

<b>Institution: Leeds Metropolitan University</b>
<b>Unit of Assessment: Unit 26 – Sport and Exercise Sciences, Leisure and Tourism</b>
<b>Title of case study: Informing global anti-doping policy and practice</b>
<p><b>1. Summary of the impact</b></p> <p>We have substantially redirected anti-doping in sport by informing global education policy and practice at the World Anti-Doping Agency (WADA), the European Commission, UK Anti-Doping (UKAD) and UK Athletics (UKA). Work conducted on behalf of the WADA - who implement and disseminate our findings - has had a worldwide effect on the design, implementation and evaluation of anti-doping education in sport. Our global reach and influence has been achieved by creating an evidence-base of existing literature, then moving to challenge current delivery methods and to informing future anti-doping policy and practice.</p>
<p><b>2. Underpinning research</b></p> <p>In 2005, the WADA identified education and social science research as strategic priorities for developing evidence-based anti-doping education. Consequently, the WADA released a call to undertake a systematic review of literature regarding contemporary attitudes towards doping in sport and anti-doping education. Our Leeds Metropolitan research team of Backhouse (PI: Senior Lecturer 2005; Reader 2008), McKenna (Professor) and Robinson (Professor) responded to this competitive call and were successful in securing funding to undertake the review. The WADA's repeated investment in our research team over nine years (see section 3) demonstrates their confidence in the quality of our research and highlights the impact and influence that our research has on the global anti-doping community.</p> <p>The first review [1] encompassed an extensive annotated bibliography of peer-reviewed publications regarding: (i) predictors and precipitating factors in doping, (ii) attitudes and behaviours towards doping and, (iii) anti-doping education or prevention programmes. The findings of this review demonstrate that any attempt to make anti-doping evidence-based was problematic because the evidence base is weak [1, 3]. This undermines strategic planning and limits our ability to target appropriate and efficacious education programmes. The findings also suggest there is an urgent need to advance understanding of the psychosocial determinants of doping behaviour, especially through collaborative research efforts at a global level.</p> <p>The recommendations of this first review have been considered and addressed through empirical research currently being undertaken worldwide [6]. Our research collaborations with colleagues in Australia, the US, the UK, and Hungary are helping to build on the recommendations of the first review in order to advance understanding of doping behaviours (see section 3 on the collaborative grants obtained). Further, the findings of this review have guided the doctoral programmes of three Carnegie bursary funded students (Whitaker, Patterson and Erickson; Backhouse is Director of Studies) [4].</p> <p>In 2008, Backhouse and McKenna were re-commissioned by the WADA to evaluate the efficacy of prevention approaches across four related, yet independent, social domains. These domains were the prevention of tobacco use, alcohol use, social drug use and bullying (Patterson was the Research Assistant on the project). The objective of this review was to inform global anti-doping education and policy by identifying the most potent factors of successful domain-specific prevention programmes. The findings [2, 5] suggested that the most effective interventions are: (i) targeted at young people and adolescents when attitudes and values are forming, (ii) tailored to fit the target population, (iii) interactive and active, (iv) derived from social influence approaches, (v) focused on developing core life skills, (vi) delivered by well-trained individuals, and (vii) based on booster sessions delivered over a number of years. These findings provide key recommendations, in an accessible style, for anti-doping educators and policy makers responsible for programme design and development. At the same time, the findings highlight a significant gap between current anti-doping practice and effective intervention programming.</p>
<p><b>3. References to the research</b> (bold names indicate current Leeds Met staff):</p> <p>[1] <b>Backhouse, S.H.</b>, Atkin, A., <b>McKenna, J.</b>, &amp; Robinson, S. (2007). International Literature</p>

## Impact case study (REF3b)

Review: Attitudes, Behaviours, Knowledge and Education – Drugs in Sport: Past, Present and Future. [http://www.wada-ama.org/rtecontent/document/Backhouse\\_et\\_al\\_Full\\_Report.pdf](http://www.wada-ama.org/rtecontent/document/Backhouse_et_al_Full_Report.pdf)

[2] **Backhouse S. H., McKenna J., & Patterson, L.** (2009). Prevention through Education: A Review of Current International Social Science Literature; A focus on the prevention of bullying, tobacco, alcohol and social drug use in children, adolescents and young adults. [http://www.wada-ama.org/rtecontent/document/backhouse\\_Prevention\\_through\\_Education\\_final\\_2009.pdf](http://www.wada-ama.org/rtecontent/document/backhouse_Prevention_through_Education_final_2009.pdf)

[3] **Backhouse, S.H., & McKenna, J.** (2011). Doping in Sport: A review of medical practitioners' knowledge, attitudes and beliefs. *International Journal of Drug Policy*, 22, 198-202. DOI: 10.1016/j.drugpo.2011.03.002

