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Opinion

# Exercise for health: Serious fun for the whole person?

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## 1. Introduction

After more than 50 years of research investigating physical activity and exercise there appears to be a clear consensus on the health benefits of this form of human behavior. Evidence from numerous studies examining exercise points to the physical, psychological, and social improvements that can accrue through regular participation in activity.<sup>1</sup> Given this accumulation of scientific knowledge and its promulgation through the offices of academia and governmental agencies, it seems remarkable that the World Health Organization has identified the lack of physical activity and exercise as one of the most pressing health concerns facing the developed and developing nations in the 21st century.<sup>2</sup> In considering this, a skeptic might observe that it seems the more we study exercise and its links to a range of so called life style diseases, the greater the increase in these same diseases and ailments! This conclusion of course would be to confuse correlation with cause and effect. Nevertheless, there must be something that can explain this strange mismatch between information and theory on the one hand, and action and practice on the other.

One of the features of most research into exercise is that it is carried out by individuals and organizations that have a vested interest in the topic. In fairness, it should be pointed out that this is quite normal, and is what happens in many other areas of research. It also seems safe to assume that those who dedicate their lives to the scientific study of a particular problem are passionately interested in finding a solution. The benefits emerging from this scenario in terms of motivation and desire are obvious, but are there any possible drawbacks? Well, one problem might be that scientists, researchers, and policy makers are ignoring, or at least forgetting about some of the potential negatives associated with exercise. I would argue that one of the most important of these negatives is that for many people, exercise tends to be an uncomfortable experience. Although studies<sup>3</sup> point to a general acceptance that exercise is beneficial for us, after many years of promoting this idea to encourage

greater participation, the evidence is that in most countries fewer people than ever are engaging in this type of health related activity. In recent years there has been an attempt to change the message to encourage greater acceptance of the benefits of this form of physical activity by proposing that “Exercise is Medicine”.<sup>4</sup> This could be understood in any number of ways such as from a physiological, epidemiological, or economic point of view. None of these perspectives are likely to be especially controversial or problematic. However, “Exercise is Medicine” may be a very unhelpful phrase in that it could quite easily be interpreted as a threat. That is, it plays on the universal idea that medicine is good for us and *we had better take our recommended dose, or else!* The exercise as medicine mantra sounds a little like a desperate attempt to convince that exercise is good for us, given it seems from epidemiological work on health and physical activity the positive message about its benefits has had insufficient impact on participation levels.

I will argue that there are a number of new perspectives that researchers could begin to consider their work in exercise and physical activity. One new approach to understand the challenge of declining levels of exercise could be to reconsider the concept and its definition. A more holistic perspective for example, might enable scientists and policy makers to envisage a broader range of benefits that could accrue from engaging in exercise. This could allow a deeper exploration of the reasons why people do or do not take part, and what personal meaning they ascribe to their involvement. I feel that it is timely to consider more comprehensively what sport can contribute to the “Exercise is Medicine” debate. Modern sport, which emerged as a huge global phenomenon in the second half of the 20th century, remains the single most important resource to increase exercise levels apart from changing habitual physical activity levels. Sport has many advantages over the idea of exercise as medicine; the most important of these is that sport is grounded in the innate human capacity for play.<sup>5</sup> We *play* sport, badly or well, gently or with intensity, but usually with passion. In contrast, we *do* exercise, or *participate in* physical activity, and it is very rarely described as a passion. Another important shift might be that researchers begin to use a greater range of methodologies and methods, for example phenomenology, that emphasize the importance of an

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individual's subjective experience, and attempt to shape research questions based on the *lived* concrete reality of a phenomenon rather than its theoretical description.

Before I consider each of these new perspectives in relation to motivation, positive experiential states, and methodological issues, there is a very important issue that seems to have been overlooked. I believe that for too long there has been little recognition or acknowledgment in the academic literature that exercise is often painful. While this is not to fall prey to the silly mantra of *no pain no gain*, it is worth remembering that sustained physical exertion is challenging.

