Psychology of Sport & Exercise 39 (2018) 163–170

Contents lists available at ScienceDirect

Psychology of Sport & Exercise

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

Portraits of adolescent athletes facing personal and situational risk factors for doping initiation

Lindsay R. Duncan*, Laura Hallward, Danielle Alexander

Department of Kinesiology and Physical Education, McGill University, 475 Pine Ave. West, Montreal, QC, H2W 1S4, Canada

ARTICLE INFO

Keywords:
Doping
Creative non-fiction
Prevention
Performance-enhancing substances

ABSTRACT

Objective: The purpose of this study was to qualitatively explore the personal and situational factors that contribute to the initiation of doping among adolescent athletes.
Design: This research was guided by a social constructionist epistemology and a relativist ontology.
Method: Data were collected using face-to-face, semi-structured interviews with 21 young adults who reflected on their experiences related to doping as adolescent athletes in a variety of competitive sports. The data analysis consisted of the development of creative non-fiction portraits (drawing upon the traditions of creative non-fiction storytelling and portraiture). This approach involves the creation of a story that is not a direct account of a participant's experience but a representation of events and experiences, grounded in research data.
Results: Four portraits were created depicting four separate characters with a unique set of beliefs, perceptions, motives, and circumstances that lead them to consider initiating doping. The portraits take the form of an inner monologue of the characters and depict a complex set of personal and situational factors that contribute to doping behavior.
Conclusions: Presenting the findings as portraits provides an accessible form of data presentation that readers can relate to and draw personally-relevant conclusions from.

1. Introduction

Doping is a worldwide problem that compromises fair play and integrity in sport (Backhouse, Whitaker, Patterson, Erickson, & McKenna, 2016). The prevalence of doping among athletes competing at a national level or higher has been estimated to be between 14 and 39% (de Hon, Kuipers, & van Bottenburg, 2015). Although this issue has been mainly discussed within the elite sporting context, research has highlighted the occurrence of athletes doping at sub-elite levels, including university, college, and even high school teams (Erickson, Backhouse, & Carless, 2017; Nicholls et al., 2017; Woolf, Rimal, & Sripad, 2014). Findings from Laure (2000) revealed that between 3 and 5% of adolescent athletes have openly admitted to using prohibited substances for performance enhancement in sport and that the initiation of doping can begin as early as eight years of age. Furthermore, researchers have suggested that adolescence is a crucial period for developing attitudes and moral values, including the commitment to compete as a clean athlete (Elbe & Brand, 2016). Doping prevention programs have, therefore, aimed to educate adolescent athletes to provide them with the knowledge and skillset to make informed decisions surrounding performance-enhancing substances and resist the temptation or pressure to dope (Elbe & Brand, 2016).

In order for doping prevention programs to be successful, the content of interventions must resonate with adolescents by addressing their specific needs and values (Backhouse, McKenna, & Patterson, 2009). When designing and implementing doping prevention programs, understanding the attitudes, motives, and risk factors associated with doping initiation have been suggested to be fundamental to program effectiveness (Backhouse, McKenna, Robinson, & Atkin, 2007; Backhouse et al., 2009; Lucidi et al., 2008). A multitude of personal, social, psychological, and situational risk factors that lead to the initiation of doping among all levels of athletes have been documented. Ntoumanis, Ng, Barkoukis, and Backhouse (2014) conducted a meta-analysis of the personal and psychosocial predictors of doping intentions and behavior across athletes of all ages and competitive levels. The results indicated that using legal supplements, perceived social norms, and positive attitudes towards doping were the three strongest positive correlates of doping and doping intentions. However, the predictors or determinants of doping can vary considerably depending on the athlete's age or competitive level (Backhouse et al., 2016). For example, elite athletes (e.g., Olympic, International-level) have reported risk factors including team selections, career transitions, and

* Corresponding author.
E-mail addresses: lindsay.duncan@mcgill.ca (L.R. Duncan), laura.hallward@mail.mcgill.ca (L. Hallward), danielle.alexander2@mail.mcgill.ca (D. Alexander).

https://doi.org/10.1016/j.psychsport.2018.08.012
Received 12 April 2018; Received in revised form 13 August 2018; Accepted 24 August 2018
Available online 27 August 2018

financial reasons (Backhouse et al., 2016), whereas less competitive athletes have reported reasons such as improving physical appearance and weight management (Özdemir et al., 2005). A systematic review by Nicholls et al. (2017) involving athletes aged nine to 21 years and across all levels of competition, identified nine factors that predict doping: gender, age, sports participation, sport type, psychological variables, athletes' entourage, ethnicity, nutritional supplement use, and health harming behaviors. Although these studies have identified numerous predictive factors of doping, they have mainly relied on questionnaires and cross-sectional study designs. As a result, there is a need to move away from rather simplistic explanations of doping (Kirby, Moran, & Guerin, 2011) and consider how multiple risk factors can interact and lead to doping initiation.

Researchers have acknowledged that there is no single risk factor that predisposes an athlete to dope (e.g., Engelberg, Moston, & Skinner, 2014). Rather, risk factors accumulate and act individually, in sequence, or in combination leading an athlete to initiate doping (Backhouse et al., 2016). The complexity, diversity, and interaction of doping determinants can be difficult to capture in quantitative study designs, limiting the extent to which we understand athletes' use of banned substances. In an attempt to address this gap in the literature, qualitative studies have been conducted to gain a deeper understanding of athletes' attitudes, motives, social, contextual, and personal risk factors that may influence or lead an athlete to initiate doping. Five elite athletes (ages 29–46 years) from various sports who admitted to or were caught doping were interviewed to identify the individual psychosocial factors that led to their initiation of doping (Kirby et al., 2011). The "admitted dopers" discussed the internal and external factors that contributed to their doping initiation, including perceptions that doping was widespread in their sport, pressure to please fans, prolonging athletic careers, ease of access to banned substances, and financial stability (Kirby et al., 2011, p. 212). This study provides a notable contribution to the literature by documenting actual motives to dope from admitted dopers who competed professionally or at the Olympics. Given the wide array of risk factors that can lead to doping initiation, younger athletes, or athletes competing at lower levels of sport may face different risk factors.

