

Athlete healthcare behaviour: an ethnographer's methodological conundrum

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Abstract

Behind every consumer's decision about utilizing health care products and services are their perception of health and illness (Hughner, 2008). Such lay understanding affect consumers' health behaviour and health outcomes (Moorman & Matulich, 1993); it also determines the choice and efficacy of conventional versus complementary and alternative medicine (CAM) products and services (Hughner, 2008). This paper examines these choices amongst a group of competitive athletes, specifically swimmers

Competitive athletes operate in a unique social environment that may result in a culture that is different from the general population. As such this may influence the athletes' beliefs, motivations and impact on their health-seeking behaviour regardless of whether they are seeking help for an existing problem, for the prevention of problems, or for performance enhancement in their sport.

It is yet to be determined if theories of help-seeking for conventional medicine or CAM in the general population are applicable in the athlete population. Theories of athlete motivation in relation to their sport may also not be applicable in their health-seeking behaviour: the athletes' motivation for CAM may or may not be related to their underlying motivation for their sport.

There is at present a deficit in our knowledge of how athlete motivation affects help seeking and health choices; what athlete perceptions and belief about CAM are; who is using it; and under what circumstances; where and when athletes seek help; and why are questions which have still to be answered and as such are the focus of the study. If there is a lack of understanding of health-seeking in the general population when it comes to non-conventional treatment, there is an added dimension of the issue of doping in the elite athletes to complicate matters. Doping does not apply to non-athletes. In athletes, it is one factor that needs to be considered when trying to understand the decision making process. Understanding motivation in doping in any study into athlete CAM use is important as it may share the characteristics of motivation in help-seeking and/or CAM use for an athlete.

There is currently little understanding of the motivation for doping amongst athletes (Backhouse, McKenna, Robinson, & Atkin, 2007). Most of the available information on the precipitating factors for doping seems to be focused on anabolic steroid use among young people (Blouin & Goldfield, 1995). Although a wide range of factors have been identified, few are

seriously helpful in addressing the complex way in which drug use begins, is sustained, or stops (Backhouse et al., 2007). There is even less understanding of motivation for CAM use in athletes. It is this aspect of athletes CAM choices that is the focus of this paper.

Any attempt to understand why competitive athletes seek CAM thus presents unique challenges to the researcher: it requires an understanding of health-seeking behaviour in the general community; the cultural norms of competitive athletes as a group; the perception of CAM and doping in the athlete community; the background knowledge of conventional medicine and CAM. There is also a need for the researcher to have a strong rapport with the informants and be trusted. As such it lends itself to ethnographic study. The skill set offered by the research team further supports this decision. The primary researcher is an elite athlete, an international swimmer, who is a practicing Doctor of Medicine with qualifications in Sports Medicine. He is supported by a team that includes a practitioner/academic in Chinese medicine; a specialist in politics and sport; and a qualitative researcher.

Introduction

The primary purpose of this paper is to bring to the fore the issues, spoken and unspoken, that need to be considered when conducting research into athlete health-seeking behaviour¹, in particular complementary and alternative medicine (CAM) use. To the authors' knowledge, this is also the first time that a theoretical construct to link the relationship (and its effect on health-seeking behaviour) between the vagaries of doping, and the definition of CAM is explicitly considered in the literature to address the modern day context of doping in sport.

The ethnographer and health decision theories

Behind every consumer's decision about utilizing health care products and services are their perceptions of health and illness (Hughner, 2008). Such lay understanding impacts on consumers' health behaviour and health outcomes (Moorman and Matulich, 1993); it also determines the choice and efficacy of conventional medicine versus CAM products and services (Hughner, 2008).

Although economic factors influence choice, either by facilitating or acting as barriers to behaviours (Grether and Plott, 1979, Kahneman and Tversky, 2000, Kahneman and Tversky, 1979, Pommerehne et al., 1982, Reilly, 1982, Tversky and Kahneman, 1981, Tversky and Kahneman, 1986, Tversky et al., 1988, Tversky and Simonson, 1993, Tversky et al., 1990, Tversky

¹ Since "help-seeking" and "health-seeking" are closely linked and many authors in the literature speak of one when referring to the other, this paper will use both terms interchangeably.

and Thaler, 1990), economic theories consistently fail to adequately answer questions relating to personal health care choices (Coast, 2004).

Health care is fraught with uncertainties: disease risks, efficacy of various treatment alternatives, and predictability of management outcomes. For economic theories to work, several factors need to exist: individuals know with certainty the level of satisfaction they will obtain from a product or service, individuals have to be rational, individuals have sufficient information to make good choices (i.e., they know what choices are available and the opportunity costs of each choice), and individuals are the best judge of their own welfare (Mwachofi, 2008).