## 2. Exercise is uncomfortable

If we are to understand why efforts aimed at increasing exercise participation have not been as effective as hoped, it is important to identify the scale and type of challenge faced. One way to do this is to briefly consider what seems to me to be at the heart of the issue. This could be summed up as, exercise is always uncomfortable, and the best form of this activity, that is, intense exercise,<sup>6</sup> is even more uncomfortable. I believe that until we accept this empirical fact, much of what we do will miss the target, resulting in poor use of scarce resources and frustration for those of us who support the importance of exercise and physical activity as part of a healthy life.

The challenge facing exercise is that in order to increase participation levels, individuals must take greater responsibility for themselves. The idea of individual responsibility appears to be more acceptable than ever. Many commentators on the modern world have pointed out that the cultural turn is toward greater autonomy and self-determination of people and nations. Taken too far, these forces can contain a destructive element, especially when they are allowed to undermine human solidarity, community and shared belief. At an individual level however, this growth in personal freedom and responsibility makes it harder to direct behavior and attitudes. It is this universal development of independent thinking that the "Exercise is Medicine" idea is up against. The scientific data strongly support the claim that increasing levels of physical activity is good for us, especially in the form of high intensity exercise. But unless governments are going to try to force or coerce people to become more active, the problem will grow. Maybe instead of blaming people for not heeding the messages, researchers need to look more closely at what our assumptions have been. A major oversight it seems to me is that we have failed to remember that exercise is up against the competing attractions of sedentary behavior.

Much of the literature in the area seems to ignore the empirical fact that doing exercise is often an uncomfortable experience, at least in comparison to sitting, reading, watching television, or playing computer games. As many countries experience growing industrialization and urbanization, their populations have become less accustomed to the kind of hard physical labor associated with rural living and an agricultural economy. This type of work, in similar ways to intense exercise, places the individual under physical and psychological stress. Stress is not bad in itself, and indeed as the first scientist to define the term pointed out, it can be experienced negatively as

distress, or more positively as eustress.<sup>7</sup> Surely one of the reasons many try to avoid taking more physical activity and exercise is the type of stress associated with this behavior. In plain English, exercise hurts; maybe only a little and sometimes a lot, but we need to accept that for most people it is uncomfortable and distressing. This is supported by the most recent advances in research which emphasize the importance of high intensity exercise to gain health benefits. Now, there are no doubt many possible explanations of why we have failed to consider the empirical fact that exercise is distressing (and should be) for all, from recreational to elite levels. It could be argued that this conundrum has been overlooked because we have not started our work often enough from the ground, that is, by understanding just how much of a counter cultural experience exercise activity is for many people in the modern technological world of easy living.

## 3. Change of direction

Beyond debates about exercise and discomfort, there are a number of other themes I feel could provide a new direction and challenge the "Exercise is Medicine" paradigm. In the following section I will briefly examine 3 of these more fully. Specifically, I will be looking at the need to adopt a more holistic view about the benefits of exercise and sport, the importance of positive experiential states in understanding exercise and sport participation, and methodological implications for future work.

### 3.1. Holistic motivation

Despite not being primarily concerned with the physical or psychological benefits relating to increased levels of exercise, a recent study has reported that individuals may achieve a sense of identity that connects to spiritual or other sources of meaning in life through their involvement in physical activity.<sup>8</sup> Although the research participants were former and current high level sport performers, it does suggest that more work is needed to understand the deeper reasons for involvement. Very few studies have looked at this in relation to exercise, tending to focus more on various forms of sport. However, Fahlberg et al.<sup>9</sup> carried out one of the first pieces of research into existential psychology and exercise and found that this type of activity can provide an important source of meaning for some people. They described how exercise gave them emotional, physical, social, and spiritual benefits, and that it helped them find meaning in their lives. Since that time, very few studies have looked at exercise from such a broad holistic perspective,<sup>10</sup> which represents a missed opportunity to understand exercise participation in a more comprehensive and person centered way.