A number of studies have been conducted investigating the incentives and deterrents to doping among other sub-groups of athletes. Bloodworth and McNamee (2010) conducted focus groups with 40 young adult athletes (M_{age} = 19.6 years) to explore their attitudes and perceived pressure or temptation to dope. Athletes discussed incurring an injury and the economic pressure of elite sport as potential pressure points that may lead to doping initiation. Similarly, Whitaker, Backhouse, and Long (2017) conducted interviews with nine rugby and track and field athletes (M_{age} = 24.75 years) to explore the decision-making processes about whether to dope or not. The athletes competed at the national level or had a professional contract, but were not subject to out-of-competition testing. The athletes spoke about three situations in which athletes may be willing to dope: (1) to continue to compete at their current level, (2) suffering from an injury, and (3) external pressure from coaches and peers. Athletes may rationalize doping with the perception that if others are using performance-enhancing substances, it becomes normalized and it is necessary to level the playing field (Whitaker et al., 2017). These qualitative studies have helped move beyond simplistic explanations of doping, and deepened our understanding of the complexity of athletes' decisions to dope; however, there is a scarcity of research among sub-elite athletes.

Smith et al. (2010) interviewed 11 athletes, including six elite and five non-elite athletes, to explore their attitudes towards doping and the contextual factors that influence their attitudes. The athletes identified factors that shape doping attitudes, including themes such as personality and identity, influential people, sporting culture, and early sporting experiences. Results demonstrated that the athletes' attitudes were fundamentally shaped by their sporting culture (i.e., the prevailing values and beliefs of the sport, such as masculinity, risk-taking, aggression, and social engagement) as well as the physical performance requirements of the sport, (i.e., team versus individual, elite versus non-elite; Smith et al., 2010). These findings indicated that elite and non-elite athletes may experience different factors influencing their attitudes towards doping, warranting further investigation into athletes' views at sub-elite levels. Adolescent athletes at sub-elite levels may not relate to the pressures described by older or elite athletes, and may face unique pressures that predispose them to dope. With approximately 7.2 million adolescent athletes aged 15 years and older participating in sport on a regular basis in Canada (Canadian Heritage, 2013), there is surprisingly minimal research focusing on the risk factors, determinants, or motives that lead to the initiation of doping among sub-elite adolescent athletes. Therefore, the purpose of this study was to qualitatively explore the personal and situational factors that contribute to the initiation of doping among adolescent athletes.

2. Methods

2.1. Philosophical assumptions

Our research was guided by a social constructionist epistemology and a relativist ontology. These guiding assumptions suggests that reality is co-constructed, interpreted, and sustained based on social interactions (Daly, 2007). We acknowledge that our research process and findings are constructed within our current ways of understanding the specific historical, social, cultural, and political circumstances surrounding us (Burr, 2006; Gergen, 1973). Thus, this research is characterized by the subjectivity of the multiple realities that co-exist between researchers, participants, and readers in this study (Burr, 2006; Daly, 2007).

2.2. Participants

Athletes were eligible to participate in the study if they (a) were above the age of 18 years, and (b) had competed at the provincial level or higher as an adolescent athlete. Young adult athletes were chosen as the participant age group for two primary reasons. First, many adolescent athletes have not yet experienced pressure or situations that lead to doping initiation. Through pilot discussions conducted with adolescents, we found that they did not have the experience or contextual knowledge to provide in-depth or meaningful responses on the topic. Second, young adult athletes were able to reflect on their experiences throughout their entire adolescence as an athlete, which provided us with the potential of capturing a wider range of personal, contextual, and situational factors that may influence or pressure an athlete to begin using performance-enhancing substances.

The 21 recruited athletes (n = 11 females and n = 10 males) had a mean age of 22.24 years (SD = 1.84, range = 19 to 25) and competed in 13 different sports including: football (n = 4), track (n = 4), water polo (n = 3), synchronized swimming (n = 2), volleyball (n = 2), gymnastics (n = 2), badminton (n = 2), baseball (n = 2), basketball (n = 1), hockey (n = 1), soccer (n = 1), rugby (n = 1), and wrestling (n = 1). Multiple athletes competed in more than one sport as an adolescent, therefore, discussed their experiences within a variety of sport contexts. In regards to competition level, the majority of the athletes competed at the provincial level during their early adolescence, and then competed at the national level during later adolescence. Two athletes went on to compete at the international level during their adulthood. At the time of the interview, thirteen athletes competed at the university level in Canada (i.e., U SPORTS) as a varsity athlete, three athletes competed outside the university league, and five athletes were no longer competing in sport, having retired from either university sport and/or an outside league.

2.3. Procedures

After obtaining ethical approval, we recruited athletes from a large Canadian university using purposeful maximum variation sampling. We advertised our study through the university's online varsity athlete forum with the goal of recruiting participants that would most likely meet the eligibility criteria and represent a variety of sport types and competitive sport histories. Details about our study were provided explaining our interest in preventing doping initiation among adolescents and seeking out athletes to conduct a private, one-on-one interview to discuss their doping attitudes, beliefs, opinions, and experiences. We aimed to recruit a diverse sample of athletes to capture a range of personal and contextual risk factors as they may differ based on gender, sport type, competition level, etc. (Backhouse et al., 2016; Nicholls et al., 2017). Therefore, the sample was continuously monitored and participants were recruited from underrepresented populations via email. Interested athletes contacted us via email and were further provided with a detailed description of the study procedures. We did not anticipate issues in recruitment given that the university athletics department advocates for clean sport. Athletes provided written consent and were interviewed within the university athletics complex. We compensated each participant $20 for completing the interview.

2.4. Data collection

We collected data using face-to-face, semi-structured interviews to provoke rich conversations about factors that could lead to doping initiation among adolescent athletes. The first and second authors developed an interview guide containing open-ended questions based on previous doping literature (e.g., Chan et al., 2014; Erickson et al., 2017). Sample items included: “When you were competing, how would you have felt if you found out that one of your teammates was doping? Have you ever been in this situation? What happened? How much did you talk about doping with the other athletes? What was the nature of these conversations?”. In alignment with our philosophical assumptions, the open-ended nature of these questions allowed for us to engage in conversational dialogue with the participants, allowing for a better exchange about their experiences and perceptions of doping. All interviews were audio recorded and transcribed verbatim and athletes were given pseudonyms to ensure confidentiality. On average, the interviews lasted 35 min (SD = 7.25).

2.5. Data analysis

Through the data analysis and interpretation, our goal was to represent the complexity of situational, personal, and contextual factors that are involved in the initiation of doping. To accomplish this goal, we drew upon the traditions of creative non-fiction storytelling (Smith, McGannon, & Williams, 2016) and portraiture (Donmoyer, 1993; Lawrence-Lightfoot, 2008) to engage with our data and present them in the form of creative non-fiction portraits. Creative non-fiction storytelling involves the creation of a story that is not a direct account of a participant's experience but a representation of events and experiences, grounded in research data (Smith et al., 2016). Blodgett, Schinke, Smith, Peltier, and Pheasant (2011) describe three types of creative non-fiction: (1) portrait; which involves the presentation of an individual character, (2) snapshot; which details a specific moment or situation, and (3) composite; which involves creating a story based on combining accounts from multiple individual data sources. Through the initial stages of our data analysis, we came to believe that portraiture would be the most appropriate form for our creative non-fiction to take. We applied a composite approach to creating the portraits as they were based on a combination of accounts from the multiple participants in this study (Blodgett et al., 2011; Erickson, Backhouse, & Carless, 2016). The characteristics of artistic portraits make them appropriate to serve as a model for our approach to data presentation. A portrait presents more than an exact mirror reflection of a subject, but involves an interpretive quality that allows for a depiction of a broad context. In portraiture, artists create their own unique interpretation of the subject, which is always recognizable but also different from those that would be created by other artists (Donmoyer, 1993). Thus, the use of portraiture reflects an awareness of the relational quality between the participants, researchers, and readers in the data interpretation. For these reasons, we believed that borrowing from the traditions of portraiture was an appropriate complement to the creative non-fiction approach and well-aligned with our philosophical assumptions.