Sadly, health care decisions are often too complex for the lay consumers to decipher sufficiently, and this often result in these consumers resorting to lay-beliefs to make their choices. Related to the issue of lay-beliefs, underlying the failure of economic theories in health care decisions is also the fact that economic theories often neglect to account for crucial aspects of social and cultural variables in the specific population of interest.

The unique social environment where competitive athletes operate in may result in a culture that is different from the general population. In this paper we posit that this culture may influence the athletes' beliefs as well as motivations, and may also have an impact on their help-seeking behaviour, whether seeking help for an existing problem, for the prevention of problems, or for performance enhancement in their sport.

There is little evidence to support the contention that existing psychological or sociological theories of help-seeking for conventional medicine or CAM in the general population are applicable in the athlete population. Moreover, psychological theories of athlete motivation for their sport may not reflect their health-seeking behaviour: An athlete's motivation for CAM may or may not necessarily be related to their underlying motivation for their sport.

There is presently a deficit in the available knowledge of how athlete motivation affects help seeking and health choices, what athlete perceptions and belief about CAM are, what constitutes CAM for athletes, where and when athletes seek help, and why. Any study into why competitive athletes seek CAM thus presents unique challenges to the researcher: it requires an understanding of the health-seeking behaviour in general, knowledge of the cultural norms of competitive athletes as a group, an awareness of the perception of CAM and doping in the athlete community, and background knowledge of conventional medicine and CAM. As a consequence the authors of this paper deemed that in any inquiry into athlete CAM use, an ethnographic approach would be most appropriate.

The primary researcher was an elite athlete (competing in the open category previously, and now competing at the Master's level) and is also a practicing Doctor of Medicine with qualifications in Sports Medicine. In addition, he grew up in an environment that allowed him to be open to, and personally experience, various modalities popularly labelled as CAM. In this research, he is supported by a team that include a practitioner/academic in Chinese medicine with interest in ethical issues in CAM research, a specialist in politics and sport, and a qualitative researcher with interest in consumer behaviour.

The ethnographer has no clothes

All classes of research have their inherent problems; and all research data are produced socially. No research is a total transparent representation of reality (Hammersley and Atkinson, 2007). Similarly, ethnographic studies are but records of participants' accounts or perceptions of actual behaviours, and these records should be viewed as *contractual* rather than *actural*. They are not literal accounts of what happened, or representations of the world, rather these accounts are simply part of the world that is perceived and described (Hammersley and Atkinson, 1983, 2007). The researcher in gathering these accounts creates documentation of the participants' experiences.

Experience is never completely objective, but embedded in a social web of interpretation and re-interpretation (Kitzinger, 2004). Accounts are active phenomenon, and the subject behind the respondent hold not just facts and experience data, but by the very process of offering up for response, constructively adds to, takes away from, and transforms the facts and details (Holstein and Gubrium, 1997), and by extension, even the experience itself. The evolution of experience does not stop there: Not only are accounts active, but the interpretation of the accounts by the ethnographer is also active.

The ethnographer, in the scrutiny of documentary sources, has to recognize and build on the information. This is done, as Hammersley and Atkinson (2007) puts it, because the researcher functions as a socialized and competent member of a literate culture: Not only does the researcher read and write, but the researcher also reflects on the very activities of reading and writing in a socialized setting, incorporating accounts and everyday activities into the researcher's topic of inquiry, whilst combining analytic and interpretative resources.

When using information sources such as interviews in an ethnographic study, the ethnographer should recognize that respondents construct aspects of reality in collaboration with the interviewer, focusing both on the assembly process and what is assembled (Holstein and Gubrium, 1997). An ethnographic approach in research thus draws as much upon the life of the

ethnographer as does it the experiences of the participants. Consequently, in a field of inquiry that is foreign or unfamiliar, the ethnographer often needs to be initiated and acculturated to the tribe of interest. This is because the tapestry of varied and nuanced experience often requires an understanding of cultural subtleties and the unspoken gap (between the portrayed and the reality) that exists in the tribe. This requirement by default therefore dictates that only an ethnographer that has grown out of the tribe, or gone through the ranks, is able to truly comprehend what it means to be a tribal member. One could argue that this is *sine qua non* of ethnography.

The ethnographer therefore has an inherent conflict: In order to understand the tribe, the ethnographer has to be immersed in, and be part of, the culture in order to perceive the world with tribal eyes. On the other hand, the ethnographer also has to take on the fabled role of the little child in the Hans Christian Andersen fairy tale of the Emperor's new clothes (1837): while being immersed and part of the society, the ethnographer is still able to reference from a greater reality, and "tell it like it is."