[3] **Whitaker, L., Long, J., Petroczi, A., & Backhouse, S.H.** (2012). Athletes' perceptions of performance enhancing substance user and non-user prototypes. *Performance Enhancement and Health*, 1, 28-34. DOI: 10.1016/j.peh.2012.03.002

[4] **Backhouse, S.H., Patterson, L., & McKenna, J.** (2012). Achieving the Olympic ideal: Preventing doping in sport. *Performance Enhancement and Health*, 1(2), 83-85. DOI: 10.1016/j.peh.2012.08.001

[5] Mazanov, J., **Backhouse, S.H.**, Connor, J., Hemphill, D., & Quirk, F. (2013). Athlete Support Personnel and Anti-Doping: Knowledge, Attitudes and Ethical Stance. *Scandinavian Journal of Medicine and Science in Sport*. DOI: 10.1111/sms.12084.

### Key research grants supporting the research:

#### WADA

2012 **Backhouse, S.H., & McKenna, J.** Reviewing the social science of drugs in sport: Five years on. \$25,000 USD

2012 Ntoumanis, N., Barkoukis, V., & **Backhouse, S.H.** A statistical synthesis of the literature on personal and situational variables that predict doping in physical activity settings. \$19,672 USD

2009 Dodge, T., **Backhouse, S.H.**, Petróczi, A., & Mazanov, J. The Effect of Negative Health Consequences Information on Likelihood to Use Anabolic Steroids: An International Investigation. \$38,056 USD

2009 Petróczi, A., Naughton, D., **Backhouse, S.H.**, & Szabo, A. Markers of transition phases in assisted performance enhancement in emerging young athletes. \$35,025 USD

#### Australian Government Anti-Doping Research Program

2009 Connor, J., Mazanov, J., Hemphill, D., Quirk, F., & **Backhouse, S.H.** The interacting athlete: the knowledge and influence of support personnel in encouraging clean sport. \$41,925 AUD

#### Rugby Football Union (Invited to tender)

2013 **Backhouse, S.H., Whitaker, L., Petróczi, A., & McKenna, J.** Prevalence of supplements and doping in adolescent rugby union players. £69,552

### 4. Details of the impact

Our research has influenced global anti-doping policy and practice since 2007. This impact is based on trusting relationships that we have developed and maintained through the completion of WADA-commissioned research. The WADA is the global authority for anti-doping and their reports have a powerful influence on international agencies and agendas. Thus, our work impacts policy and practice globally (WADA), continentally (European Commission) and nationally (UKAD and UKA). The WADA's re-investment in our research team over nine years identifies us as their preferred research team for systematic, rigorous and impactful reviews around doping in sport and prevention education. We identify eight main points of impact:

1. Our work has **challenged established norms and practice** in the delivery of anti-doping education and the shaping of anti-doping policy. The WADA stated that our reports "*provide a strong evidence base for anti-doping organizations to not only start building education and prevention programs, but those needing to adjust or justify existing programs. From*

WADA's perspective these include our Ministries of Education Pilot Project and our Play True Generation Program". In an impact statement, the Head of Education and Athlete Support at UKAD has provided further evidence of our impact on challenging current practice, and shaping future strategies, in the field of anti-doping education.

2. Our publications have influenced **practice and professional services**. Policy and practice at UKA has been impacted through Backhouse's role on the Anti-Doping Policy and Support team. For example, she successfully advocated that UKA altered their strategy to target the wider athletics community. UKA's Anti-Doping Manager stated that Backhouse's *"education knowledge has been invaluable to the development of this strategy which aims to provide appropriate and effective anti-doping education for all sections of the athletics community in the UK"*. UKAD have also drawn on our research findings and expertise to inform their four year education strategy (2011-2015).
3. Our **research findings help to define best practice**. Based on the 2007 and 2009 reviews, Backhouse was invited to provide expert advice to the European Commission via the *Ad hoc Group of Experts on Doping in Recreational Sport*. Through this role, and in collaboration with other international experts, Backhouse is sharing best practice and making policy and practice recommendations for doping prevention across all 28 member states of the European Union. Backhouse has delivered workshops for organisations such as UKAD and Sports Medicine Australia to challenge and shape their anti-doping strategy.
4. A further impact of our research relates to the influence that the findings have had on global **debates on public policy and practice**. In response to our reports, the WADA has altered the anti-doping landscape of the global sports community. This community includes researchers, international and national commissioners of research, international and national sport governing bodies, and sports performers and professionals. The WADA's Director of Education stated that our 2007 and 2009 reports provided to the WADA have *"proven to be key elements in the area of anti-doping social science research. Your reports have been cited in most of the recent applications for WADA's Social Science Research Grant Program and, more generally, in many non-WADA funded research reports"*.
5. Global **economic and organisational impact** has been achieved by directing the WADA's social science research priorities and funding streams in anti-doping. Specifically, our research has informed the worldwide allocation of research funds and this has created a strategic and evidence based funding agenda. Therefore, our findings offer a reference point for further research on the social science of doping within and beyond our institution.
6. Our research has **challenged conventional wisdom and stimulated debate among stakeholders**. Following our 2007 recommendations, anti-doping policy has shifted to recognise the importance of values and skills-based education. Both reviews highlight the need to establish global collaborative networks of researchers and practitioners. As a result, the WADA has created a Researcher Directory ([www.wada-ama.org/en/Education-Awareness/Social-Science/Researchers-Directory/](http://www.wada-ama.org/en/Education-Awareness/Social-Science/Researchers-Directory/)) to develop a network of key stakeholders and to increase visibility and awareness of social science research.
7. The seventh main point of impact concerns health and welfare impacts through the **influence on continuous professional development of practitioners and researchers**. The initial research linked national and international beneficiaries through collaborative projects. These links have supported the professional development of two research assistants (Atkins and Patterson) who were involved in the WADA funded projects. In addition, the research team have secured internal funding for three full-time PhD bursaries (Director of Studies, Backhouse). External funding from the Rugby Football Union (see section 3) is supporting the first graduate of this programme (Whitaker) to pursue post-doctoral research in the field. Our commitment to addressing the gaps in the literature, and extending the research agenda, has given rise to a critical mass of researchers focused on doping and anti-doping in sport. For example, Whitaker's PhD thesis marked a significant

