in sports for the joy or challenge that can be derived from the activity, and as such would also have a tendency to use PEDs. Athletes who started sports for fame and not for the enjoyment of it are more susceptible to use whatever is available to realize their desired motives. However, task-oriented athletes are still likely to resist the use of PEDs, as they are more concerned with the feelings they experience. These athletes will also find the challenge of sports affected if drugs are used as an intervening activity. The use of drugs by these athletes will also be of instrumental value, since it is used to enhance performance, and as such reduces their intrinsic motivation,

which was the pleasure or challenge of sports.

At the competitive stage, extrinsically motivated athletes are likely to experience the feeling of 'felt negative inequity' as they compare their outcome/output with comparative others. The response to this feeling to restore equity may include perceptual change, behavioral change, or leaving the sport. However, on one hand if there is limited investment by the athlete at this stage, the likely behaviour would be to leave the sport if there is 'felt negative inequity'. Significant investment by the athlete on the other hand will have a direct relationship with their commitment to the activity, since greater investment would result in greater commitment and a lower probability of them withdrawing from the sport. Committed athletes with significant investment may consider changing the 'comparative other' where there is a feeling of 'felt negative inequity', in order to restore equity in the short term. Such an action is unlikely to have the desired effect of restoring the feeling of equity, as the desired outcome/reward would still not have been achieved. The inability to reduce the feeling of 'felt negative inequity' as a result of a change of the 'comparative other', as well as the inability of the athlete to change the outcome/output, can lead to the athlete resorting to PEDs as a means of restoring equity. Athletes who are intrinsically motivated will not make the same comparisons as extrinsically motivated athletes, since their behaviour is of an internally perceived locus of causality, and as such would exclude the feeling of inequity. Figure three summarizes that at the competitive stage of an athlete's sport lifecycle, the athlete feels positive inequity, intrinsically motivated and needs level to be satisfied are deficiency needs if the athlete is task oriented. However, if the athlete is outcome oriented, the athlete feels negative inequity, extrinsically motivated and needs level to be satisfied are deficiency needs. The athlete is likely to use PEDs if they are outcome oriented and not use PEDs if they are task-oriented.

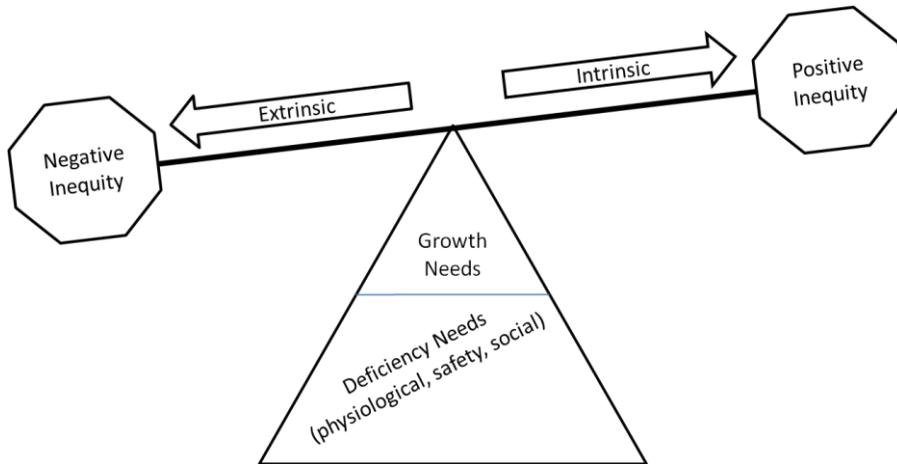


Figure 3 – competitive stage of athlete’s sport lifecycle (Edwards and Gobin 2016)