Earlier, we mentioned how a study into why competitive athletes seek CAM requires an understanding of general health-seeking behaviour, the tribal norms of competitive athletes, the perception of CAM and doping in the athlete tribe, and the background knowledge of conventional medicine and CAM. The primary author for this paper therefore brings with him his multifaceted experience that adds a depth to the inquiry. At the same time, he also brings his internal conflict: The conventional doctor versus the CAM consumer, the tribal athlete versus the academic observer. To highlight the issue to consider in any inquiry into athlete CAM use, the primary author thus draws upon this bank of knowledge. He is also guided by the experience of the other authors and their perspective of a greater reality.

The ethnographer and help-seeking

A review of the literature demonstrated that there is some understanding about the help-seeking behaviour in the general population (Campion, 1993, Cullen, 1982, De Leo et al., 2005, Mojtabai et al., 2002, Moreira et al., 2005, Weerasinghe and Mitchell, 2007). In these general population studies, help-seeking behaviours are very much determined by socioeconomic and cultural factors (Campion, 1993, Grzywacz et al., 2005, Grzywacz et al., 2004, Adamson et al., 2003). There are also many other as yet unquantifiable factors that may play a role.

Despite the recent increased interest, when it comes to CAM, the reasons for its escalated use among the general population are not clearly understood. Research in Europe (Fulder and Munro, 1985), the United States (Eisenberg et al., 1998), Australia (Australian Bureau of Statistics, 2008, MacLennan et al., 2006), and Canada (Sirois and Gick, 2002) suggested that a variety of

demographic and health belief variables may be associated with CAM use. These findings, however, often have been inconsistent. Moreover, conclusions regarding the motivations of CAM users have been reached by comparing conventional medicine clients with an undifferentiated sample of CAM clients. As a consequence, researchers have often assumed incorrectly that the reasons why people initially turn to CAM are the same ones why people continue to use CAM (Sirois and Gick, 2002). These CAM studies also do not address the athlete population, whose needs may be different from the undifferentiated general population.

Athletes wanting to achieve or maintain peak performance may have attainment or maintenance of an optimal state of physical health as a motivation factor. This may form part of the concept of *flow* as described by Csikszentmihalyi (Csikszentmihalyi, 1990, Csikszentmihalyi and Jackson, 1999). Athletes may also seek various methods to improve their sporting performance (e.g. hypnosis in a golfer to improve concentration and confidence; high altitude training in a runner to improve oxygen carrying capacity and endurance; dance therapy to improve agility and coordination in a rugby player; high dose intravenous vitamins in a tennis player in the hope of quicker recovery from fatigue). Achievement goal theory (Nicholls, 1984, Nicholls, 1989) and self-determination theory (Deci and Ryan, 2000, Deci and Ryan, 2008a, Deci and Ryan, 2008b) relating to the athlete's motivational profile may explain why this may be so.

To achieve the goals of optimal health and/or sporting performance, a motivated athlete may seek help in the form of conventional, complementary, or alternative medicine. Unlike “well” non-athletes that undergo treatments with the aim to prevent diseases, or maintain “wellness”, athletes who are already considered physically impeccable by general non-athlete standards may actually be on a quest for ultimate perfection or physical nirvana – a state that transcends beyond “wellness.” This state has been coined the *Omega state* (signifying the ultimate state) by the primary author of this paper (Koh and Cole, 2007). The ambition is to be the best of the best. Understanding the hunger and drive for excellence is a key to understanding motivation for CAM use in athletes.

The ethnographer and doping

If there is a lack of understanding of health-seeking in the general population (when it comes to non-conventional treatment), to complicate matters, in the elite athlete there is an added dimension: the issue of doping. Doping does not apply to non-athletes. In athletes, it is one factor that needs to be considered when trying to understand the decision making process. Understanding doping motivation in any ethnographic study of athlete CAM use is important as it may share or differentiate the characteristics of motivation in health-seeking and/or CAM use in an athlete.

There is currently very little understanding of doping motivation in athletes (Backhouse et al., 2007). From a review of the literature, it is apparent that although doping goes beyond simply the use of drugs (World Anti-Doping Agency, 2003), most of the available information on the precipitating factors for doping seems to be focused on anabolic steroid use among young people (Blouin and Goldfield, 1995, Brower et al., 1994, Brower et al., 1991, Burnett and Kleiman, 1994, Kanayama et al., 2003, Kanayama et al., 2006, MacKinnon et al., 2001, Schwerin et al., 1998, Striegel et al., 2006). Despite there being a wide range of factors being identified, few are informative in addressing the complex way in which drug use begins, is sustained, or stops (Backhouse et al., 2007).

