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An Aristotelian investigation into personal training.

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Abstract

Background: This paper originated from research exploring the expansion of the work of Personal Trainers. Specifically the research examined the increased role of trainers in clinical environments. **Purpose:** The purpose of this paper is to open discussion and debate on the definition of Personal Training and the professional role of Trainers. Its key focus is on the relationship between the professional definition created through accrediting organization expectations of competence and the demands of applied practice. **Methods:** Based on an Aristotelian analysis this research defines a Personal Trainer as a form of coach who is rationally and emotionally balanced, who can apply her or his practical wisdom flexibly to develop a relationship with the client enabling them both to be healthier, fitter and happier. **Results:** Research looking at 5 key texts books recommended internationally to study to become a Personal Trainer shows that on average 53% of the text is devoted to technical knowledge; 39% to scientific knowledge and only 9% to psychology and motivation. **Conclusions:** There is need for a shift in the definition and perception of Personal Training practice so that it encompasses more thoroughly and in balance all three of Aristotle's virtuous knowledges: the episteme, the techne and the phronesis. **Health & Fitness Journal of Canada 2014;7(4):33-47.**

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Introduction

The objectives of this paper are to i) define what a Personal Trainer (PT) is using an Aristotelian analysis, and to ii) review from an Aristotelian perspective five of the most referenced books on PT. In meeting these objectives this paper chronicles the history of the PT

phenomenon. The intention is to locate PT in the broader Coaching vocation. Hemmestad et al., (2010) and Standal and Hemmestad (2011) have argued that a phronetic approach (an Aristotelian concept) is a means through which the theory-practice gap in sports coaching can be addressed. This paper builds on their argument and applies it not to the Sports Coach, but to the PT. Whilst there is a rich and developing body of literature on the Sports Coach less has been published on the PT, a role which can be conceived as being an Exercise Coach. The challenge for the Sports Coach is to access usable and applied work in Sports Science so the challenge for the PT is to link into exercise science. In 2004 Smith (2004) defined exercise science as 'a theory-based, research-led discipline that seeks applied solutions to health problems related to physical inactivity, and which aims to understand and promote individual and public health and wellbeing through evidence-based physical activity interventions' (p1). By defining the PT this paper will help exercise scientists better understand the role and thereby shape future research. It also suggests how PTs might best prepare for professional practice.

In writing this paper the authors hope the readers are infected with the joy they felt when applying a 2000 yr old

theory to the contemporary practice of PTs.

1. WHAT IS A PERSONAL TRAINER? AN ARISTOTELIAN INVESTIGATION.

In understanding the nature of 'something', Aristotle suggested that there is first a need to understand that 'object's' function; "*The virtue of a thing is its proper function*" (Aristotle, 1952 p387). Consequently Aristotle attempted to define all 'things': activities, arts and sciences including the nature of human beings and their activities, in terms of the end they attempt to achieve,

"Every art and every inquiry, and similarly every action and pursuit is thought to aim at some good...But a certain difference is found among ends; some are activities, others are products..."(Aristotle, 1952 p339).

Using this as a starting point, a personal trainer's function could be stated as presenting a programme of activities and exercises deemed appropriate to an individual's needs. Therefore, a personal trainer could be defined as a "*professional who develops and implements an individualised approach to exercise leadership in healthy populations and/or those individuals with medical clearance to exercise*" (ACSM, 2010 p8). Arguably, this functional definition as a *prescriber of exercise* is too generic as such a definition would also include sports coaches, physical education teachers and military instructors.