We felt that a creative non-fiction portraiture approach was an appropriate data analytic practice for this study for five primary reasons. First, the characteristics of portraiture align well with our social constructionist assumptions regarding the relational quality of acquiring an understanding of the world. Second, it has the potential to provide a vibrant, relatable, and compelling depiction of an issue that many readers may not have previously considered to be relatable. Therefore, this approach may provide an optimal opportunity for vicarious learning amongst the readers (Erickson et al., 2016). Third, our thorough review of the interview transcripts revealed that the initiation of doping involves a complex interaction of personal and situational factors, and creative non-fiction has been reported to be particularly useful for demonstrating such interactions (Smith et al., 2016). Fourth, this approach allows us to integrate direct verbiage used by the participants to preserve the authenticity of their own words while portraying a fictionalized situation. Fifth, stories and portraits are accessible forms of data presentation that can be understood by a broad audience, which aligns with our desire to use our data to directly inform doping prevention efforts.

We underwent a rigorous process to develop the creative non-fiction portraits. Following the transcription of the interviews, we familiarized ourselves with the dataset by reading over the transcripts multiple times and noting our thoughts and perceptions. From these notes, we established four distinct character sketches reflecting the variety of ages, sports, previous exposure to doping education, relationships with their coaches, and reasons they may initiate doping that were expressed through our interviews. We created an outline for each character and then compiled quotations from the participant interviews that aligned with the character and his or her experience. Each portrait was then drafted by one of the authors and quotations were integrated within it. The integration of quotations from the interviews, identified in italics within the portraits, helped us to express the characters in the voices of our participants. A first round of edits was made by the remaining authors. We then sent each story draft to six to ten individuals for review. These individuals were not necessarily participants in our original data collection but were purposely selected because they were athletes who could relate to the character being portrayed with regard to gender, sport type, and/or highest competitive level achieved, or had some relevant expertise in coaching or sport psychology. These individuals provided big picture comments on the story (e.g., Was it realistic? Did it make sense?) as well as specific comments (e.g., Do you recommend edits to the wording of any sentences?). After receiving feedback from these individuals, all authors met together to do a live review of the portraits, discuss the feedback, and make edits to the portraits. Once we felt the portraits were near completion we met with a tutor from the writing services center at the host institution for advice on the literary quality of the portraits.

2.6. Criteria for judgment

There is no standard set of criteria to judge the quality of interpretive research, such as that presented here (Erickson et al., 2016; Smith et al., 2016); however, adopting a relativist approach we drew upon discussions from Schinke, Smith, and McGannon (2013), Smith et al. (2016), and Sparkes and Smith (2014) to provide some guidance on creating good quality creative non-fiction portraits. We took eight

measures to ensure the quality in the creation of the portraits. First, we aimed to be clear with our readers about the purpose of creating the portraits such that they can judge for themselves the contributions that they make to the literature and how they align with or challenge previously published findings. Second, we built our portraits on the foundation of the semi-structured interviews, then through the multiple phases of revision we consistently checked back to ensure the portraits still represented key ideas that we believed had been expressed in the interviews. Third, we aimed to create the portraits in an evocative manner such that they would conjure up relatable experiences and emotions. Our goal was for the readers to feel like they were seeing or experiencing the data emerge rather than simply being told what themes and emotions they should perceive. By attempting to evoke emotion through thick descriptions and rich interpretations, we facilitated naturalistic generalizability of the study (Smith, 2018). Fourth, we sought verisimilitude in the presentation of the portraits by creating characters and situations that closely aligned with our participants' telling of their own experiences. Further, we integrated quotations from our interviews into the portraits to reflect the voices of our participants and we involved athletes and individuals with relevant experiences in the review of our portraits to assist in achieving a feeling of authenticity in the characters, situations, and language. Fifth, we focused on presenting complexity in the characters by using an internal monologue approach to depict tension or conflict in their thoughts, worries, sense of identity, and moral beliefs. Sixth, we chose the approach of presenting a portrait or a snapshot in time to represent key moments in doping initiation. We were deliberate in presenting only short scenes as we felt this allowed us to demonstrate a complex interaction of factors set within specific moments without obscuring the message with cumbersome details. Seventh, we spent a considerable amount of time discussing amongst ourselves, and reviewing opinions from others on the degree to which the stories "felt right". As highlighted by Smith et al. (2016), this can contribute to the authenticity the readers perceive in the stories, and therefore, the strength of the messages they can take from them. Our eighth and final approach to ensuring the quality of the stories was to undergo an extensive process of editing and revision. Despite the fact that we were systematic in outlining the stories before they were drafted, the final versions of the stories presented here are considerably evolved from the original drafts. Although we regularly reflected on the themes we sought to convey through the portraits, the depiction of the characters and their surrounding circumstances developed with our frequent discussions and incorporation of feedback.

We did consider some additional factors that have been presented as means to achieve high quality creative non-fiction stories (Smith et al., 2016) but throughout our process came to believe they would not be the most relevant in our case. Some authors have suggested that interpersonal dialogue is a compelling way to present the denouement (e.g., Smith et al., 2016). Consistent with the portraiture approach, we opted to limit the inter-character dialogue and focus more heavily on the internal thoughts of the characters to express the fact that our data suggested doping initiation often involves an athlete's process of reconciling their own personal thoughts with their perceptions of the social and environmental pressures. Developing a plot and setting a clear scene have also been suggested as means to present high quality creative non-fiction stories (Smith et al., 2016). We were deliberate in limiting the plot and presenting portraits rather than more extensive stories because of our goal of depicting moments when doping is initiated. With regard to setting the scene, we aimed to provide enough information about the physical space or moment in time that the reader could create a realistic and relatable image in their mind without having one forced upon them. We encourage the reader to judge the quality of the portraits presented in light of the considerations our team made in writing them.