The World Anti-Doping Agency (WADA) is the international governing body that oversees the issue of doping in sports. The WADA has defined doping in their World Anti-Doping Code (World Anti-Doping Agency, 2003) as inter alia a violation of one or more of the following rules (p. 8-12)²:

1. “The presence of a Prohibited Substance or its Metabolites or Markers in an Athlete’s bodily specimen...”
2. “...Use or Attempted Use of a Prohibited Substance or a Prohibited *Method*...”
3. “...Refusing, or failing without compelling justification, to submit to sample collection after notification as authorized in applicable anti-doping rules or otherwise evading Sample collection...”
4. “...Violation of applicable requirements regarding athlete availability for Out-of-Competition testing including failure to provide required whereabouts information and missed tests which are declared based on reasonable rules...”
5. “...Tampering, or Attempting to tamper, with any part of Doping Control...”
6. “...Possession of Prohibited Substances and *Methods*...”
7. “...Trafficking in any Prohibited Substance or Prohibited *Method*...”
8. “...Administration or Attempted administration of a Prohibited Substance or Prohibited *Method* to any Athlete, or assisting, encouraging, aiding, abetting, covering up or any other type of complicity involving an anti-doping rule violation or any Attempted violation.”

² The emphasis of *method* in italics is by the authors of this paper. No definition is given by WADA for what is considered a *method*. WADA only describes limited and specific examples of *methods* as applied to enhancement of oxygen transfer that involves blood doping and compounds such as perfluorochemicals, efaproxiral (RSR13) and modified hemoglobin products (e.g. hemoglobin-based blood substitutes, microencapsulated hemoglobin products). WADA however states that *method* is not limited to these compounds and processes.

A substance or *method* is considered for inclusion on the WADA's Prohibited List if the WADA determines that the substance or *method* meets any two of the following three criteria (World Anti-Doping Agency, 2003, p. 15-16):

1. "Medical or other scientific evidence, pharmacological effect, or experience that the substance or *method* has the potential to enhance or enhances sport performance."
2. "Medical or other scientific evidence, pharmacological effect, or experience that the use of the substance or *method* represents an actual or potential health risk to the athlete."
3. "Determination by the WADA that the use of the substance or *method* violates the spirit of sport as described in the Introduction to the Code."

Reviewing the World Anti-Doping code as a whole, the level of evidence required to list a substance or *method* as doping appears to be much less stringent than that required of scientific dogma. The objective behind prohibitions also seems to be related to any substance or *method* that enhances sport performance, becomes a health threat to the athlete, or is against the spirit of the sport. As a whole, the current emphasis of prohibition would thus appear to be based on four main factors:

1. Substances within the athlete's body.
2. *Methods* that enhance oxygen transfer through blood doping or artificial measures.
3. Altering collected body fluid samples.
4. Genetic manipulation.

A large assortment of mechanical, physical, psychological, nutritional and pharmacological techniques has been used to improve athlete performance throughout history. The controversy of acceptable levels of naturally occurring endogenous compounds and what constitutes a *method* that is not considered doping are beyond the scope of this current discussion. What is important to consider, however, are the following:

1. It is acceptable (and logical) to enhance performance by physical training without adding substances to the athlete's body. The creative use of varied training programmes (e.g. warm-up, planned plays) and orthotic devices during out-of-competition training (e.g. flippers in swimmers) is standard practice for most sports and one of the fundamentals of training paradigms. Most performance-enhancing devices are, however, banned during competition. If a CAM that uses a physical modality is able to achieve the same result of enhancing performance, would this *creative* use of CAM for sporting excellence be deemed acceptable or would it violate doping regulations? Should the use of massage (e.g. superficial and deep),

proprioceptive neuromuscular facilitation (PNF) stretching, and direct pressure, for example, to speed up recovery, improve flexibility and improve performance during a competition be labelled as prohibited *methods*?

2. If performance-enhancing devices are prohibited in competition, how does the acceptance of performance enhancing swim suits by the international swimming governing body, Fédération Internationale de Natation (FINA) during the 2008 Olympics (Cowley, 2008, The Associated Press, 2008) and 2009 World Championships (AFP, 2009b), reconcile with the WADA's "spirit of sport" (World Anti-Doping Agency, 2003, p. 3) and FINA's own rule of "No swimmer shall be permitted to use or wear any device that may aid his speed, buoyancy or endurance during a competition" (Fédération Internationale de Natation (FINA), 2005, SW 10.7)? At the time of writing of this paper, the rules regarding specialized swim suit use is still being deliberated by FINA with some swimmers affected by the transitional rules (AFP, 2009a, FINA, 2009a, 2009b)³.
3. Erythropoietin (EPO) is a peptide hormone that occurs naturally in the human body⁴. Some athletes may use recombinant EPO to improve endurance performance or to improve recovery from anaerobic exercise. EPO is prohibited both in and out of competition under the World Anti-Doping Code Prohibited List (World Anti-Doping Agency, 2009, p.9). Calf-derived deproteinised haemodialysate, Actovegin, is a component in calves' blood that has gained much attention recently when it was reported to be used by the Australian rugby teams (Santow, 2008) to improve endurance and recovery from injuries⁵. Although the medical evidence review by the Cochrane group showed possible efficacy in the treatment of tendon injuries (McLauchlan and Handoll, 2001), the Australian Sports Anti-Doping Authority (ASADA) indicated that Actovegin was then not on the WADA's list of prohibited substances; its use when restricted to intra-muscular injections is thus not prohibited (as a substance), but is illegal (as a *method*) when injected into a vein (Ritchie and Morrissey, 2008). Recombinant EPO use, traditionally difficult to detect in the

