Performance Enhancement & Health xxx (2017) xxx–xxx

Contents lists available at ScienceDirect

Performance Enhancement & Health

journal homepage: www.elsevier.com/locate/peh

The paradox of human milk doping for anti-doping

Chantalle Forgues[a,*], Jason Mazanov[b,c], Julie Smith[d]

[a] College of Business Administration, Plymouth State University, USA
[b] School of Business, UNSW, Canberra, Australia
[c] Department of Sport and Community Engagement, University of Chester, UK
[d] School of Regulation and Global Governance, Australian National University, Australia

ARTICLE INFO

Article history:
Received 11 February 2016
Received in revised form 27 May 2017
Accepted 9 August 2017
Available online xxx

Keywords:
Anti-doping
Human milk
Third party harms
Drug policy

ABSTRACT

Human milk is employed as a reference substance to assess the equivocal language defining the three tests (enhancement, health and violation of the Spirit of Sport) for prohibiting substances and methods under the World Anti-Doping Code (the Code). Human milk is demonstrated to be consumed by athletes with intent to enhance performance, presents a non-trivial risk to health, and violates the Spirit of Sport. The implications of prohibiting human milk under the Code demonstrate the increasing complexity and unintended (sometimes absurd) outcomes that arise from the implementation of the anti-doping ideology. The discussion focuses on two outcomes of the analysis. Firstly, the trade-off between administrative convenience and a workable drug control system for sport is considered (e.g. transparency versus decision latitude). Secondly, the discussion raises questions about the extent to which anti-doping policy makers consider third party harms with trading athletes and sporting interests relative to others individuals (e.g. babies) and society more broadly. The plausible prohibition of human milk under the Code indicates that a much closer examination of how best to manage performance enhancing technology in sport is needed, especially with regards to the influence of anti-doping beyond sport.

1. Introduction

Athletes across the globe are drinking human milk with an intent to enhance sporting performances, reporting that it increases their stamina, builds their muscle, and helps them recover faster after physical exertion (Alesci & Trafecante, 2015; Buia, 2015; Lieber, 2014; Lynch, 2014; see also Bahret, 2014). Human milk has been described as "liquid gold" for athletes looking to improve their sporting performances (Dutton, 2011; LaMotte, 2015) as an all-natural nutrient rich substance that contains human growth hormone (Kunz, Riodriguez-Palmero, Koletzko, & Jensen, 1999; Rodriguez-Palmero, Koletzko, Kunz, & Jensen, 1999). Given the rising moral panic around 'doping' in sport (Crichter, 2014; Coomber, 2014; McDermott, 2016), applying the rules that govern the prohibition of a substance or method under Articles 4.3.1.1–4.3.1.3 of the World Anti-Doping Code (the Code) leads to a conclusion that human milk could be listed as a prohibited substance. The consequences and implications of listing human milk as a prohibited substance raise questions about whether the Code and its supporting policy is flawed. The analysis also identifies third party harms (e.g. depriving vulnerable infants of a lifesaving therapy) arising from both doping and anti-doping (indeed the Code could be contributing to the harms) need to be more fully considered by both policy makers and researchers.

2. Prohibition of human milk

The colloquial use of the term 'doping' typically refers to using a substance, method or technology that enhances some aspect of the human condition, but does so with pejorative connotations (Mazanov, 2017). In sport, doping refers to the use of a substance or method to enhance sporting performance, and is seen as a threat to the integrity of sport. Since the early 20th century, doping has been perceived to undermine the integrity of sport by impugning the 'level playing field' (e.g. athletes with access to such substances would always win over those without access) and attribution of sporting excellence to individual effort (e.g. naturalness and authenticity) (Mazanov & McDermott, 2009). Efforts to control this perceived threat to the integrity of sport gave rise to the anti-doping ideology, which sought to exclude those using substances and methods deemed offensive from sporting communities. For much of the 20th century, the implementation of the anti-doping ideology was little more than a pantomime, until a series of drug-related athlete deaths and scandals in the late 20th

* Corresponding author.
E-mail address: crforgues@plymouth.edu (C. Forgues).

http://dx.doi.org/10.1016/j.peh.2017.08.002
2211-2669/

century saw governments force sport to formalize the ideology with rigorous administration (David, 2013; Houlihan, 1999; Hunt, Dimeo, & Jedlicka, 2012; Ritchie & Jackson, 2014). The result was the founding of the World Anti-Doping Agency (WADA) and the establishment of powerful (some argue, hegemonic; e.g. Gleaves, 2011; Jedlicka, 2014; López, 2014) regulatory and policy instruments to enforce the anti-doping ideology across jurisdictions, driven by the UNESCO (2005) International Convention Against Doping in Sport (see Mazanov, 2017, for a fuller description of the systemic governance framework).

The main purpose of WADA is to develop and administer universal anti-doping policies, the centerpiece of which is the Code. The Code is a uniform framework of anti-doping regulations that is binding on its private signatories pursuant to contract law (McArdle, 2015; Sullivan, 2016). Based on the principles of international law, the Code is binding on governments that are signatories to the International Convention against Doping in Sport (UNESCO, 2005). At the time of writing, 186 of the 193 United Nations members and 570 national and international sports organizations were bound to the provisions of the Code by a complex set of conventions, contracts and agreements (Houlihan, 2014; McArdle, 2015; Sullivan, 2016). It is worth noting that there is no requirement to be Code compliant, although being non-compliant denies access to events (e.g. the Olympics) and funding (e.g. government support or institutional grants) (Mazanov, 2017).