3. Results

Each portrait is composite in nature, meaning it portrays a collection of experiences by multiple athletes, as opposed to one singular experience. The portraits focus in on one specific fictional character, do not have a definite beginning or end, and represent the voice of an adolescent athlete faced with the pressure of whether to initiate doping or not. Direct quotations from the interviewed participants are presented in italics. The four portraits of Sarah, Marc, Brad, and Maria are individually presented below.

3.1. Sarah

I know I'm the best on the team, but let's be real if I'm going to make the team when I go to university next year, I need to be better. In our last meeting, Coach said my skills and technique are great, but I need to improve my speed and agility on the court. Does this mean Coach thinks I'm slow? Or, even worse, she thinks I'm fat?! Well she didn't exactly say it like that, but I could afford to lose a couple of pounds. *I remember leaving her office and going, "how do I do that?* How much do I train? What do I eat?" *Coach just assumes that athletes by this time or at this point in their lives know what healthy eating is all about,* but I'm not really sure. *I was never educated on nutrition, my parents were never educated on nutrition.* How am I going to drop all this weight in just a few months? I don't think that working out is going to be enough … I wish we were one of those fancy schools that has trainers and nutritionists for their teams. *Coach is putting pressure on me* and I feel like she is expecting something dramatic from me, like, movie montage-style changes. *I trust my Coach because she wants me to do better.* I don't want to disappoint her if I don't make the improvements she expects.

Should I ask one of the older girls on the team what to do? I'm *really embarrassed and shy to admit that I'm trying to lose weight* to my teammates though. Maybe I should talk to Julia on the volleyball team … she *used diet pills to lose weight,* it was crazy, such *a drastic weight loss in a very short amount of time.* That's what I need. She told *me they work, and they work well.* She said they can have some side effects *but maybe it's not going to happen to me.* I'm only going to use it for a couple of weeks anyways, just to help me get started.

But what's going to happen if people comment on my weight loss? Or if somebody finds out? I don't want rumors going around about me. *We're kind of that little perfect team that sticks together, we don't break the rules, everybody loves us* … I don't want people to think I'm a cheater. I'm not a cheater.

3.2. Marc

There was a time I thought I hit my peak at fourteen. Fifteen and sixteen were rough. It's crazy to go from being the best guy on the team since I was five, to seeing everyone get bigger and faster. It was like, all of a sudden, I was smaller and weaker than everyone else. *We're the same age and it was so frustrating because there was this guy next to me and he may have been the same skill level but he just gained* 20 lbs *of muscle and he was skating so fast* and taking hits, *it was painful to watch … it was so irritating. I was trying to reach my dream and I was trying everything* – and they were the ones getting the edge.

The feeling when I got pulled off the first line and replaced with Robinson … Robinson! Man! Of all people. I guess that was the wake-up call I needed. Get with the program, Marc. Step it up. Your regular training isn't gonna cut it. Thank goodness my dad was paying attention. I wouldn't have known what to do. He was all over it though; asking the coach about extra workouts, reading up on supplements and proper nutrition. My dad understands what it takes to become a pro. He just legitimately wants me to be able to compete at the highest level and help me gain any advantage I can. If my dad wasn't so invested, I'd be playing beer league hockey with a bunch of washed up old guys by now.

I'm almost embarrassed that I thought a protein shake after a workout would be enough to keep me going. Obviously guys were taking it to the next level. *I mean, they wouldn't really hide it. I'd notice right away that they went from being a hundred forty pounds soaking wet to one-seventy in two, three months. It was just so black and white. And they were pretty proud of it.* But I see it now. You don't really have a choice when you want to compete at this level. *I mean you look at a person's hockey bag when they open it up, they've got their protein powder, they've got their pre-workout, creatine, BCAAs … Some of them have caffeine pills.* Who knows what else …

It's kinda weird that the coach never says anything. I mean, *the coaches and trainers can't be blind to all of this. Coach is definitely a good guy. He loves this hockey program. I don't think he wants anything to happen to it. But, I don't know, they never discuss it. No guy's ever been interrogated, nothing. They just let it happen. I guess he just won't confront anyone without proper evidence.* The thing is, Coach isn't really looking for it. I guess all the other guys figured it out before I did.

3.3. Brad

Yes! That was a good practice! I'm so glad I felt good today. It would suck to have an off-day at my last practice before my very first Nationals. Brian said my strokes are looking good and after this week's training I feel rested and ready to go! When I get off the block and into the water, nobody's gonna stand a chance against me! Haha, well, okay, I know it's just my first Nationals and I know there are swimmers way faster than me there, but I'm definitely ready to crush my own personal bests.

Okay, tonight, I've got to pack. I'm going to have to be pretty strategic about this because I'll be away longer than I'm used to. My coach told me to put my racing suit in my carry on in case my bag gets lost … man I hope my bag doesn't get lost. I should find the packing list and all those papers they gave us at the team meeting tonight. I guess I need to sign that doping form, too. Where'd I put those forms … Oh! Here they are! Ok, let me look at this list … Hmmm, yikes, this looks complicated! Metabolic modulators … Methyl-die … methyldieno … methyldienolone, how do you even pronounce that one? Clenbuterol … *This is just a bunch of medical lingo* … Ventolin … Ventolin?! Uh oh! Is that what I take for my asthma? Let me google that … Ventolin … Hmmm, it says it's an inhaler! Is that actually what I take? *Am I not allowed to take my inhaler? I don't really take it a lot … so I might be fine? But what the heck, I can't take things that are prescribed to me that I need? What do I do?* Oh man, this is not good. I don't need this kind of stress right now. I was feeling so good just two minutes ago. Ok, let me text José and see if he knows what to do …

Brad: Hey man, did you read that doping stuff we got tonight?
José: Hey Brad. I mean, I signed it. We just need to hand it in before we compete.
Brad: No, but, I think my inhaler is on the list. I don't know if it's allowed … I'm freaking!
José: You're probably fine, man. You've been using your inhaler all year. Brian would have said something if you weren't allowed to take it. Plus, we had this info session like three years ago, before you were on our team, and I think they said if you have to take it for medical reasons it's okay.
Brad: K … but how do they know if I need it? Do I need a doctor's note?
José: Not too sure … I guess ask Brian?