The Elite and Professional Stage in Sports

Being a professional athlete, sports become the job of the individual, as a result of this; their needs are expected to change. Even though it may appear that he/she is at the esteem or actualization level and achieving success, he/she has still not achieved his/her objective. At this phase of their life, the athlete has moved to the security level in terms of needs. Their primary objective at this stage is continued participation in the team, medical care, and existence after their sporting careers have concluded. Other professions or individuals at the end of their work life can retire and enjoy a pension while professional athletes who have a shorter productive work life are not that fortunate. The ‘after retirement’ life can only be meaningful or worthwhile if they provide for those less formative years. The more the athlete earns and set aside, the more likely are their chances of a comfortable retirement. Athletes are therefore driven to earn as much as they can, so that they can enjoy a better ‘after retirement’ life. In the developed market economies better results do not only result in higher salaries, but also endorsements (Brewer 2002), which can be very lucrative, and will contribute to the overall income of the athlete. As was earlier stated, many of the top athletes have nothing of

substance to fall back on, making this phase a very important or defining period in their life.

The future for this type of athlete is not their only concern, job security or membership in the team is also dependent on their performance. The failure of an athlete to perform at an acceptable level will result in them no longer being a part of the team. Here, high performance can guarantee a place on the team, and at the same time assist in providing for the athletes' future. At this level, if the athlete is unable to alleviate these security needs, he/she will be forced to return to the physiological needs, and as such must perform at a higher level to remain on the team. The team will take care of all the athlete's basic needs, which will no longer be a concern of the athlete. To guarantee this place on a professional team, the athlete will train harder or use whatever is available and in most cases the lure of PEDs is the easiest route to take. However, though some athletes may continue to enjoy satisfaction from improved competence and more challenging experiences, autonomy may be affected as a result of team officials determining how, when, where and the amount of training that each team member must do. As a member of a professional team, the interest of the athlete should not supersede that of the group, and development of the athlete must be in keeping with the group's goals and objectives.

Also, at the elite and professional levels, the desire to beat competitors' controls the actions of the athletes, and whatever is needed will be done to realise the desired outcome, as the athlete becomes less task-oriented and more outcome-oriented. The desire to be one of the best has been driven by the escalation of commercial interests in sport, which "has added another pressure on athletes to perform to maintain corporate sponsorships and to acquire as much wealth as possible during their brief and risky career life-span" (Stewart and Smith 2008, 283). Another external factor that has contributed to this type of behaviour is the subculture in some sports, which has a "powerful impact on its members" as they integrate within the sporting fraternity (Bilard *et al.* 2010, 6). Sport is ruled by implicit principles that create high team cohesion, which includes

doping, though it is never discussed (Bilard *et al.* 2010). These two motives were found to be some of the dominant factors contributing to doping by cyclists. Bilard *et al.* (2010) in their study of motives linked to doping behaviours found that high performance so as to achieve external rewards such as financial gain, medals, and public admiration was the second ranked motive for this kind of behaviour. The third ranked motive was “the social norms associated with the sport” (Bilard *et al.* 2010, 6). Surprisingly, the first ranked motive cited by the respondents in the study was health concerns – “trying to reduce health problems associated with the sport” (Bilard *et al.* 2010, 5). These motives are all extrinsic in nature as they are either controlled by third parties or are of instrumental value. Doping by elite athletes is not for recreational purposes, that is for the enjoyment of the drugs, but as Johnson *et al.* (2010, 4) posited, “doping is simply a means to an end, namely, improved performance and enhanced competitiveness”, and as such extrinsically motivated.

Even though athletes may have started sports for intrinsic motives, as they progress to higher levels of sports, the rewards received at these levels will ultimately reduce their intrinsic motivation, while simultaneously increasing their extrinsic motivation. The change in motive from intrinsic to extrinsic will also affect their orientation, moving from task-orientation to outcome-orientation so as to maintain their sponsorship. ‘Sports’ is the job of a professional athlete who’s basic and social needs have to be fulfilled by his/her sporting activities. The failure of the professional athlete to win or beat competitors individually – being within the top placing of the race, or as a team – a member of the team being in the top placing, will result in their basic and social needs being unfulfilled, as they lose their place on the team, due to under-performance. The action of doping is therefore extrinsically motivated, since it is done for the instrumental value rather than the activity itself. “However, it is critical to remember that intrinsic motivation will occur only for activities that hold intrinsic interest for an individual - those that have the appeal of novelty, challenge, or aesthetic value for that individual” (Ryan and Deci 2000, 59-60).

