

We have completed the research “Death for Performance – What would athletes trade-off for success?” as proposed.

The key academic outputs:

“Would they dope? Revisiting the Goldman dilemma” Connor J, Woolf J, Mazanov J

Br J Sports Med 2013;47:697-700. doi.org/10.1136/bjsports-2012-091826

“The Goldman Dilemma is dead: what elite athletes really think about doping, winning, and death”

J. Woolf, J. Mazanov & J. Connor (2016): International Journal of Sport Policy and Politics, 9(3), 453-467. DOI: 10.1080/19406940.2016.1194875

“How athletes conceptualise doping, winning, and consequences: insights from using the cognitive interviewing technique with the Goldman dilemma,” Jules Woolf & Jason Mazanov (2017):

Qualitative Research in Sport, Exercise and Health, 9:3, 303-320, DOI: 10.1080/2159676X.2016.1272480

Key outcomes:

1. The historical results that half of all elite athletes accept the Goldman Dilemma is unfounded and should not be used to demonise elite athletes nor as the basis for anti-doping interventions.
2. An athlete’s future orientation is important to activate to counter the risk of doping.
3. Athletes have a far more nuanced understanding of doping, risk and winning than commonly accepted. This complexity of thought needs to be incorporated into anti-doping strategies.

The critical review of the Dilemma and analysis of how athletes construct the Dilemma demonstrate that it no longer deserves its status as ‘received wisdom’ or truth. A closer look at the history of the Dilemma raises doubts as to its validity and reliability. These doubts magnify when taking account of how athletes construct the Dilemma. Simple aggregate reporting of proportions fails to capture the nuanced thinking that underpins athlete acceptance or rejection of the

Dilemma. The fact that athletes engage in nuanced thinking about how drug use in sport influences both their current and future selves indicates a far more sophisticated understanding of the issues than that portrayed in the popular and academic literatures. Consequently, anti-doping education initiatives must take into account the way athletes understand themselves now, and how they imagine themselves in the future. However, our results did show that there is a small proportion of athletes who do prioritise winning over health and/or legality. This at risk group needs to be identified and targeted in a different way to reduce/mitigate the possibility of their doping. This group should be dubbed the intransigents as current / conventional education and deterrence strategies are not and will not be effective against them. How this should be done, and the most effective deterrent strategies, requires further research. This subset of the wider athlete population represents the intractable problem group as their winning orientation overwhelms all other motivational constructs.

Summary

The long-standing myth that many athletes would accept a Faustian style bargain and trade health for success in sport has been categorically refuted by the research team. The ‘Goldman Dilemma’ as it is commonly known was research that purported to demonstrate that up to 50% of elite athletes would accept the trade of taking a drug that guaranteed winning a gold medal but would also result in their death in 5 years time. The claims of Goldman, due to their sensational nature received considerable popular media coverage and became common ‘knowledge’ or received ‘wisdom’ regarding the behaviours of athletes. Problematically, this view of athletes as driven to win at any cost – even death, obscured a more nuanced approach to, and understanding of, doping behaviours. The dilemma has been used to justify anti-doping interventions via the construction of a view of athlete behaviour that is not supported by research.

To thoroughly test the dilemma, we undertook two studies. In the first we presented elite track and field athletes in North America with three variations of the Goldman dilemma with counter balanced presentation, split into online and interview response. We found that only 2/212 athletes would accept the original bargain as outlined by Goldman. Thus categorically refuting the original claim. The variations to the dilemma that were presented did show one relevant result – 25/212 would take a drug if there were no consequences and no chance of being caught.

The second study sort to explore athletes’ understanding of the dilemma, what it means and how they interpret it. We utilized cognitive interviews (30) to explore athletes’ views and found that they considered the bargain implausible, in terms of both guaranteeing winning and death. The undetectability of the drug was also not believed – which may be an indication that testing regimes and anti-doping education is having an impact on athletes. The significant finding of the study was the in-depth, qualitative insights that were gained regarding how athletes think about doping, cheating and winning. These are detailed at length in the “The Goldman Dilemma is dead: what elite athletes really think about doping, winning, and death” article.

The third article arising from the grant was a methodological one that justified the use of cognitive interviewing techniques in doping research. This was an unintended additional output from the

original grant project. The method used to engage athletes and understand their beliefs was shown to be highly effective and insightful. Such qualitative methodologies should be utilized more often in anti-doping research.

The findings of the studies highlighted the importance of approaching anti-doping education with a 'whole-of-athlete' approach. By that we mean we must consider all the influences an athlete has on their decisions to dope. This includes a temporal element where the future orientation of the athlete is explicitly activated so that the consequences of their choices can be better contextualized. This was shown by the number of athletes who rejected the idea of death in the short term for gold success based on their imagined futures including family, children and other work/study successes.

Summation:

1. The historical results that half of all elite athletes accept the Goldman Dilemma is unfounded and should not be used to demonise elite athletes nor as the basis for anti-doping interventions.
2. An athlete's future orientation is important to activate to counter the risk of doping.
3. Athletes have a far more nuanced understanding of doping, risk and winning than commonly accepted. This complexity of thought needs to be incorporated into anti-doping strategies.
4. There is (probably) a small subset of athletes for whom winning at any cost is acceptable and current interventions and education strategies will not change their behaviour. This group represents a particular problem for anti-doping success.

Recommendations for WADA

Based on a synthesis of the research completed for the grant and the team's previous work on the dilemma and athlete decision making we have six recommendations for WADA:

1. The use of hyperbolic un-scientific claims to justify anti-doping interventions should stop.

2. Education strategies should explicitly approach the problem of doping with a whole of athlete view and explicit future orientation.
3. The cognitive interviewing technique should be utilised to further assess anti-doping education materials for effectiveness.
4. Scenario based research should be utilised to explore athlete perceptions.
5. A concerted approach to identifying and understanding the subset of win at any cost athletes is required to develop strategies to counter their significant risks of doping.
6. The nuanced understanding of beliefs about doping, revealed via the cognitive interviewing techniques, need to be replicated globally.

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