Does Brian even know? I mean, he knows I have an inhaler but we've never talked about banned substances before. *He just says "Don't be an idiot and don't-test positive."* But he was just talking about steroids and stuff. I don't even know if Brian even knows all the rules. *If he's the national coach then he probably knows what he's doing … Or, maybe not necessarily,* he doesn't really seem like an expert in this; he's still pretty new to coaching, I think this is only his second year coaching Nationals. But maybe he knows this stuff from when he was swimming. Argh! I wish we got this list earlier … Maybe I can just try not to use my inhaler at the meet? Am I going to be cheating at my very first Nationals? I don't even know how to find out … *I think it would have helped to have had a doctor maybe sit with me and go through everything.* I feel like it's too late … *But I worked so hard, and I'm flying across the country tomorrow … am I even going to be allowed to compete?*

3.4. Maria

I wish I could just go back to that one game and that one play. I saw her running towards me at full speed and I knew as soon as I was about to shoot that we were going to collide. That split second ruined everything. Before then, *I felt very confident about my chances of going to a good Division I school.* I even had my eyes set on playing pro one day! But then she hit me, my knee twisted in such an awful way, and that was it.

At first, I was really optimistic about recovering. I didn't need surgery, best news! I had to miss the rest of the season which sucked, but I still had the whole summer to recover and get back in shape. My coach *set me up with all these trainers, physical therapy four to five times a week. You know, just trying to do whatever it took.* It was painful, but I told myself every day *you got to work hard to get back into it.* That really worked … for a little while. As time went on, even though I was working so hard, it felt like I wasn't recovering quickly enough. It was really *demotivating, just seeing everyone else continue to progress while I was just sitting there watching them* play. *I felt like I was getting sort of left behind. It wasn't fun.*

I didn't really talk to many people about being so sad about getting injured. My teammates were all focused on their goals of making it to a Division I school, but *my chances were a lot slimmer now* and I was just getting left behind. *I still worked* hard in the gym, *but it didn't mean as much* anymore. My friends could tell *I was sort of pessimistic* about my future in the sport. I mean, soccer and being an athlete is my whole life. It's like my life is over. I would do anything to play again.

After training today, my friend *told me "take this to recover better".* So now I've got this bottle of white pills. They look harmless but I know they are probably illegal or banned or whatever. Should I take them? But I remember Coach telling us, *"We are not doing that, we are clean here. Watch what's on the banned list. Be very careful not to test positive".* But I'm injured, what are the odds of me even being tested? Do I even care? At this point I might as well. What more do I have to lose …

4. Discussion

The purpose of this study was to explore the personal and situational factors that contribute to the initiation of doping among adolescent athletes. To deepen our understanding of these factors and how they interact among athletes who have not yet reached elite-level sport, we developed creative non-fiction portraits depicting four moments in which circumstances aligned and athletes felt influenced or pressured to initiate doping. Inherent in our decision to craft these portraits based on the principles of creative non-fiction storytelling is our belief in the power of a story in making a unique impression upon the reader who engages with the story (or in this case, portrait) from their own unique vantage point. We acknowledge that the meanings we draw from the portraits are *our* meanings and they may not perfectly align with the interpretation that other readers will make. Thus, following in the footsteps of other researchers who have presented creative non-fiction stories in the domain of sport and exercise psychology (e.g., Carless & Sparkes, 2008), and doping (Erickson et al., 2016), we offer some discussion, not as a means to impose one correct interpretation of our research but rather to present our own reflections on what we learned through the process of developing the portraits and what we hope the readers might take from them. We invite readers to reflect on the

themes they perceive in their reading of the portraits.

In considering the portraits that we generated in this analysis, we were struck by the magnitude of the problem surrounding a lack of knowledge about doping among sub-elite athletes. Many athletes lack basic knowledge about doping (e.g., What constitutes doping? Which substances are banned? Who is eligible for testing? Which healthy nutritional options are available for helping to improve performance?) and this constitutes a major risk factor for doping initiation. In the portrait of Sarah, she feels helpless because she thinks she needs a nutritional intervention but doesn't know enough about nutrition to do it on her own. Brad, a young swimmer, has never been formally educated about prohibited substances nor the protocols for receiving a therapeutic use exemption, and he realizes too late that he could be disqualified without one. The portraits of both Maria and Marc also suggest a lack of understanding of the rules of doping control. A deep lack of knowledge also exists among members of the support team, such as coaches, trainers, or parents. For example, Brad finds himself in a distressing situation, in part, because his coach Brian is not sufficiently educated about anti-doping protocols and the role that he has as a coach in teaching his athletes. Sarah is well aware that her parents do not have the knowledge necessary to provide her the nutritional support she needs. The finding that athletes and their entourage are lacking education is not new – other researchers have been documenting this for decades (e.g., Backhouse et al., 2007; Greenway & Greenway, 1997; Somerville & Lewis, 2005). However, in creating the portraits we came to understand that the severity of this problem and the compounding effects of athletes and members of their entourage *all* being insufficiently educated has not been documented in the research literature. These portraits also demonstrate to adolescent athletes how a lack of doping knowledge in a few areas or by a few people can aggregate and quickly manifest itself into doping initiation. As indicated by the World Anti-Doping Agency (WADA), it is the ultimate responsibility of the athlete for the substances they ingest and actions they take (WADA, 2015); however, the optimal doping-free sport environment includes coaches and other athlete support personnel who could serve as reliable information sources. Our portraits express that the risk of doping seems amplified when an athlete cannot access trustworthy information from their support personnel. Although knowledge does appear to play a key role in doping prevention, and should certainly be a key focus of prevention efforts, knowledge alone will not protect an athlete from initiating doping (Barkoukis, 2016; Elbe & Brand, 2016; Ntoumanis et al., 2014). Considering our portraits in light of the other doping prevention literature, we believe that prevention interventions should be robust and address a number of social and motivational factors beyond simple knowledge about doping and its risks.

A second observation that we made in the creation of these portraits was the role that members of an athlete's social network, both inside and outside the sport context, can play in providing support to avoid doping and also pressure to initiate it. The portraits make a novel contribution to the literature by demonstrating how difficult it can be for athletes to tease apart their social influences and understand whether they are positive, negative, or a mix of both. In the portrait of Sarah, she comes to perceive pressure to dope because of her appraisal of a conversation she had with her coach. The pressure that Sarah felt in this moment that drove her toward considering diet supplements may or may not have been explicitly intended by the coach, but either way it was perceived that way. In the case of Marc, his father's reaction to his performance plateau and the subsequent actions he takes to find ways to help Marc become bigger and stronger could be perceived as supportive, but could also be perceived as coercive. In the portrait of Maria, it was her friend and teammate who made the explicit suggestion that she take drugs to help her recover. The social dynamics of doping presented in the portraits are consistent with previous research findings that athletes' appraisals of interpersonal situations may lead them to perceive pressure to dope (Zelli, Mallia, & Lucidi, 2015). In a study conducted by Zelli et al. (2015), 900 adolescent athletes were presented with hypothetical situations depicting interpersonal interactions in which they were being solicited to use banned substances. After reading each situation, participants provided an appraisal of the degree to which they thought the solicitor had the protagonist's best interest in mind, the degree to which the protagonist had his or her own interests in mind, or whether the solicitor sought to harm the protagonist. Adolescents who appraised the situation as more favorable to the solicitor subsequently reported higher risk cognitions and motivation, such as lower self-efficacy, for refusing social pressure to dope, stronger positive attitudes toward doping, more positive perceived social approval of doping, and stronger intentions to dope in the near future (Zelli et al., 2015). These findings are also consistent with previous research based in the theory of planned behavior which has supported that doping-related attitudes, perceived behavioral control, and perceived norms can all be influenced by personal appraisals of social situations (Kirby, Guerin, Moran, & Matthews, 2015). Given the role that interpersonal appraisals can play in motivating doping behavior, prevention efforts should include content around the social dynamics of doping.