Though some athletes may participate in sports relying on training and nutrition to achieve success, elite athletes who feel under-benefited, “because they invest more time and energy in their sport career than their peers”, but feel disproportionately rewarded (Van Yperen 1997, 323), will respond to the situation in any way they perceive as appropriate in their attempt to restore equity. Due to their investment and their desire to fulfil their social and other needs, the elite and professional cyclists will not consider leaving the field as a viable option even when there is felt negative inequity. This was the case with Kimmage who “did not simply choose to leave the sport once he understood what was going on” in professional cycling (Moller 2010, 87). Other responses to felt negative inequity hypothesized by Adams were for the individual to change his or her input or output (Bretz and Thomas 1991). To cope with the lack of reciprocity as it relates to reward for their investment the elite and professional athletes “will not do well to cut down on these investments because an undesired side effect might be a decrease in their performance level” (Van Yperen 1997, 323). A decrease in performance will ultimately affect the rewards such as fame, medals, and endorsements sought by the athlete, and as such not a likely response to restore equity. An increase in the input by the ‘comparative other’ can lead to an improvement in performance, and hence the reward for the ‘comparative other’, which will not reduce the athlete’s, felt negative inequity. While changing the input may not reduce the felt negative inequity, a change in the comparative other can reduce the felt negative inequity. However, this will not change the success or performance of the elite or professional athlete, whose efforts/inputs are targeted towards achieving success, which will ultimately increase rewards. “Moreover, restoring equity by increasing one’s rewards is not always possible” because rewards are based on performance or output (Van Yperen 1997, 323).

“Sport is by its very nature competitive, and athletes are continually seeking ways of securing a competitive edge over rivals” (Stewart and Smith 2008, 291). The culture of the sport will therefore have a significant influence on the action that is likely to be taken by the athlete who feels disproportionately rewarded. Elite athletes are

pressured to 'keep up with the Joneses' because of the practice of doping in sports. If an athlete is of the opinion that the comparative others are using illegitimate means to improve performance, then in an attempt to restore equity he or she must do likewise if equity is to be restored. Kimmage (as cited in Moller 2010, 79) posited that "he was just leveling the playing field so he could compete with others". The viable option that most athletes are likely to consider in such a situation is to 'keep up with the Joneses', thus a vicious cycle of perpetual doping emerges. The culture of some sports would have a significant influence on an athlete resorting to PEDs, since it is the general belief that others are doing the same thing. By resorting to PEDs, there should be an improvement in the athlete's performance, which will be similar to the comparative others, thereby increasing the likely reward of the athlete and restoring equity. By using PEDs athletes are able to reduce their felt negative inequity because of improvement in their performance, which is often considered the only viable option by most athletes. This is expected to result in greater extrinsic rewards such as fame, medals, and endorsements, which is what an elite athlete would have set out to accomplish. Figure four summarizes that at the elite and professional stage of an athlete's sport lifecycle, the athlete feels negative inequity, extrinsically motivated and needs level to be satisfied are deficiency needs. The athlete is most likely to use PEDs at this stage.