Despite having a very similar function to these roles, the nature of the modern personal trainer's work would seem to be unique. Certainly personal trainers play a similar pedagogical role as other sports coaches and military instructors. Each

role seeks to present an environment in which an individual is challenged to develop his or her physiological and motor skill performance. However, to suggest sport performance coaching is a direct parallel to the personal training environment is crude. Many clients seeking the services of a personal trainer come from an objectively different population to those under the 'care' of a sports performance coach. Such clients may include, but not be limited to, those with clinical conditions such as obesity, osteoporosis and histories of cardiovascular and muscular disease. Furthermore, it can be argued, due to the one to one nature of the encounter, the need to develop behaviour change, and the personal motivations of many individuals who seek exercise support, a personal trainer may have as much in common with a counsellor as a sports coach. Consequently there is a need to examine the nature of personal trainers and their work in more detail so as to ensure that there is a consensus over their role and how they might best be prepared for professional practice.

Differentiating personal trainers from sports performance coaches and military instructors

It was not until the late 1800's and the beginning of the 20thC that the role of a personal trainer emerged, as distinct from sports performance and military training (Smith-Maguire, 2008). Due to the era's notions of 'Muscular Christianity' (Watson et al., 2005), the 'invention' of home-based exercise equipment, and the mass publication of instructional literature, there was a rise in the notion of training for an ideal physique and health (YMCA, 2000). The period saw the development of the

An Aristotelian Investigation into Personal Training

performance of circus strength acts. These new acts not only included feats of strength but also posing routines highlighting notions of physical beauty and the ideal masculine image. This new physical culture saw performers such as Eugene Sandow, Sigmund Klein and Louis Attila become not only sources of physical inspiration but also purveyors and gurus of the knowledge required to achieve these goals (Gaines and Butler, 1980). As the 20thC developed other figures emerged as celebrities, each providing information and knowledge on how to train, eat and live an active lifestyle for health and beauty. From Artie McGovern in the 1930's through to Jack Lalane, the first television trainer, in the 1950s, each of these instructors fulfilled a demand for prescribed exercise that would work for everyone (cf Shephard 2015, Clarke, Lucett and Corn, 2012, McGovern 1937).

Through this brief history it is possible to observe the divergence of personal training from related professions. That is popular exercise became synonymous with aesthetic and fitness objectives as opposed to sport performance or military ends. This differentiation can also be illustrated by using Carpersen and colleague's (1985) commonly cited definitions (see for example Faulkner and Taylor, 2005, Biddle and Mutrie, 2001) in which exercise is classified as any form of structured physical activity undertaken with the key intention of improving fitness, health and well-being (see Table 1). In contrast, whilst sport may overlap with exercise in terms of an individual's intention to improve his or her fitness it also includes competition, skill development and is rule bound. Consequently, it can be seen that the divergence away from training for sport

and military purposes provided a unique 'physical culture' environment for the development of personal training.

It was not until the 1980s that personal training became readily available to the average gym user and exerciser. Before this time the one-to-one instruction of personal trainers had been available exclusively to the rich and famous. The 1980s brought a drop in the economic fortunes of celebrity trainers and a rise in gym culture and public consciousness regarding health related exercise, many personal trainers began offering training to a wider market (Smith-Maguire, 2008). As a result the profession grew and the first professional standards were set by newly developed governing bodies. The first personal trainer examinations were delivered by the American Council on Exercise in 1990. They followed this with the publication of the Personal Trainer Handbook in 1991 (Green, 2003).

The first professional standards for personal training were set in the US through the American Council on Exercise (ACE), the American College of Sports Medicine (ACSM), the International Association for Fitness Professionals (IDEA), National Council for Personal Trainers (NCCPT), the Aerobics and Fitness Association of America (AFAA), National Academy of Sport Medicine (NASM) and the National Strength and Conditioning Association (NSCA) (Reiff, 1996).

At the same time, the UK also saw a rise in PT. However it was not until 2002 that the UK saw a governing body developed to oversee these professionals. Drawing upon the literature and business models from the US, particularly the work of the NSCA and ACSM, the UK developed its professional and ethical standards

An Aristotelian Investigation into Personal Training

through the Register of Exercise Professionals (REPS) (Ansell, 2008).

established a national registry for qualified trainers in 2012 (Pitts, 2014).

Table 1: Definition of key terms.