It is characteristic of athletes to constantly monitor their progress and performance against their personal best performances as well as against their peers and competitors, even at the sub-elite level (Morente-Sanchez & Zabala, 2013). This characteristic is often critical in driving athletes' motivation to train and compete. As discussed by Smith et al. (2010), however, it can also contribute to risky or unethical attitudes and behaviors such as doping. In our portraits, Sarah is very aware of her status as the best player on her current team but fears she will not be able to compete against the players at the college level and is focused on taking any action she can to ensure she will succeed at that level. Marc became frustrated when he noticed that he had plateaued and other athletes his age were still on an upward trajectory. When Maria realized that her injury was setting her way back from her teammates she became somewhat ambivalent to the moral consequences of doping. When athletes feel they cannot maintain their position on a team or ranking amongst their competitors and they do not feel they have the resources to succeed in a healthy way, they may feel pressured to use performance-enhancing substances to regain their edge. As documented in the literature, the nature of an athlete's goals and the resources they have at their disposal may influence the likelihood that they will turn toward doping when they find themselves in difficult positions. For example, Sas-Nowosielski and Swiatkowska (2008) have demonstrated that athletes with high levels of ego orientation are more inclined toward maladaptive behavior such as doping, whereas athletes who subscribe to a more task-oriented mastery orientation are less likely to engage in these behaviors. As expressed in our portraits, a tendency toward perfectionism or competitiveness is not likely to be the sole factor driving an athlete toward doping, but may play a contributing role when aligned with other circumstances.

Our portraits express moments where young athletes are at a breaking point – personal and social circumstances have aligned that have put them in compromising positions. Interpreting and presenting our data through the creation of creative non-fiction portraits allows us to demonstrate the complex interactions of personal and situational factors that contribute to the initiation of doping in a way that has not previously been expressed in the literature. In a study of elite athletes reflecting on the circumstances that led them to initiate doping, Engelberg et al. (2014) reported that it was a confluence of factors, not one singular incident, that resulted in doping initiation. Through our portraits, we demonstrate how powerfully an interaction of factors can drive athletes toward doping when they feel trapped in their current circumstances and/or are illequipped to seek alternatives. Although we chose to present portraits representing one moment in time, we believe the complexity of factors leading to doping is evident as each character has a distinct set of beliefs, perceptions, and motives that they experience within a broader context. Given the same set of social

circumstances, one athlete may initiate doping whereas another athlete may be resistant to it. We hope that readers who engage with these portraits perceive the complex interaction of factors contributing to doping.

A note about researcher reflexivity is warranted, given the perceptual and interpretive nature of creative non-fiction portraiture. We are all women who competed in sports as adolescents and faced little overt pressure to use nutritional supplements or performance-enhancing substances. For several years, we have been engaged in research with adolescents, exploring their attitudes about doping, responses to doping-prevention messages, and working toward building a primary doping prevention intervention. This experiential context in which we conducted our analysis has inherently shaped the creation of the portraits. Although we acknowledge the way that our experiences have shaped the creation of the portraits, we also feel it is important to acknowledge the other voices that come through in the portraits. We included quotations from our research participants in italics throughout the portraits in an attempt to protect the authenticity of their words. We also recruited individuals with distinctly different sport and academic backgrounds from our own to solicit their feedback on the stories, which we hoped would bring some naturalistic generalizability (Smith, 2018) to the portraits. Notwithstanding these steps, the writing of creative non-fiction portraits is inherently interpretive and the overall tone of the portraits certainly reflects our own experiences and understanding of the culture of doping initiation in Canada.

In considering all four portraits together, it is notable that the tone is somewhat gentle. The athletes are presented, to a certain degree, as victims of their circumstances without explicit malicious intent. We feel there is an interesting and novel finding here. In previous research, when adolescents have reported on their future intentions to use performance-enhancing substances there have been overwhelming 'floor effects' in which almost every athlete reports that they absolutely will never use these substances (Elbe & Brand, 2016; Ntoumanis et al., 2014). We believe this comes from a dominant perception among adolescents that doping is done by people with a malicious or deliberate intent, which is reinforced by doping reports in the media. In listening to the experiences and ideas of our participants, however, we realized that the circumstances surrounding the initiation of doping among adolescents who have not yet reached elite-level sport are often less malevolent and that pressure is more nuanced. These nuances are what we have reflected in the portraits.

The primary limitations of this research reflect decisions that we made with regard to participant recruitment and data analysis. Among the participants who conducted the interviews from which the portraits were generated, there were no athletes who admitted to doping. All athletes spoke generally about their knowledge of and experiences with doping in their environments; however, it is not known the degree to which they were reporting on first person accounts. Given that writing creative non-fiction portraits is an interpretive process in which facts are accompanied by fiction, we did not feel it was necessary for the portraits to be based exclusively on first-person accounts. A second limitation lies in the risk that the complexity and interaction of themes expressed in the portraits is not perceived by the readers as we hoped. Frank (2010) describes the nature of stories as "out of control" whereby the author has no guarantee that the reader will interpret the purpose, theoretical and analytical insights, or relevance as the writers intend. Our best efforts were made to consult with potential end-users of this research as the portraits were being developed to help create portraits that felt authentic and resonated with our target audience while remaining true to the data; however, every reader will reach their own understanding and draw their own conclusions (Frank, 2010). A third limitation to our study is that we chose to portray our data using portraits reflecting moments in time to illustrate an athletes' experience. In comparison to alternative qualitative approaches, such as narrative inquiry or other forms of creative non-fiction, our methodological design provided us with less opportunity to describe a detailed plotline or include more socio-cultural contextual information associated with the portraits. Selecting an approach that better facilitates the inclusion of this contextual information would allow us to more deeply explore the broader, socio-cultural factors that influence an athlete's experience surrounding doping such as the influence of the media or the 'clean' status of professional athletes on adolescent doping intentions.