While "Exercise is Medicine" makes sense from a physiological perspective, it is more likely that the health benefits associated with sport will appeal to more people. Sport is truly holistic, or at least, it can easily be approached in this way. The distance runner and golfer can both benefit physically, psychologically, socially, and spiritually. In just the same way, veteran age group athletes can enjoy their sport just as much as the young and highly trained. And what is more, the passion to keep

playing, which is often described as a kind of love, means that lifelong participation is seen frequently. It is noticeable that so much research<sup>11</sup> has focused on exercise adherence compared to sport. Exercise may be good for us, but it seems that for many people, this is insufficient to attract and retain their interest. Sport appears to combine passion and motivation in a mix that has made it by far the most practiced form of physical activity and exercise across the world.<sup>12</sup>

This motivation for sport has been subject to extensive study over many years, therefore this does not represent a completely new perspective as such. However, I feel that some of the implications from self-determination theory<sup>13</sup> have not been adequately considered in relation to motivation for *sport or exercise*. In attempting to understand sport participation levels, Deci and Ryan<sup>13</sup> claim that sport is a very attractive pursuit to many people because of its connection to intrinsic motivation. Although they describe this type of motivation as being about feelings of competence and self-determination, intrinsic motivation is possibly even more important because it is considered an innate quality of human beings. Most clearly seen in very young children in the form of play, it accounts for those activities where the reward seems to be in doing the task rather than something else. In contrast, exercise seems to be faced with an intractable problem in that it seems attached to an instrumental and utilitarian ethic, one where the focus is on getting a reward for effort. I believe that this type of extrinsic motivational orientation is unattractive to many because of its undeniable link to the idea of work, effort, and routine. To conclude, sport is often seen as a type of play activity that is pursued for its own sake in comparison to exercise, where motives are more clearly oriented to achieving extrinsic rewards such as weight loss, cardiovascular health, and psychological well-being.

### 3.2. Play and flow

One of the most striking differences between sport and exercise centers on the concept of play. Novak<sup>14</sup> argues that sport, especially at amateur and recreational levels, is an expression of the human capacity to play. At a more prosaic level, it is common place to talk about *playing* sport, and to describe athletic activity by using this term. For example, we refer to hockey players, rugby players, and football players; this nomenclature is used even at the highest levels of sport in the case of professional football players. That we are so familiar with this word may have obscured its very great importance to understanding why sport matters so much for many people and communities. Play and playing have been described by Pieper<sup>15</sup> as universal human behaviors which are as important to our health and well-being as work, or other more instrumental pursuits. In his book, *Leisure: the Basis of Culture*, Pieper explains that human play allows us to experience creativity, autonomy, and the joy of pursuing activity for its own sake. These qualities associated with play, enable the human person to experience a form of holistic regeneration, one that touches us at a physical, psychological, emotional, and spiritual level. He argues that this is deeply enjoyable and self-liberating. He also claims that play is serious because it requires us to unreservedly throw our whole selves into the task, and that through play and approaching activities in a spirit of

play, we can acquire knowledge and learn in a way that is superior to when we are engaged in effortful work.

The passion for play is surely one of the best reasons to explain why people take part in a wide range of sports activities that benefit the individual and the growth of authentic communities and social solidarity. The contrast with exercise could not be greater. Our language provides the clue to the very significant differences between the 2 concepts of play and exercise. This is seen when we talk about *working* at exercise, and while we know work is vital and important, it is rarely as attractive to free human beings as play.