Fitness	“a set of attributes that people have or achieve that relates to the ability to perform physical activity” (Caspersen et al., 1985 p129)
Health	“positive physical and emotional well-being with a high capacity for enjoying life and challenges and possessing adequate coping strategies in the face of difficulties” (Biddle and Mutrie, 2001 p8)
Well-being	“a state in which the individual is free from both physical and mental illness and disease” (Bird, Smith and James 1998)
Physical Activity	“a general term that refers to any movement of the body that results in energy expenditure above that of resting level” (Faulkner and Taylor, 2005 p2)
Exercise	“a subset of physical activity in which the activity is purposefully undertaken with the aim of maintaining or improving physical fitness or health” (Faulkner and Taylor, 2005 p4)
Sport	“activity is rule governed, structured and competitive and involves gross motor movement characterised by physical strategy, prowess and chance” (Biddle and Mutrie, 2001 p8)

According to this UK organisation a professional personal trainer is an individual who fulfils the criteria and undertakes the tasks listed in their occupational descriptor as published on their website (REPS, 2009). Furthermore, a trainer should also possess a recognised vocational qualification at level 3 (Advanced Instructor) on the National Occupational Standards (NOS) (Weissbort, 2006). It should be noted that despite these published standards, ‘personal trainer’ is not a legally protected title or profession. At present, achieving such academic and vocational standards is not a legal requirement before an individual can use the term as a professional descriptor.

Canada has undertaken a similar development in the creation of the personal training profession. Drawing upon guidelines developed from earlier organisations such as the ACSM, the Canadian profession developed key organisations such as the Health and Fitness Federation of Canada (HFFC), Can-Fit-Pro, and Canadian Fitness Education Services (CFES) (Santa-Mina and Burr, 2013). In 2014, Can-Fit-Pro

This Canadian REP’s was based upon the guidelines of the International Confederation of Register of Exercise Professionals (ICREPs). The ICREPs was created from the UK’s, Australian and New Zealand REPs frameworks in 2011 and is presented as key step forward in developing the consistency and professionalism of personal training (ICREPs, 2013).

Defining the ‘how’ of personal training

In attempting to define what a personal trainer is descriptions begin to present the unique ‘functional’ definition of the personal trainer in contrast to other physical activity related professions. Yet, if the aim is to explore the work of personal trainers it is necessary to move beyond the definition of *one who provides exercise and fulfils the [ACSM/HFFC/REPS/ACE/NASM] professional and personal requirements*. To do this there must be an examination of core competencies deemed essential to define the scope of a profession’s practice. Again, this can be undertaken using an Aristotelian analysis to examine the

An Aristotelian Investigation into Personal Training

foundations on which such competencies should be based.

In exploring the competencies required to be a PT, the main focus of an Aristotelian approach would centre on the question “what is a ‘good’ personal trainer?” Aristotle suggested in defining the nature of an object there is a need to understand not only what an object’s function is but how its ends are achieved (Aristotle, 1952). Accordingly, the ‘how’ of personal training needs to be examined to provide an answer to the question of what is a personal trainer?

In debating the goodness of a profession, Aristotle states there are three intellectual virtues, the *episteme*, the *techne* and the *phronesis*, which interact to provide its function (Hemmetstad et al., 2010). *Episteme* represents the scientific knowledge and theories, for example, in personal training this would include to knowledge about the location of muscle groups and their function for human locomotion as well as issues related to the safety of the client. *Techne* constitutes the technical knowledge underpinning the practice of a craft. For example the trainer would know specific exercises and their prescription to develop muscles required to improve locomotion. *Phronesis* is the knowledge “defined as a practical wisdom related to dealing ethically with context, practice and experience” (Hemmetstad et al. 2010 p 450). It is this knowledge which the professional uses to achieve their function in reality. A personal trainer may have an excellent *episteme* of human anatomy, and thus understand the most efficient exercise processes through *techne*, but they ultimately require a unique *phronetic* skill to deliver this message in a meaningful, ethically appropriate and contextualised manner. Trainers need to know not only the ‘what

and why’ of an exercise but also ‘how’ to get a client to do it safely and appropriately. Brooks (2004) states, personal trainers are not only prescribers of individualised exercise routines they also need to be able to inspire unique client groups, from bodybuilders to cardiac patients, through acting as leaders and motivators for behaviour change.