As discussed by other researchers, there is practical benefit to presenting data through story-based approaches because of the potential for them to facilitate some elements of knowledge translation (Erickson et al., 2016; Smith, Tomasone, Latimer-Cheung, & Martin Ginis, 2015). Within a research context, stories can be used to transcend a typical academic audience and reach other stakeholders on a more accessible level. As stories allow readers to inhabit the world of the characters, the messages being conveyed through story may be more engaging to non-academic audiences. A coach who is committed to a regular dialogue about doping and other ethical issues with his/her athletes may use these portraits to identify key points for discussion. A parent who sees his/her own actions reflected in a story may realize that his/her attempts at support can be perceived as pressure and reconsider some of his/her actions. Disseminating our results using creative non-fiction portraits invites all participants involved in sport (i.e., athletes, parents, coaches, trainers, etc.) to interpret and reflect on the personal, social, psychological, and situational risk factors that contribute to the complexity behind doping initiation. The portraits could also serve as stimuli for the development of relatable anti-doping intervention activities. In other domains, role play has been used as an effective intervention technique to educate adolescents about the social dynamics of health risk behaviors (Banister & Begoray, 2004; Bennett & Assefi, 2005; Schuster et al., 2008). We suggest that doping prevention efforts could be enhanced by teaching adolescents about their susceptibility to social pressure around doping and how to appraise their social interactions by including role-play activities based on these portraits and other stimuli. In fact, our research team is involved in the development of a doping-prevention intervention that will capitalize on scenario-based learning. The development of these portraits has provided us with rich data that will form the basis of the intervention activities. We invite readers to use these portraits as case studies for discussion or as inspiration for other scenario-based activities to engage adolescents in conversations about doping-free sport.

Overall, this research is the first to use creative non-fiction portraits to provide a glimpse into the lives of young athletes and the pressure they may experience to initiate doping. Analyzing and presenting the data through portraiture has extended our knowledge on doping initiation both empirically through the extension of current doping literature, as well as practically, by providing prevention interventions with an accessible form of relatable and meaningful data. The portraits mainly highlight the lack of doping knowledge among adolescents and how their social networks can have a serious compounding effect that put adolescent athletes in pressure filled situations and at risk of initiating doping. Results from our study have taken the first step to understanding the complex association between the multitude of adolescent risk factors and doping initiation, and presenting them through portraits using the athletes' own words. These creative non-fiction portraits can be used in educational resources, such as through scenario-based learning and role playing. It can also extend as a helpful tool, not only among adolescent athletes, but to spark conversation and learning for an athlete's parents, coach, trainer, doctor, etc. Researchers are encouraged to employ creative non-fiction portraiture in their investigations and to consider how the results of such studies can be built into prevention interventions as a method of facilitating adolescent athlete learning to reduce the onset of doping initiation in non-elite sport.

Declarations of interest

None.

Funding

This project has been carried out with the support of the World Anti-Doping Agency.

References

Backhouse, S. H., McKenna, J., & Patterson, L. (2009). Prevention through education: A review of current international social science literature. Retrieved from https://core.ac.uk/download/pdf/29019303.pdf" .

Backhouse, S. H., McKenna, J., Robinson, S., & Atkin, A. (2007). International literature review: Attitudes, behaviours, knowledge and education – drugs in sport: Past, present and future. Retrieved from https://www.wada-ama.org/sites/default/files/resources/files/backhouse_et_al_full_report.pdf .

Backhouse, S. H., Whitaker, L., Patterson, L., Erickson, K., & McKenna, J. (2016). *Social psychology of doping in sport: A mixed-studies narrative synthesis.* Montreal, Canada: World Anti-Doping Agency Retrieved from https://www.wada-ama.org/sites/default/files/resources/files/literature_review_update_-_final_2016.pdf.

Banister, E., & Begoray, D. (2004). Beyond talking groups: Strategies for improving adolescent health education. *Health Care for Women International, 25*(5), 481–488.

Barkoukis, V. (2016). Moving away from penalization: The role of education-based campaigns. In V. Barkoukis, L. Lazuras, & H. Tsorbatzoudis (Eds.). *The psychology of doping in sport (pp. 215-229).* London: Routledge.

Bennett, S. E., & Assefi, N. P. (2005). School-based teenage pregnancy prevention programs: A systematic review of randomized controlled trials. *Journal of Adolescent Health, 36*(1), 72–81.

Blodgett, A. T., Schinke, R. J., Smith, B., Peltier, D., & Pheasant, C. (2011). Indigenous words: Exploring vignettes as a narrative strategy for presenting the research voices of aboriginal community members. *Qualitative Inquiry, 17*(6), https://doi.org/10.1177/1077800411409885 522e533.

Bloodworth, A., & McNamee, M. (2010). Clean Olympians? Doping and anti-doping: The views of talented young British athletes. *International Journal of Drug Policy, 21*(4), 276–282. https://doi.org/10.1016/j.drugpo.2009.11.009.

Burr, V. (2006). *An introduction to social constructionism.* London: Routledge.

Canadian Heritage (2013). *Sport participation 2010, research paper.* Retrieved from publications.gc.ca/collections/collection_2013/pc-ch/CH24-1-2012-eng.pdf.

Carless, D., & Sparkes, A. C. (2008). The physical activity experiences of men with serious mental illness: Three short stories. *Psychology of Sport and Exercise, 9*(2), 191–210. https://doi.org/10.1016/j.psychsport.2007.03.008.

Chan, D. K. C., Hardcastle, S. J., Lentillon-Kaestner, V., Donovan, R. J., Dimmock, J. A., & Hagger, M. S. (2014). Athletes' beliefs about and attitudes towards taking banned performance-enhancing substances: A qualitative study. *Sport, Exercise, and Performance Psychology, 3*(4), 241–257. https://doi.org/10.1037/spy0000019.

Daly, K. J. (2007). *Qualitative methods for family studies and human development.* ThousandOaks, Oaks, CA: Sage.

Donmoyer, R. (1993). The purpose of portraits: Rethinking the form and function of research on at-risk students. In R. Donmoyer, & R. Kos (Eds.). *At-risk students: Portraits, policies, programs, and practices (pp. 37-49).* New York: SUNY Press.

Elbe, A. M., & Brand, R. (2016). The effect of an ethical decision-making training on young athletes' attitudes toward doping. *Ethics & Behavior, 26*(1), 32–44. https://doi.org/10.1080/10508422.2014.976864.

Engelberg, T., Moston, S., & Skinner, J. (2014). The final frontier of anti-doping: A study of athletes who have committed doping violations. *Sport Management Review, 18*(2), 268–279. https://doi.org/10.1016/j.smr.2014.06.005.

Erickson, K., Backhouse, S. H., & Carless, D. (2016). "The ripples are big": Storying the impact of doping in sport beyond the sanctioned athlete. *Psychology of Sport and Exercise, 24*, 92–99. https://doi.org/10.1016/j.psychsport.2016.01.010.

