

Project Yager (Australia)

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The 3D Project: Development and evaluation of a multidimensional universal program addressing three interrelated behavioral influences on doping behavior

Researchers, health professionals, and communities agree that doping in sport, and the use of Appearance and Performance Enhancing Supplements (APES) can be harmful for adolescents and adults (Hoffman et al., 2008). Interventions to prevent supplement and substance use in the sport are needed to reduce harm.

Anti-doping programs for athletes have been implemented in a variety of sporting contexts with mixed results. However, this traditional approach to doping prevention is limited in reach and addresses only a few of the known determinants of APES use. Body image, and in particular, dissatisfaction with muscularity, is a key driver of APES use in adolescent boys and young men, but has received little attention as an anti-doping target. Recent research by the PI found that boys with poor body image were more likely to consume supplements such as protein powders and creatine, and more likely to have lenient attitudes towards the use of doping in sport (Yager & O'Dea, 2014). These findings demonstrate the interrelationship between body dissatisfaction and supplement use, suggesting the potential value in targeting body image in doping prevention efforts. Findings from a recent meta-analysis of personal and psychosocial predictors of doping (Ntoumanis, Ng, Barkoukis, & Backhouse, 2014) provides further confirmation that body dissatisfaction, and muscularity dissatisfaction in particular, are linked with increased doping intentions and doping use (Ntoumanis et al., 2014). These authors concluded that “body image should be targeted in prevention programs, particularly those that reach adolescent athletes” (Ntoumanis et al., 2014, pp 22).

Intervention programs to reduce doping and steroid use have predominantly focused on athletes. However there is evidence that doping behaviors are becoming more prevalent among the general population (Baron, Martin, & Abol Magd, 2007; Lippi, Franchini, & Guidi, 2008). Male non-athletes have been shown to report the highest usage levels of doping and ergogenic aids, followed by recreational athletes, whilst elite athletes reported the lowest rates of use (Wanijek, Rosenthal, Strauss, & Gabriel, 2007). In light of this pattern of usage, adolescent boys are an important target for anti-doping efforts as they may become future recreational or elite athletes, and their attitudes and beliefs in relation to doping contribute to the culture around doping use. If adolescent boys have a ‘win at all costs’ attitude, and positive attitudes towards doping, they are more likely to engage in the practice, and this also contributes to a social environment that supports doping behavior (Ntoumanis et al., 2014). Further, adolescent boys may become involved in sporting organizations in capacities other than as athletes; for example they may become coaches, support personnel, or volunteers. It is vital that individuals in these supporting roles also receive adequate anti-doping education and support to ensure that attitudes and social norms within sporting organizations align with an anti-doping stance (Mazanov, Backhouse, Connor, Hemphill, & Quirk, 2014). Thus, to reduce doping both in and out of sport, it is critical to

conduct multidimensional, universal programs with adolescent boys that target the use of APES and create attitude change at the individual, community, and societal levels.

In summary, we have identified two significant gaps in the implementation of anti-doping interventions: 1) Programs do not specifically target body image, one of the most important individual psychological factors related to APES use; and 2) Programs are typically implemented to selective audiences at a time that may be too late to meaningfully influence attitudes, intentions, and social norms, thus limiting their effectiveness. Our research aims to address these gaps by developing and evaluating a multidimensional prevention program that focuses on the interrelated influences of body image, use of supplements, and individual attitudes and social norms towards doping and APES use delivered in a school setting. This novel approach represents the first evaluation of a program that addresses doping and body image together.

We propose to address the following research questions:

- What is the impact of an optimised school-based universal body dissatisfaction and APES prevention program on adolescent boys' body dissatisfaction, attitudes towards doping in sport and intentions to use and actual APES use?
- Do teachers who receive resources and face-to-face training in program delivery have high levels of confidence and competence in delivering the program?