“People want to work with charismatic, fun, intelligent and inspiring individuals. They do not want to spend hours and hours with a non-emotional professor dictating what they must do and how many.” (Ivey, 2010 location 1106)

It can be suggested that the work of the personal trainer is based on interactional skills that are dependent on the environment and client. This permits the recognition of the issues surrounding attempts to influence and change another’s behaviour (Hemmetstad et al. 2010). Consequently, in answering “what is a ‘good’ personal trainer?” it can be suggested individuals who can achieve their ends through the occupational objectives provided by the governing bodies in demonstrating all three of Aristotle’s intellectual virtues.

“The origin of action...is choice, and that of choice is desire and reasoning with a view to an end. This is why choice cannot exist without reason and intellect or without moral state; for good action...cannot exist without a combination of intellect and character.” (Aristotle, 1952 p388).

From theory to practice in personal training

Whilst presenting a model of the scientific knowledge and practical know-how underpinning good personal training

An Aristotelian Investigation into Personal Training

Dwayne Ivey (2010) begins a chapter entitled "Psychology: your real job" thus:

"Psychology is arguably the most important factor involved in being a personal trainer...Though every professional personal trainer will have the skills to communicate with their clients and their issues, most of the national personal trainer certifications do little more than touch on the topic. They do not expand on psychology and they fail to prepare you for such crucial and intimate encounters. I implore you to seek out community college and/or university classes that are specifically geared to human psychology. You may not want to be a therapist, doctor, or shrink, but the fact is that as a personal trainer you will spend many quality hours with your client." (Ivey, 2010 Location 874)

The authors interpret the term psychology in this quote as being synonymous with the notion of *phronesis*. Ivey is arguing the education of personal trainers focuses on the *episteme* and *techne* aspects of personal training ultimately failing to properly address the *phronetic* demands of the role. The argument that *phronesis* is the most important factor in personal training is supported by Ed Thornton in his autobiographical 'It's More Than Just Making Them Sweat',

"Rhonda, who I now realize was probably an exercise-compulsive anorexic. Training her involved carefully holding her back for fear she'd hurt herself, while trying to convince her that, at 97 pounds, she wasn't fat...You can't help clients develop healthy mindsets about exercising their bodies until you cut

through their armour." (Thornton, 2010 p66)

Weissbort (2006) states in relation to her experience,

"Soft skills such as customer care, rapport building, listening and counselling are often undervalued by personal trainers, which is reflected in the amount of time spent studying them. Arguably, though, they can be seen as far more important and profitable in the long run than hours spent studying more and more about the human body" (Weissbort, 2006 p10)

In line with both Ivey's and Weissbort's comments, this aspect may not be presented sufficiently within the literature and education surrounding personal training.

The dangers of a lack of understanding and an inability to utilise the 'soft skills' needed for appropriate training relationships has been well documented. There are a large number of reports of inappropriate relationships leading to distress and personal issues for those involved (e.g. Fernandez, 2012, Hardy and Ward, 2012, Confessore, 2005). A lack of communication can have serious physical implications. Springer and Clarkson (2003) report on two occurrences of exertional rhabdomyolysis caused by personal trainers. They state of one case, *"The trainer had to assist the woman in walking from one exercise machine to another. She was urged on despite her statements that she wanted to quit"* (Springer and Clarkson 2003 p1499). The reporting of such life threatening occurrences, as well as the recognition of other personal trainer induced injuries, has led to a growing

number of comments focusing on the lack of empathy demonstrated by a number of trainers (e.g. McDowell, 2009, Kelsey, 2009, Bee, 2007). Empathy is an area that needs more research to ascertain if it is a personality trait or if it can be taught. Arguably this lack of *phronesis* is a limiting factor in the development of this field. A greater emphasis on behavioural and psychological skills would seem appropriate in personal trainer education as stated by Ivey (2010).