Erickson, K., Backhouse, S. H., & Carless, D. (2017). "I don't know if I would report them": Student-athletes' thoughts, feelings and anticipated behaviours on blowing the whistle on doping in sport. *Psychology of Sport and Exercise, 30*, 45–54. https://doi.org/10.1016/j.psychsport.2017.01.005.

Frank, A. W. (2010). *Letting stories breathe.* Chicago: University of Chicago Press.

Gergen, K. J. (1973). Social psychology as history. *Journal of Personality and Social Psychology, 26*(2), 309–320.

Greenway, P., & Greenway, M. (1997). General practitioner knowledge of prohibited substances in sport. *British Journal of Sports Medicine, 31*, 129–131.

de Hon, O., Kuipers, H., & van Bottenburg, M. (2015). Prevalence of doping use in elite sports: A review of numbers and methods. *Sports Medicine, 45*(1), 57–69. https://doi.org/10.1007/s40279- 014-0247-x.

Kirby, K., Guerin, S., Moran, A., & Matthews, J. (2015). Doping in elite sport: Linking behavior, attitudes, and psychological theory. In V. Barkoukis, L. Lazuras, & H. Tsorbatzoudis (Eds.). *The psychology of doping in sport (pp. 215-229).* London: Routledge.

Kirby, K., Moran, A., & Guerin, S. (2011). A qualitative analysis of the experiences of elite athletes who have admitted to doping for performance enhancement. *International Journal of Sport Policy, 3*(2), 205–224. https://doi.org/10.1080/19406940.2011.577081.

Laure, P. (2000). Doping: Epidemiological studies. *Presse Medicine, 29*, 1365–1372.

Lawrence-Lightfoot, S. (2008). *The good high school: Portraits of character and culture.* New York: Basic Books.

Lucidi, F., Zelli, A., Mallia, L., Grano, C., Russo, P. M., & Violani, C. (2008). The social-cognitive mechanisms regulating adolescents' use of doping substances. *Journal of Sports Sciences, 26*(5), 447–456. https://doi.org/10.1080/02640410701579370.

Morente-Sanchez, J., & Zabala, M. (2013). Doping in sport: A review of elite athletes' attitudes, beliefs, and knowledge. *Sports Medicine, 43*, 395–411. https://doi.org/10.1007/s40279-013-0037-x.

Nicholls, A. R., Cope, E., Bailey, R., Koenen, K., Dumon, D., Theodorou, N. C., et al. (2017). Children's first experience of taking anabolic-androgenic steroids can occur before their 10th birthday: A systematic review identifying 9 factors that predicted doping among young people. *Frontiers in Psychology, 8*(JUN), https://doi.org/10.3389/fpsyg.2017.01015.

Ntoumanis, N., Ng, J. Y. Y., Barkoukis, V., & Backhouse, S. H. (2014). Personal and psychosocial predictors of doping use in physical activity settings: A meta-analysis. *Sports Medicine, 44*(11), 1603–1624. https://doi.org/10.1007/s40279-014-0240-4.

Özdemir, L., Nur, N., Bagcivan, I., Bulut, O., Sümer, H., & Tezeren, G. (2005). Doping and performance enhancing drug use in athletes living in Sivas, mid-Anatolia: A brief report. *Journal of Sports Science and Medicine, 4*(3), 48–252 doi:PMC3887327.

Sas-Nowosielski, K., & Swiatkowska, L. (2008). Goal orientations and attitudes toward doping. *International Journal of Sports Medicine, 29*(7), 607–612. https://doi.org/10.1055/s-2007- 965817.

Schinke, R., Smith, B., & McGannon, K. (2013). Pathways for community research in sport and physical activity: Criteria for consideration. *Qualitative Research in Sport, Exercise and Health, 5*, 460–468. https://doi.org/10.1080/2159676X.2013.846274.

Schuster, M. A., Corona, R., Elliott, M. N., Kanouse, D. E., Eastman, K. L., Zhou, A. J., et al. (2008). Evaluation of talking parents, healthy Teens, a new worksite based parenting programme to promote parent-adolescent communication about sexual health: Randomised controlled trial. *BMJ, 337*, 273–277.

Smith, B. (2018). Generalizability in qualitative research: Misunderstandings, opportunities and recommendations for the sport and exercise sciences. *Qualitative Research in Sport, Exercise and Health, 10*(1), 137–149. https://doi.org/10.1080/2159676X.2017.1393221.

Smith, B., McGannon, K. R., & Williams, T. L. (2016). Ethnographic creative non-fiction: Exploring the what's, why's and how's (Chapter 5, pp. 59-72). In G. Molnar, & L. Purdy (Eds.). *Ethnographies in sport and exercise research.* New York: Routledge.

Smith, A. C. T., Stewart, B., Oliver-Bennetts, S., McDonald, S., Ingerson, L., Anderson, A., et al. (2010). Contextual influences and athlete attitudes to drugs in sport. *Sport Management Review, 13*(3), 181–197. https://doi.org/10.1016/j.smr.2010.01.008.

Smith, B., Tomasone, J. R., Latimer-Cheung, A. E., & Martin Ginis, K. A. (2015). Narrative as a knowledge translation tool for facilitating impact: Translating physical activity knowledge to disabled people and health professionals. *Health Psychology, 34*(4), 303–313. https://doi.org/10.1037/hea0000113.

Somerville, S. J., & Lewis, M. (2005). Accidental breaches of the doping regulations in sport: Is there a need to improve the education of sportspeople. *British Journal of Sports Medicine, 39*, 512–516.

Sparkes, A. C., & Smith, B. (2014). *Qualitative research methods in sport, exercise, and health.* New York: Routledge.

Whitaker, L., Backhouse, S. H., & Long, J. (2017). Doping vulnerabilities, rationalisations and contestations: The lived experience of national level athletes. *Performance Enhancement and Health, 5*(4), 134–141. https://doi.org/10.1016/j.peh.2017.06.001.

Woolf, J., Rimal, R. N., & Sripad, P. (2014). Understanding the influence of proximal networks on high school athletes' intentions to use androgenic anabolic steroids. *Journal of Sport Management, 28*(1), 8–20. https://doi.org/10.1123/jsm.2013-0046.

World Anti-Doping Agency (2015). *World anti-doping code.* Montreal: Retrieved from.

Zelli, A., Mallia, L., & Lucidi, F. (2015). "I am not sure what you mean…": The possible contribution of interpersonal appraisals to social-cognitive accounts of doping use. In V. Barkoukis, L. Lazuras, & H. Tsorbatzoudis (Eds.). *The psychology of doping in sport (pp. 215-229)*London: Routledgehttps://www.wada-ama.org/en/resources/the-code/world-anti-doping-code.