Code compliance means adopting a legalistic prohibitionist paradigm to achieve drug control for sport, a 'zero-tolerance' approach (Kayser & Broers, 2015, p. 363). The underlying anti-doping policy principally is an absolute ban on objectionable substances and methods that appear on a Prohibited List. Under Article 4.3.1 of the Code, WADA has sole discretion to determine whether a substance or method can be prohibited if it is deemed to have transgressed against at least two of three tests:

4.3.1.1 Medical or other scientific evidence, pharmacological effect or experience that the use of the substance or method, alone or in combination with other substances or methods, has the potential to enhance or enhances sport performance;

4.3.1.2 Medical or other scientific evidence, pharmacological effect or experience that the use of the substance or method represents an actual or potential health risk to the athlete;

4.3.1.3 WADA's determination that the Use of the substance or method violates the Spirit of Sport described in the introduction to the Code.

Article 4.3.2 allows WADA to prohibit substances or methods deemed to have the potential to obscure or interfere with drug testing. The reasons behind the prohibition of a substance or method under Articles 4.3.1 and 4.3.2 are never made public (McNamee, 2012b). Further, under Article 4.3.3, the prohibition of a substance or method "is final, and shall not be subject to challenge based on an argument that the substance [did not meet the criteria for prohibition]" (WADA, 2015a). In practice, this means prohibition is never exposed to independent review.

The three tests are applied to human milk as a case study to demonstrate potential problems that arise with the standards either stated or implied by Articles 4.3.1.1–4.3.1.3. Human milk was chosen as a substance being used by athletes with intent to enhance performance (one of the few public reasons given for listing mildronate; WADA, 2016), that has the potential to bring significant harms to athlete health and violates the stated ethical basis of sport (the Spirit of Sport).

2.1. The performance enhancing standard

The language of Article 4.3.1.1 is elusive and, as such, creates a liberal standard by which WADA may judge whether a substance enhances performance. The Code does not explain enhancement or otherwise define it. There is no language in this criterion that qualifies the level of enhancement necessary to merit prohibition. There is also no language explaining the type of enhancement necessary for prohibition, making it unclear exactly how much change in performance is deemed to be unreasonably performance enhancing.

Code drafters, contributors, and stakeholders have indicated that the standard for enhancement is generous (McNamee, 2012a), such that almost any substance that benefits an athletic endeavour in any way can be deemed to satisfy this criterion. Indeed, a substance only has to be used with the intention to enhance performance, "regardless of whether the expectation of performance enhancement is realistic" (WADA, 2015b). The language of the 2015 Code captures this sentiment, even though this specific language was removed from the official commentary. As a case in point, the entry of mildronate to the Prohibited List occurred on the basis that there was "evidence of its use by athletes with the intention of enhancing performance" (WADA, 2016) despite an absence of clear clinical evidence the substance improved sports performance (Schobersberger, Dünnwald, Gmeiner, & Blank, 2017).

A substance or method can also satisfy Article 4.3.1.1 if it has the "potential" for enhancement. This language is so broad as to be nearly meaningless given the near limitless universe of substances that have the potential to enhance athletic performance. McNamee (2012b) argues that this language was drafted to allow WADA wide latitude for assessing the enhancement qualities of a substance or method, and permits the placement of almost any substance or method on the Prohibited List. Absent qualifying language, therefore, it is reasonable to consider a substance for placement on the Prohibited List if that substance has *any* enhancing property that directly or indirectly provides an athlete with *any* type of physical or mental improvement.

The measure by which to prove enhancement is equally generous. The Code provides that a substance may be prohibited if there is "medical or other scientific evidence, pharmacological effect or experience" to establish enhancement, or the potential therefor. This provision offers three specific measures by which enhancement may be proven: (i) medical or other scientific evidence; (ii) pharmacological effect; or (iii) experience. Each measure is indefinite. The first two, scientific or pharmacological, suggest an objective and impartial assessment of the ergogenic effects of a substance or method. However, Cornelius (2012) demonstrates that medical and scientific evidence of enhancement can be murky, being frequently inconclusive and sometimes contradictory. Further, evidence can be politicized through careful selection and interpretation, or by making conceptual leaps that substances or methods thought to have performance enhancing implications in non-sportive contexts generalize to reliably indicate performance implications in sportive contexts. For example, the performance enhancing effect attributed to human growth hormone appears to be a result of politicized extrapolation of non-sports related findings to the sports context, rather than direct empirical evidence (López, 2013). As a result, there are innumerable variables that could manipulate the evidence or effect of enhancement in an unknown number of ways, thereby demanding a broad application of the first two measures provided in this standard.

The third measure in this standard, "experience", is particularly liberal. The experience standard stands independently from the objective empirical tests as a singularly subjective test. The Code also does not require any specific type of experience, method of establishing the experience, or degree of experience to prove enhancement. Indeed, the concept of experience itself is without limit. While others have argued that anti-doping policy is necessarily vague (McNamee, 2012b), it is clear that, in this case, Code drafters elected not to qualify their language for this test to the same extent as other aspects of the Code (e.g. see Appendix One of the Code). Without limiting language in the text, therefore, it is reason-

Please cite this article in press as: Forgues, C., et al. The paradox of human milk doping for anti-doping. *Performance Enhancement & Health* (2017), http://dx.doi.org/10.1016/j.peh.2017.08.002