To conclude this section we define a Personal Trainer as a form of coach who is rationally and emotionally balanced, who can apply their practical wisdom flexibly to develop a relationship with their client enabling both to be healthier, fitter and happier.

REVIEW FROM AN ARISTOTLELIAN PERSPECTIVE OF 5 KEY BOOKS ON PT

The statement by Hemmestad, Jones, and Standal (2010) maintains “*phronesis* holds the potential to exist as an insightful over-arching framework through which coaching can be interrogated” (p453)

Despite the explicit need to understand the *phronesis* of personal training, as presented in autobiographical texts by practising personal trainers (e.g. Ivey (2010)) there may be a lack of emphasis on this knowledge within professional certification and accreditation textbooks. To examine this issue this section presents an analysis of 5 key texts published as resources for personal trainers by the established governing bodies and educational providers.

Question

In part this study set out to examine the contention that educational materials

targeted at personal trainers do not address in detail the psychological skills (which we equate in part with *phronesis*) required for professional practice. The key texts of major accrediting organisations were analysed.

For the purpose of this paper the texts from the following organisations were used: the American College of Sports Medicine (ACSM), American Council on Exercise (ACE), National Academy of Sports Medicine (NASM) and the National Strength Conditioning Association (NSCA) both based in the USA, and the UK's Register of Exercise Professionals (REPS).

It is recognised that there are a number of similar accrediting bodies in most countries. For example Canada possesses the Health and Fitness Federation of Canada (HFFC), Can-Fit-Pro, CFES, and other designations. Each of these associations establishes standards for being considered a PT with various levels of credentialing and education. However, the inclusion of texts related to these organizations was not undertaken owing to: 1) a limited availability of organizational texts to the international community, and 2) the foundations of these organisations appear to be based on the recommendations and processes of the five chosen structures. It is argued that these five have fundamentally impacted on the initial international development of the PT profession. Therefore each is still considered a guiding foundation for future progress. For example Canadian trainer education is based upon guidelines such as the ACSM (Santa-Mina and Burr, 2013). Furthermore the recent creation of the REPs Canada brings Canadian trainers into professional standards similar to the UK REPs system (ICREPs, 2013).

Therefore the inclusion of the ACSM and UK REPs is seen as encompassing the key elements of knowledge that underpin the Canadian educational bodies.

ACSM: Established in 1954, the ACSM claims to be a global leader in sports and exercise sciences with over 45,000 members and certified trainers working within 90 countries (ACSM 2012). The *“ACSM is the only organization that offers a 360-degree view of the profession. From academicians to students and from personal trainers to physicians, our association of sports medicine, exercise science, and health and fitness professionals is dedicated to helping people worldwide live longer, healthier lives”* (ACSM 2012). The ACSM is arguably the oldest organisation that provides accreditation for PTs. In the method used for this study the key text was identified as the fourth edition of the ACSM publication “Resources for the Personal Trainer” [5]. Significantly for this research this edition stated *“The Behaviour Modification section, which was new in the third edition, has been lengthened considerably and includes many case study examples”* (ACSM, 2014 piii).

ACE: ACE was founded in 1985 as a non-profit organisation with the philosophy that *“We seek to inspire, motivate and encourage America to make healthy living an integral part of our society.”* (ACE, 2012). According to its key text, the ‘Personal Trainer Manual’ in its third edition, *“ACE has certified more than 100,000 individuals and has more than 45,000 currently certified professionals in 77 countries”* (Green, 2003 p xi). It can be assumed these figures will have risen in the decade that has passed since the text’s publication and a recent impact report puts the figure nearer 55,000 certified

professionals (ACE, 2012). It should also be noted that this text may soon be updated. However at the time of writing it is the most current text from the organisation.