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step in identifying the risk and protective factors of doping in sport through the novel application of the Prototype Willingness model.

8. Since the impact of our work is global and expressed through world-wide education programmes implemented by the WADA, our work provides **direct benefit to the health and quality of life** of sports performers. Engagement with education programmes founded on our research, improves the awareness, understanding, and attitude of sports performers. In turn, this contributes to a reduced risk of potential harm associated with reducing and preventing doping in sport. In the UK, our impact is demonstrated by the 7000+ athletes and their support personnel who have received anti-doping education from UKAD since 2011.

### 5. Sources to corroborate the impact

Corroboration of the contribution, impact, and benefit of our research to the anti-doping field (section 4, points 1, 4, 5 and 6) is offered by an impact statement provided by the **Director of Education and Program Development** at the **WADA**. Additionally, the **Education Manager** for the **WADA** can also be contacted for further corroboration of the underpinning research undertaken by Backhouse and McKenna. They are also well placed to corroborate our influence on the development of researchers in the field (section 4, point 7). Available from Leeds Metropolitan University.

In a statement to Leeds Metropolitan University the **Head of Education and Athlete Support at UK Anti-Doping** has corroborated our impact on policy and practice at UKAD (section 4, points 1, 2, 3, and 8). Dr Backhouse's impact in a practitioner role as a National Trainer within UKAD's Education Delivery Network can also be provided by contacting the Head of Education and Athlete Support. This contact will also corroborate our influence on the continuous professional development of researchers and practitioners in the field (section 4, points 3 and 7).

In a statement of impact, the **Head of the Sport Unit** at the **European Commission** has corroborated our claim that our research has informed EU wide recommendations for preventing doping in recreational sport (section 4, point 3). Further corroboration can be provided by contacting the official in the Sports Unit responsible for anti-doping matters. Available from Leeds Metropolitan University.

Our impact on anti-doping policy and practice at UK Athletics (section 4, point 2) is corroborated in a statement of impact by the **Anti-Doping Manager** and in the **Anti-Doping Strategy** document for 2010-2013. Further corroboration can be provided by contacting **UK Athletics Anti-Doping Manager**. Available from Leeds Metropolitan University.

Further evidence of the impact, influence, and reach of our research is demonstrated by Backhouse's invitation to participate in the following activities or groups:

- European Commission's *Ad-hoc Group of Experts on Doping in Recreational Sport* (24<sup>th</sup> January 2013-present).
- Consortium bid to the European Commission for funding (£198,000EU) for a project on doping prevention in recreational sport.
- UKAD National Trainer (22 nationwide), Education Delivery Network (2011 – present).
- Invited speaker in the British Psychological Society sponsored symposium on *The pursuit of human enhancement: Doping in Sport*. British Science Festival, Bradford, 12 September, 2011.
- Keynote lecture at the *Body enhancement and (il)legal drugs in sport – a human and social science perspective conference*. Copenhagen, 10-12 November, 2010.
- Keynote lecture on supplements and doping at the University of the West Indies, Mona, 18 September, 2010.
- Sports Medicine Australia sponsored speaker at the Asics Conference of Science and Medicine in Sport (ACSMS), Hamilton Island, Australia, 16-18 October, 2008.
- Member of the UK Sport Social Research Advisory Group (to consult on anti-doping policy and practice in the UK) (2008-2010).