Moving away from the dichotomies of play and work, the research of Csikszentmihalyi and Csikszentmihalyi<sup>16</sup> into the idea of *flow* and optimal performance offers another way of seeing the issue. The findings of their extensive studies with sports performers, scientists, dancers, artists, business leaders, and many other occupations, is that best performances usually take place when the individual experiences the state of flow. From a psychological perspective, Csikszentmihalyi and Csikszentmihalyi<sup>16</sup> describe flow in ways very similar to the concept of play, in that it feels effortless, spontaneous, and easy, while simultaneously being very goal focused, controlled, and clear. The research suggests that although this deeply enjoyable and rewarding psychological state can be experienced in all parts of life including exercise, physical activity, and work, it is more often found in activities such as playing sport. They argue that this is due to the inherent qualities of sport, the most important of which is that sport provides participants with many opportunities to develop their skills to meet the challenge of the task. Csikszentmihalyi and Csikszentmihalyi<sup>16</sup> contend that given sport's greater complexity in terms of the physical, technical, and psychological skills that must be mastered to participate successfully (at any level), flow states are more likely to occur in comparison to the less complex forms of activity commonly seen in exercise programs.

### 3.3. Methods

One such way that researchers could develop a better understanding of the subjective experiences of exercise participants is by making greater use of phenomenology.<sup>17</sup> Although mostly used in psychological and sociological studies, the founder of this strictly empirical method envisaged that it could be employed by all human and natural science disciplines. A more phenomenologically guided approach to our work could help scientists gain a more complete understanding of the concept of exercise and help us to build theory that always places the human person, and their reality, center stage. A phenomenological study might have been able to warn academics about the dangers of describing exercise as medicine. They may have discovered that despite overwhelming evidence and rigorous science supporting the phrase, "Exercise is Medicine" has had the effect of turning people off doing more physical activity and exercise, and fails to capture the most important motives behind why some choose to become active. Understandably, those organizations and individuals who support the idea that "Exercise is Medicine" might point out that they are not interested in why people exercise or become more active. They will likely highlight that their concern is much more about identifying the underlying physiological,

biochemical, and molecular changes associated with exercise behavior. But is this really true? Is not it more correct to argue that all, that is natural scientists as much as their social science colleagues, have a duty to do much more to promulgate the message that increasing levels of exercise is beneficial. Doing this may begin to reverse the trend of inactivity we have witnessed in many countries during the past few decades. Greater care with terminology is therefore surely warranted, especially where behavior change in the public is the aim. Academics are very familiar with being accused of ivory tower thinking. This is often a deeply offensive and unfair description, and one that does not appear to hold any validity in a field like sport and exercise science, which by its own definition, is an applied science. However, words matter greatly, and most especially to our audience. From a phenomenological perspective, “Exercise is Medicine” may resonate and make sense to academics and researchers, but is likely to do more harm than good if our aim is increasing participation. The phrase “Exercise is Medicine” could still be used in the labs and research centers, but in my view, should rarely if ever be uttered in the public square!

#### 4. Conclusion

In answering the question posed by the title of this paper, the most equitable response might be to acknowledge that although exercise is a medicine and beneficial for health, like most medicines, it is best taken with a spoonful of sugar. It is my belief that sport can help us to swallow our medicine, and on occasion make us forget we are even taking it. Sport in its many and varied forms has the potential to provide a wide range of health benefits for the whole population. This is not to ignore the disadvantages that may be associated with playing sport, for example, injuries, burnout, and over-competitiveness, although these can also be experienced by avid exercisers. However, it seems to me that sport is the best vehicle within which exercise can be experienced because of its shared genealogy with play. As has already been discussed, play is a serious concept in the sense that is vital to human health and well-being, and it has the added attraction of also being highly enjoyable and fun.<sup>18</sup>