NASM: NASM was founded in 1987 and provides education and certification for personal trainers claiming to be *“a pioneer in developing evidence-based health and fitness solutions...a trusted resource for health and fitness information and empowers millions to live healthier, more enriched lives”* (NASM, 2012). The text considered key to its educational foundations is the ‘Essentials of Personal Training’ that has run to its fourth edition [9]. This new edition contains a number of updated sections including *“A greatly improved Behavioural Coaching chapter to help fitness professionals communicate with their clients”* (Clark et al., 2012 p xi).

NSCA: NSCA was originally founded in 1978 to provide accreditation for strength and conditioning coaches working with sports performers. It broadened its membership in 1981 to include all allied professions. As a result, *“the new millennium brings over 25,000 NSCA members worldwide. As the Association supports its members, it ultimately supports all athletes and non-athletes who will benefit from safe and efficient exercise techniques and program design”* (NSCA, 2012). In its second edition, the ‘Essentials of Personal Training’ (Coburn and Malek, 2012) is provided as the key text for its personal training education and its certified examination; *“The content of the textbook has been designed to present the knowledge, skills, and abilities...required by a personal trainer”* (NSCA, 2012 p ix).

REPS: REPS is the key UK based personal trainer accrediting body. Whilst British Weightlifting (BWL), UK Strength

and Conditioning Association (UKSCA) and the National Amateur Bodybuilders Association (NABBA) provide governing bodies for exercise leaders and have personal trainers as members, REPS is the 'officially' recognised certifying body for fitness professionals. Launched in 2002 through the work of Skills Active, a national education body, REPS was created to provide a standard level of occupational competence amongst trainers and to bind their exercise practices to a set of ethical standards. Although the website does not provide data on member numbers a search using the REPS database suggests a total of 13,442 individuals registered as Level 3 personal trainers as of the 20th March 2012 (REPS, 2012). Unlike the US organisations, REPS does not provide a single textbook for use with its accredited education. In the UK each awarding body (e.g. YMCA, ActiveIQ) must demonstrate their courses achieve the minimum educational requirements set by Skills Active and the Qualifications and Credit Framework (QCF) (REPS, 2012). In accordance with this framework, personal training courses are set at level 3 on the QCF. The courses then produce their own literature. In an attempt to examine the content of a UK based organisation two key texts were amalgamated: the 2nd edition of the 'Fitness Instructors Handbook' (2013a) and 'The Complete Guide to Personal Training' (2013b) both by Coulson (2007). This decision was taken because the texts state they are endorsed by Skills Active and together provide complete coverage of the required knowledge for the 'Instructing Health and Fitness Level 2', the 'Instructing Physical Activity and Exercise Level 3' and all requirements for 'Health and Fitness Occupational Standards at

Level 3'. Therefore this knowledge underpins the qualifications for recognition as an advanced instructor and personal trainer at Level 3 on the REPS accreditation framework. Furthermore, the Register of Exercise Professionals demands that registered instructors record 12 CPD points to maintain their professional status. In accordance with this, Skills Active has acknowledged that reading Coulson (2013a) provides 2 CPD points and Coulson (2013b) provides 3 CPD. It is therefore suggested that reading these books will provide personal trainers with sufficient knowledge to partly achieve the maintenance of their professional status. It can be argued that they provide the overview of knowledge to undertake personal training practice.

To understand the importance placed on the skills of communication, behaviour change and psychology within the texts identified above a content analysis was undertaken (Table 2). Using the chapter headings and the main focus of each section, the academic content, in terms of number of pages devoted to the subject, were grouped into the following categories:

1. **Sciences:** this category included all chapters focused on anatomy, physiology, kinesiology, nutrition and biomechanics.
2. **Instruction and Programming:** this category included all the chapters that provided information on exercise techniques. It should be noted that in each of these chapters further 'science' information is often given to support the advice on training prescription.
3. **Special populations:** this category includes all of the chapters that