³ Swimming Australia under guidance from FINA disqualified Swedish swimmer Therese Alshammar and stripped her world record in the 50 metres butterfly for wearing two swimsuits during the 2009 Australian Swimming Championships.

⁴ EPO is released from the kidneys and acts on the bone marrow to stimulate red blood cell production. An increase in red blood cells improves the amount of oxygen the blood can carry to the body's muscles. It may also increase the body's capacity to buffer lactic acid.

⁵ Research data on the mechanisms and the effect of Actovegin action suggests that the drug improves the transport and utilization of oxygen and glucose, activates the aerobic routes of energy metabolism and, as a result, improves the functional state of hypoxic cells (Boiarinov, Penkovich, & Mukhina, 1999).

athlete, has recently been successfully tested in athletes as a result of collaboration of the WADA and the pharmaceutical companies in uncovering a molecular marker of the drug (Sillup, 2008). This uncovering process (to detect the presence of a substance in the body) would not be useful for Actovegin if its intramuscularly use is not prohibited. Attempting to catch an athlete in the act of using Actovegin intravenously (and therefore fall under an illegal *method*) would be logistically challenging, and brings up feelings of déjà vu⁶.

4. It is acceptable if training (e.g. altitude training) increases a naturally occurring substance (e.g., red blood cell concentration through elevation of endogenously produced EPO), but if this increase is artificially achieved through transfusion of externally introduced substances (e.g. recombinant EPO), it is considered doping. Again, if a physical modality of CAM is able to raise the levels of a naturally occurring endogenous substance in the athlete, would it be considered doping? For example, controlling pain would offer considerable competitive advantage for athletes in most sports. Although the use of pain relieving pharmaceutical drugs like morphine is banned by the WADA (World Anti-Doping Agency, 2009, p.8), if a CAM modality like acupuncture as a *method* is capable of increasing an athlete's endorphin levels⁷ (Clement-Jones et al., 1980, Han, 2004), and in so doing potentially improve athlete performance (Pelham et al., 2001), is that acceptable? In the literature, there was one reported use of acupuncture in a patient with a ruptured muscle fiber (traditionally requiring prolonged treatment periods) sustained during training less than 3 weeks prior to the 1998 European track and field championship who went on to win a silver medal and maintained a high performance level without pain (Schwanitz, 2007).
5. Prior to 2004, caffeine was classified as a banned substance by the WADA if it is detected in the urine above a concentration of 12 micrograms per millilitre (World Anti-Doping Agency, 2008). This was because caffeine was previously considered a performance enhancing substance. Recent reports, however, suggest that caffeine actually decreases performance above that threshold (World Anti-Doping Agency, 2008, Salleh, 2008). Caffeine is in addition metabolised at very different rates in individuals and this risks sanctioning athletes for simply consuming social amounts

⁶ Blood transfusion was forbidden by the International Olympic Committee (IOC) after the 1984 Olympics, despite the fact that no methods had been devised for unequivocal detection (Lippi and Banfi, 2006, Berglund, 1988).

⁷ Endorphins are endogenous morphine-like compounds that produce pain-relief and a sense of well-being, especially during episodes of stress (Amir et al., 1980).

of caffeine which are common in drinks and food. These and many other concerns led to the eventual removal of caffeine from WADA's list of banned substance in 2004 (World Anti-Doping Agency, 2008). The historical evolution of caffeine as a prohibited substance is but one compound that has gained much attention in the sporting community. How would this change of *official* acceptance of caffeine use affect the perception and reporting of athletes for currently legal substances (e.g. high dose intravenous iron and vitamins), or of currently legally ambiguous substances (e.g. traditional or "natural" herbal tonics)?

The above examples show a perceived inconsistency at present with regards to the doping guidelines. Some of the cited examples are not known to have been reported in the literature, and are based on the primary researcher's clinical experience and encounters.

The perceived inconsistency and the gap between the rules and reality may leave an athlete feeling that beyond incidents of specific examples (whereby a specific ruling is made), there seems to be a general sense of lack of clarity about the rules. Such Kafkaesque policies are therefore perceived to be open to subjective interpretation.