To conclude, given the mass of empirical evidence that has been accumulated from scientific research, the idea that “Exercise is Medicine” is more or less beyond dispute. Although governments and their agencies around the world will most likely welcome this term and the science that supports it, the equally important matter is how useful this will be in encouraging people to increase exercise levels in the future. The results so far indicate that much more will be needed to counter the physical activity health crisis facing the developed world in particular. At this juncture, the question we face is how much more do we need to know about the underlying mechanisms of how exercise benefits health, given that resources for research are always scarce? It seems time to shift focus to a much greater degree toward understanding how to get more people involved in physical activity and exercise. It has been proposed in this paper that one of the best ways to do this will be to re-direct efforts at sport, and try to understand more about its potential benefits at the individual and community levels. Another way forward may lie in broadening our research questions and using

methodologies that start from the ground up, which can help to discover the range of meanings sport and exercise can provide throughout an individual’s life.<sup>19</sup> Additionally, there must be a greater willingness to investigate the topic from a more holistic perspective, one that understands sport beyond the merely physical and as something that can provide for social, psychological, emotional, and spiritual health. Finally, we need to look more closely at the value of sport to the community, and its role in creating and sustaining identity. In order to understand and get to grips with this global phenomenon, it may be time to return to the individual and the local, and come out from the halls of academia and into the streets.

#### Competing interests

The author declares no competing financial interests.

#### References

1. Mountjoy M, Andersen LB, Armstrong N, Biddle S, Boreham C, Bedenbeck HPB, et al. International Olympic Committee consensus statement on the health and fitness of young people through physical activity and sport. *Br J Sports Med* 2011;**45**:839–48.
2. Durstine JL, Gordon B, Wang Z, Luo X. Chronic disease and the link to physical activity. *J Sport Health Sci* 2013;**2**:3–11.
3. Heath GW, Kolade VO, Haynes JW. Exercise is medicine: a pilot study linking primary care with community physical activity support. *Prev Med Rep* 2015;**2**:492–7.
4. Jobelo F, Stoutenberg M, Huber A. The exercise is medicine global health initiative. *Br J Sports Med* 2014;**48**:1627–33.
5. Nesti MS. *Existential psychology and sport: theory and application*. London: Routledge; 2004.
6. Callois R. *Man, play and games*. Chicago, IL: University of Illinois Press; 2001.
7. Selye H. *The stress of life*. New York, NY: McGraw-Hill; 1956.
8. Ronkainen NJ, Tikkanen O, Littlewood M, Nesti MS. An existential perspective on meaning, spirituality and authenticity in athletic careers. *Qual Res Sport Exerc Health* 2015;**7**:253–70.
9. Fahlberg LL, Fahlberg LA, Gates KW. Exercise and existence: exercise behaviour from an existential-phenomenological perspective. *Sport Psychol* 1992;**6**:172–91.
10. Brymer E, Schweitzer R. Extreme sports are good for your health: a phenomenological understanding of fear and anxiety in extreme sport. *J Health Psychol* 2013;**18**:477–87.
11. Pridgeon L, Grogan S. Understanding exercise adherence and dropout: an interpretative phenomenological analysis of men and women’s accounts of gym attendance and non-attendance. *Qual Res Sport Exerc Health* 2012;**4**:382–99.
12. Kwon S, Janz KF, Leutuchy EM, Burns TL, Levy SM. Developmental trajectories of physical activity, sports and television viewing during childhood to adulthood. *JAMA Pediatr* 2015;**7**:666–72.
13. Deci EL, Ryan RM. *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum Press; 1985.
14. Novak M. *The joy of sports: end zones, bases, baskets, balls and consecration of the American spirit*. New York, NY: Basic Books; 1994.
15. Pieper J. *Leisure: the basis of culture*. South Bend, IN: St Augustine’s Press; 1998.
16. Csikszentmihalyi M, Csikszentmihalyi I. *Optimal experience: psychological studies of flow in consciousness*. Cambridge, UK: Cambridge University Press; 1988.
17. Vanatta S. A phenomenology of sport: playing and passive synthesis. *J Philos Sport* 2008;**35**:63–72.
18. Allen-Collinson J. Sporting embodiment: sport studies and the continuing promise of phenomenology. *Qual Res Sport Exerc* 2009;**3**:279–96.
19. Nesti M. Phenomenology and sports psychology: back to the things themselves! *Sport Ethics Philos* 2011;**5**:285–96.