An Aristotelian Investigation into Personal Training

- focused on the prescription and exercise programming for specialist populations including children, elderly, elite athletes and clinical rehabilitation. Again, as with the Instruction category, focused science to support the programming and prescription advice was also given in this material.
4. **Client assessment:** this category covered the methods used when working with clients seeking personal training services to obtain information on their health and fitness status. Such chapters
 7. **Business:** this category included the information provided to trainers on 'selling' their services, marketing, career pathways, qualification strategies and similar professional information needed to create and sustain a business.
 8. **Psychology and Motivation:** this category included all chapters which focused on behaviour change, adherence issues, leadership, communication skills and discussions of the trainer-client relationship beyond fitness/health assessment and

Table 2: Breakdown of set texts based on chapter focus.

Core Text	% on Technical Knowledge	% on Scientific knowledge	% on Psych and motivation
ACE (Green, 2003)	49	35	15
ACSM (ACSM, 2014)	59	29	12
REPS (COULSON, 2013a and 2013b)	63	33	4
NSCA (Coburn and Malek, 2012)	53	40	7
NASM (Clark et al., 2012)	61	35	4
Mean % of the 5 texts	53	39	9

- included information on fitness
5. testing, health screening and initial consultations.
 6. **Health and Safety and Ethics:** this category included chapters focusing on the organisation's ethical code of conduct, health and safety responsibilities of trainers, first aid and similar content.
- business based objectives.
- Pages detailing glossaries, examination content, quizzes, and references were not included in the analysis.
- To understand the limitations of the methodology readers should note that the results that follow are an analysis of chapter size and not of specific content or its quality. That is chapters on, for

example 'Science,' may make a comment on psychology or how to present information to a client. The critique presented here is of what we consider to be the core textbooks and not the courses or accreditation process provided by the five bodies. We are critiquing the notion that someone can label him or herself a personal trainer without professional accreditation and may base their practice on the contents of the book when it would be preferable for them to undertake the courses.

Results

Table 2 presents the total number of pages in percentage terms dedicated to *techne*, *episteme*, and *phronesis* within the key texts for personal trainer education and accreditation.

The results suggest there is an overall imbalance in content towards the scientific and technical aspects of exercise prescription. It can be seen that regardless of the accrediting body, less than 10% of its academic content is focused on understanding behaviour change and how to support clients in maintaining a healthy lifestyle. This would seem in direct contrast to the recommendations and experiences described within the previously cited autobiographical texts by PTs.

It could be argued that all three elements of an Aristotelian definition of a 'good' personal trainer are provided for in the academic texts. The recommendations within the educational material clearly suggest a process including all three sources of knowledge. The texts clearly provide information on anatomy and physiological process that allow for the trainer to understand the need for a holistic approach to assessing their clients in the first instance. This

assessment allows for an individualised diagnosis of needs in terms of physical fitness. From this diagnosis the trainer is then able, based on their scientific knowledge, to judge what training is required and what forms of exercise activity are best suited to develop the recognised physiological limitation. The 'how' to present the exercise stimulus is understood through both physiological and psychological factors. Physiologically, scientific data is presented on the recommended number of training sessions, length of time of each session, number of exercises and level of intensity experienced in a particular training modality. Psychologically, skills are presented to allow the trainer to "*empower individuals to live a healthy lifestyle*" (Clark et al., 2012). Therefore, the process from *episteme*, theory, to *techne*, what and why, to *phronesis*, how, it could be argued is sufficiently covered for practice.

Yet this would seem to miss key elements of personal training and importantly fails to grasp the subtlety of Aristotle's notion of a phronetic knowledge. Specifically it can be argued that the knowledge presented in the key texts supports a model, which presents practical wisdom as the lowest form of knowledge.

In discussing approaches to coaching within adapted and disability physical activity Standal (2008) suggests that the knowledge used to underpin practice is based on a hierarchy, which legitimises scientific, experimentally derived data but denigrates expertise and practical wisdom. Consequently, theoretical and academic knowledge takes priority over expert opinion. Whilst such a model has a clear and unarguable advantage in the development of scientific knowledge it

An Aristotelian Investigation into Personal Training

does raise issues as to the need within environments such as PT for dealing ethically with unique, individualised and socially bound practices.