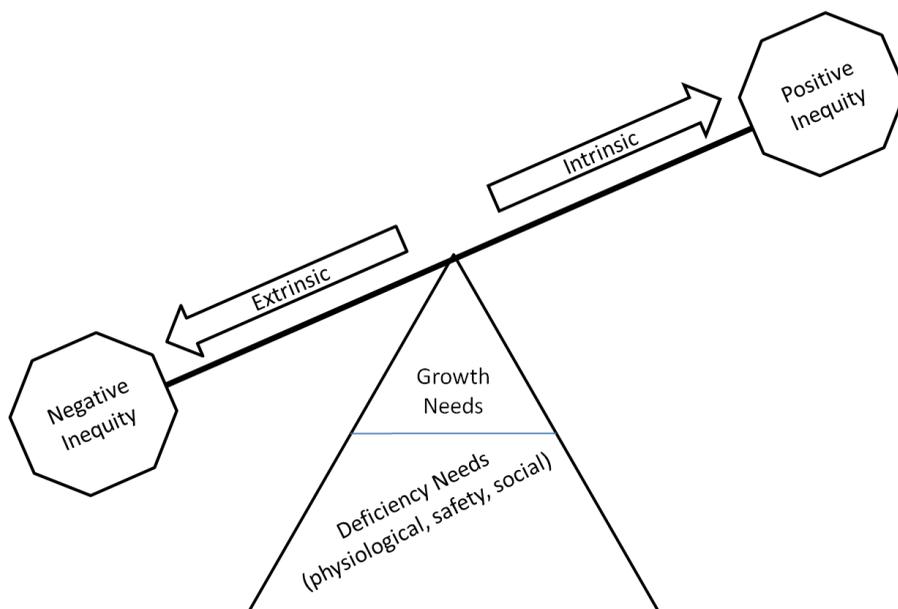


Figure 4 – elite and professional stage of athlete’s sport lifecycle (Edwards and Gobin 2016)

CONCLUSION

The motivation theories covered in this paper highlight the complexity of the issue from a behavioural perspective, as well as the enabling factors to doping in sports. The formulation of policies without an understanding of some of these issues will not bring about the desired change. The continued trend of being reactive rather than proactive will not effectively address the doping phenomenon. Rather than attempting to eradicate the behaviour, steps should be taken to contain or restrain the activity of doping. This would not be an acceptance of failure, but a paradigm shift in the fight against doping in sports. Punitive actions have never been the only action to eliminate delinquent behaviour among people. Masculinity theory which addresses a different need of some individuals must also be considered. Stewart and Smith (2008, 288) posited that “for some athletes, the combination of illegality, risk of exclusion, and potential for physical damage can be part of the attraction of taking drugs”. They also indicated that rather than reducing the practice “a

punitive anti-doping policy may unintentionally increase the appeal of drug use for some hyper-masculine athletes because of its association with deviant and high-risk behaviour”.

The policy for the ongoing doping crisis should proactively address the needs of athletes rather than just trying to improve or enhance the general image of sports through punitive actions. The current system in the quest for clean sports has left athletes on their own to overcome their addiction. Once an athlete is perceived as having a high propensity to dope, intervening measures should be put in place to reduce the undesirable behaviour.

Based on the earlier discussion, the fight against doping in sport must address the factors that will impede clean sports, as well as those that will influence the desired behaviour. A change in the culture of some sports, as well as the current mechanism in relation to commercialism must be addressed. The process used in the fight against drugs has come under criticism and as such must address two very important issues: needs, and justice – distributive, in relation to deviant behaviour.

In addressing the security needs of athletes, a substantial percentage of the athlete's endorsement and prize money can be put into a fund which they would be entitled to if they conclude their athletic career as a clean athlete. Such a practice will reduce the likelihood of doping as the amount to be lost if found doping will be significant as an athlete competes successfully for a long period. The fund will address their security need, which is the driving force for many athletes as was earlier mentioned. The need for distributive justice has also attracted the attention of stakeholders, as athletes have received reduced penalties for cooperating with the authorities after committing a doping offence, as in the case of Tyson Gay – received two years instead of four years. There should be no discretionary provision for any athlete once they have breached the rules, since such practice can lead to persons using such provision to reduce the penalty intended to deter the behaviour. Future studies can address the acceptance of a fund approach in the fight against doping, as well

as means of identifying athletes with a high propensity to dope, so that mechanisms can be put in place to reduce the occurrence of the delinquent behaviour.

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