If this perceived inconsistency result in athletes being wary of establishments, believing in a Machiavellianism code of conduct, it impacts on their willingness to share with an ethnographer their real use of CAM. This would potentially affect the ability to get any valid information from these athletes. Adding to the potential perception by the athlete of an absence of clear doping guidelines, there may also be an unspoken overriding need for athletes to seek an advantage over their competition. This combination may further affect information revealed to the researcher.

It was postulated earlier that there might be a relationship between the athlete's motivation for the sport as well as CAM use. It was also shown in the literature how there is a possible relationship between an athlete's motivation for the sport and doping (Backhouse et al., 2007). If this is true, then the athlete's same underlying motivation for the sport may suggest a possible similarly close relationship between doping and CAM use (Figure 1). This would be dependent both on what the athlete's understanding of doping encompasses and also how the athlete perceives what CAM is (described later).

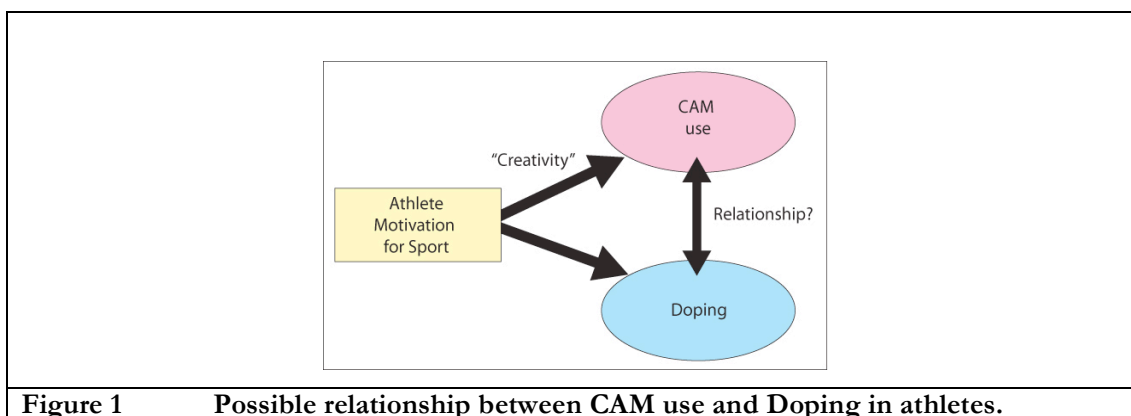


Figure 1 Possible relationship between CAM use and Doping in athletes.

It was demonstrated how many aspects of doping are still unclear. Media debates with experts in the field further add to the athlete's confusion. The caffeine (Salleh, 2008) and Actovegin (Ritchie and Morrissey, 2008) debacle described previously are but two high profile examples. Backhouse et al. (2007) in the report for the WADA have shown that controversial headlines on doping impact on the perception of doping, fuelling a sentiment of distrust amongst athletes for the authorities. The WADA report also showed that existing research suggests that a large number of athletes still lack knowledge on doping: the effects of drugs⁸, the legal aspects of doping, and where to find answers. The report has further shown how this ignorance and misperception of what is considered doping have limited the amount of information available for, and understanding on, the topic by researchers.

The implication of the controversy and lack of understanding and information on doping for ethnographic research on athlete CAM use is this: If there is a perception in athletes that there is an association between doping and CAM use, the real extent of CAM use, like doping, may be greater than what would be reported. Therefore, recognising this potential relationship is important to the ethnographer as it impacts on the data collection process of finding out athlete motivation factors for CAM use. It also has the implication of interpreting existing data on athlete CAM use with caution.

From the doping studies, it has been suggested that elite athletes are a distinct population group from other exercising individuals because of the different circumstantial environment, social stressors and sporting goals (Backhouse et al., 2007, p. 27). This would be an important factor for consideration when looking at CAM studies that are focused only on the general population.

⁸ Although the focus of the WADA report was on drugs, the authors of this paper postulate that the lack of knowledge would also include those effects of various non-drug treatments.

Earlier discussion had alluded to how athletes' perception of what CAM encompasses may affect ethnographic research that looks into the motivation factors for CAM use. The discussion will next focus on the issue of defining what CAM is.

The ethnographer and the definition of CAM

Any medical system is socially grounded in the context of time and culture (Coulter and Willis, 2004). "Western" biomedicine (or allopathy), as practiced in many industrialised countries, while generally regarded as conventional, or orthodox, and despite having a long-established history in these societies, is similarly affected by the prevailing cultural norms as is any other medicine (Payer, 1996, Stein, 1993)⁹.