The downgrading of professional knowledge and the promotion of quantified experimental data may lead to a mechanised, impersonal approach to the PT-client encounter. That is the training is designed in a fashion unrelated to the individual's holistic needs but rather each bodily function is trained in an isolated manner with no holistic consideration of the individual's needs. Such an approach has been previously recognised within the 'medical' model approach to impairment and adapted physical activity (Standal, 2008). That is the client's needs are seen as impairments in physiology and biomechanics, isolated from the social-cultural context. As a result 'fitness' interventions are presented as forms of corrective therapy as opposed to avenues for holistic health development. Within personal training such a process can be suggested as observable within, but not limited to, each text's recommendations for such practices as standardised heart rate training zones, sets and repetitions ranges for various objectives and a standard set of fitness tests for client assessment. Consequently there is a danger of a "one scientific size fits all" philosophy as demonstrated by a recent court case in which the defence of the PT to the severe injury of a client was "I do that workout with everyone" (Eickhoff-Shemek, 2010).

Arguably, this emphasis on the mechanised and reductionist reliance on scientific data is also presented within each text's discussion of the PT-client relationship and the psychology of client behaviour. Whilst further research is

needed to explore the theoretical underpinnings of each text's recommendations, it is recognised terms such as the core conditions of Rogerian person centred counselling (Rogers, 1961) which are described as important aspects of the PT-client social and psychological encounter (e.g., Green, 2003 p 391). Yet, despite the humanistic and holistic philosophy underpinning Roger's and similar relationship building views the methods for PTs are reduced to a scientific process. This fails to genuinely embrace the humanistic philosophy and individuality of personal training. The majority of texts discussing behaviour change via mechanised psychological techniques such as goal setting, journal keeping and discrete cognitive behavioural and neuro-linguistic programming methods for self-talk and visualisation. Yet despite such methods finding support within key academic texts and through experimental data, there is a growing body of literature which debates the extent of the effectiveness of such methods in sports and exercise contexts (e.g., Murphy, 2005, Nesti, 2004, Lavalley and Cockerill, 2002, Corlett, 1996). However, at present, the key PT texts appear to maintain support for a model of knowledge that emphasises the scientific episteme and techne over the phronetic professional wisdom.

As a result this paper finds supports for the recommendations of Warburton et al., (2013) and Santa Mina and Burr (2013). There is clearly a need for advanced postgraduate education in line with other medical and health professionals. Furthermore this education should include a period of internship and 'hands-on' experience reflecting the demands of other clinical roles. This would allow for the development of PTs

An Aristotelian Investigation into Personal Training

able to not only achieve scientific standards but also able to recognise the key ethical applications of this knowledge.

Conclusion

In conclusion we propose defining a Personal Trainer as '*a form of coach who is rationally and emotionally balanced, who can apply their practical wisdom flexibly to develop a relationship with their client enabling them to be healthier, fitter and happier*'. To inform professional practice through this definition there is a need for a shift in how the key knowledge required by PTs is conceptualized. Specifically in the haste to be recognised as a legitimate profession founded on scientific, evidence based practice, the knowledge base of personal training has left behind the key element which perhaps makes it effective: **the personal**. Therefore we call for a shift in the definition and perception of PT practice so that it encompasses more thoroughly and in balance all three of Aristotle's virtuous knowledge: the *episteme*, the *techne* and the *phronesis*. Specifically we recommend that the certification of PTs must include a period of internship in-line with other health professionals. The rationale being that an understanding of *phronesis* is experienced before professional recognition is awarded.

Authors' Qualifications

The authors' qualifications are as follows: John Gray MSc. ASCC.FHEA., Prof. Andy Smith MBE. PhD. FBASES. And Dr Hazel James PhD.

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