Interest in, and use of, CAM has been growing in recent times in many industrialised countries. This is reflected by the increasing number of research papers in medical and scientific journals. Non-representative surveys in many countries have also suggested a high use of CAM¹⁰. Despite this growing interest, the definition of what is complementary or alternative remains very subjective. The implications of culturally derived meanings for individuals' definitions of (Bharucha et al., 2003) and decisions to use CAM therapies (Foote-Ardah, 2003, Grzywacz et al., 2005, Kronenberg et al., 2006, Lee et al., 2004) highlight the importance of cultural values and the social identities they reinforce.

From the literature, and from popular perception, there seems to be, on the surface at least, a division between Western orthodox (or conventional) medicine and CAM. But understanding this divide (using organisational definitions) is not the only approach to understanding CAM, for neither CAM nor conventional medicine is a testament of absolutes. Not all medical practitioners agree on what constitutes orthodox and, similarly, not all CAM practitioners agree what is deemed complementary or alternative (Tovey and Adams, 2001)¹¹.

⁹ The reader may realize at this stage that this paper has so far deliberately used the term "conventional" rather than "biomedicine", and is delivered in a manner as perceived from a "Western" context. This is with the view that much of the available literature continues to report "conventional" and "biomedicine" as one and the same. It is also a perspective adopted by most international sporting codes and insurance agencies.

¹⁰ In the United States, about a third of adults aged 18 years or older use CAM (Barnes, Powell-Griner, McFann, & Nahin, 2004).

¹¹ Within the boundaries of conventional medicine, CAM can lay claim to certain skills and techniques, for example, nursing and therapeutic touch (Trevelyan and Booth, 1994), and CAM also seeks conventional medical courses as part of their therapist training, for example, anatomy for osteopathy and chiropractic.

The National Centre for Complementary and Alternative Medicine (NCCAM) is the U.S. Federal Government's lead agency for scientific research on CAM¹². The NCCAM (2007) defines CAM as “a group of diverse medical and healthcare systems, practices, and products that are not presently considered to be part of conventional medicine.” The NCCAM definition, while having the strength of not defining CAM as a homogeneous aggregate, has the disadvantage that it is not clearly outlined and formally prescribed. It is thus changeable with the evolution of time, culture, and the zeitgeist.

When it comes to defining what unconventional medicine is, there is a complex social and academic interaction at play. In addition, both conventional medicine and CAM are constantly in flux, influencing each other and also affecting, and being affected by, social and other factors outside their individual spheres of influence. Geography, history and governmental regulations are but a few factors (Wardwell, 1994, Easthope et al., 1998)¹³. In a consumer-driven health care environment (Relman, 2008, Kaptchuk and Eisenberg, 2001, Scandlen, 2005), commercial or financial factors also play a role in the obfuscation.

Many health insurance policies in Australia now recognise certain (but not other) CAM modalities under their schemes. For example, Australia's largest private health insurer, Medibank Private, only recognises chiropractic, osteopathy, acupuncture, naturopathy, and remedial massage under their “alternative therapies” (Medibank Private, 2007)¹⁴. Physiotherapy, although recognised as a “conventional” medical treatment for a long time (Commonwealth of Australia, 1998, Barclay, 1994, Thornton, 1994, Williams, 1980, Young, 1969), continues presently to have different recognition and coverage by the different health insurers in Australia (iSelect, 2008). Such economic issues may act as potential barriers to CAM utilization, and also impact on an athlete's perception of credibility of one CAM modality over another. Such perception can result in a belief that one CAM modality may be relatively more “alternative” than another.

The implication of the definition of CAM for an ethnographer when studying athlete CAM use is this: While various individual organisations and professionals continue to have their own

¹² NCCAM is one of the 27 institutes and centres that make up the National Institutes of Health (NIH) within the United States (NCCAM, 2007).

¹³ For example, homeopathy is popular among physicians in the United Kingdom, Germany, the United States, and France (Wardwell, 1994), as is acupuncture among physicians in Australia (Easthope, 1998) and Singapore. Singapore and the state of Victoria in Australia have legislation requiring the registration of traditional Chinese medical practitioners. Chinese medicine has also recently been included in a list of allied health practices to be regulated on a national basis in Australia by 2012.

¹⁴ Physiotherapy is classified under a section of its own with its own set claim limits; therapies like podiatry, dietetics, occupational therapy, speech pathology, and orthoptics are classified under ‘other therapies,’ sharing claim limits with ‘alternate therapies’ (Medibank Private, 2007).

definitions, the perceptions of the general population and athletes — the end-users — of what constitutes CAM similarly also vary tremendously. There is thus a risk when applying any theoretical perspective on, and definition of, CAM that it oversimplifies a complex and multi-dimensional phenomenon. An individual's use of CAM modalities — as a discrete behaviour — may be the result of myriad forces weighed within a complicated decision-making process unrelated to the definition of CAM. Even the concept of CAM as an “alternative entity”, may be unrelated. Likewise, the homogeneous aggregation of distinct modalities under the CAM rubric downplays the diverse systems of beliefs, medicines, and philosophies underlying the various approaches (Matthews et al., 2005, Stratton and McGivern-Snofsky, 2008). As Cassidy (2002) has pointed out, the inherent ethnocentrism of defining modalities or systems of medicine “unconventional” or “alternative” depends on the established norm, which is not always Western biomedicine, may be arbitrary, and not universally supported.

For the purpose of understanding athlete CAM use, rather than focusing the discussion on individual modalities of CAM, it may be advantageous for a researcher using an ethnographic method of inquiry to adopt a more “societal” or bird's eye approach to the topic as it avoids detracting from the diversity and complexity that differentiate CAM systems. Whether it is the primary interest of the researcher to find out the end-user definition of CAM or not, culture-bound labels of CAM should be avoided. This is to circumvent the various issues of arbitrary classification that may mask vital information of the reasoning and motivational factors for athlete CAM use.

Logically, approaches to the problem of definition may be classified in terms of purposes, types, and methods, which make possible a multitude of definitional styles. Theorists may seek a definition that will provide a term logically integrated into a larger postulatory framework, while researchers seek sufficient standardisation to guide them toward the same phenomena and allow for comparison of findings. A theoretical concept requires that the idea be wholly thought through, carefully defined, and made explicit; social theory also requires well-defined concepts as the definitions help to link theory to research (Neuman, 2006). Definitions are therefore necessary (Robinson, 1950): A lack of clear, consistent definition may hamper understanding. Paradoxically, strict reliance on definitions may also undermine an ethnographer's fieldwork, impeding new insight.

Conclusion: The ethnographer and athlete CAM use

A background review has shown that the study area of athlete health care behaviour, especially in the utilisation of CAM, has not been adequately described in the literature. Studies that look into choices from an economic perspective (Grether and Plott, 1979, Kahneman and Tversky, 2000,

Kahneman and Tversky, 1979, Pommerehne et al., 1982, Reilly, 1982, Tversky and Kahneman, 1981, Tversky and Kahneman, 1986, Tversky et al., 1988, Tversky and Simonson, 1993, Tversky et al., 1990, Tversky and Thaler, 1990) fail to adequately answer questions relating to personal health care choices (Coast, 2004) and may not be useful for the ethnographer looking at athlete CAM use; studies that looked into general population CAM utilisation from a sociodemographic correlate perspective (Arcury et al., 2006, Barnes et al., 2004, Bausell et al., 2001, Cherniack and Pan, 2004, Conboy et al., 2005, Eisenberg et al., 1993, Eisenberg et al., 1998, Keith et al., 2005, Krivoy et al., 2006, Kronenberg et al., 2006, London et al., 2003, McFarland et al., 2002, Oldendick et al., 2000, Rhee et al., 2004, Tindle et al., 2005) offer some insight into the make-up of a CAM user, but fail to offer explanatory factors for its use (Stratton and McGivern-Snofsky, 2008).

When studies that looked at CAM utilisation from a psychosocial perspective (Buettner et al., 2006, Furnham, 2007, Furnham and Beard, 1995, Furnham and Bhagrath, 1993, Furnham and Forey, 1994, Honda and Jacobson, 2005, Owens et al., 1999, Söllner et al., 2000, Sturm, 2000) were coupled with studies that utilised athlete motivational theories to explain the actions of athletes (Ames, 1992, Deci, 1975, Deci and Ryan, 1985, Deci and Ryan, 1991, Deci and Ryan, 1995, Deci and Ryan, 2000, Hardy et al., 1996, Iso-Ahola, 1999, Ryan, 1982, Ryan, 1995, Vlachopoulos et al., 2000, Wiggins, 2004) it helped explain to the ethnographer to some extent the phenomenon of athlete CAM use. However, although psychosocial theories in CAM studies and theories on athlete motivation share similar theoretical constructs, the studies that utilised these respective theoretical constructs have applied them in different context.

From the review of the literature, the ethnographer may find that the one area that both CAM utilisation and athlete motivation share common ground is in the area of doping (Backhouse et al., 2007, Coombs and Ryan, 1990, Papadopoulos et al., 2006, Tricker and Connolly, 1997). Doping studies may explain to some degree the motivation of an athlete in seeking alternatives to conventional therapies to assist them in their sport. The review commissioned by the WADA (Backhouse et al., 2007), however, has shown that even the most current research on doping has been under-theorised (p. 2). This paper might be the first time a direct relationship between motivation for doping and reasons for CAM use in elite athletes is formally proposed as a unified theoretical construct, and would warrant further research.

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