Physical Activity as an Investment in Personal and Social Change: 
The Human Capital Model

Richard Bailey, Charles Hillman, Shawn Arent, and Albert Petitpas

The use of metaphorical language in discussions of physical activity and health is pervasive. For example, policy documentation and academic literature alike are littered with metaphors, most of which have a martial character—e.g., society must ‘combat’ obesity; it needs to ‘light’ and ‘defeat’ heart disease; susceptible populations must be ‘targeted’ and we must ‘battle’ with the determinants of sedentary behavior. Such terminology is understandable in light of the evident threats to health and well being resulting from inactivity; however, it also frames the discourse in a negative manner. A consequence of negatively-framed arguments is that they tend to be narrow and restrictive. NIKE, Inc. recently brought together a group of sports scientists, medical researchers, psychologists and others to articulate and to validate a new conceptual model—the Human Capital Model (HCM) of physical activity.1 We propose that this alternative model better represents the full scope of the positive contribution of regular physical activity to human development and well being.

The use of the phrase ‘Human Capital’ is deliberate and suggests that physical activity is an investment capable of delivering valuable individual and social returns. Underlying the model is a claim that the stock of competencies, knowledge and personal attributes are embodied in the ability to participate in physical activity, and that these activities produce value that is realized through increased well-being, educational achievement, economic worth, and so on. Moreover, by focusing explicitly on the positive potential outcomes of physical activity, the HCM captures a much more holistic and inclusive range of evidence compared with negatively-framed approaches. In order to build the HCM, a comprehensive review of the beneficial outcomes of physical activity first was performed using over 500 published articles. Differential weightings were given to findings based on the qualities and scope of the studies (e.g., range of institutional settings, international applicability, etc.). Human development next was conceptualized according to six different domains of ‘capital’: 1) physical; 2) emotional; 3) individual; 4) social; 5) intellectual; and 6) financial, based on extended iterative quantitative and qualitative methods.1 Each of these 6 domains defines a set of resources that underpin human well-being and success (Figure 1):

1. Physical Capital: The direct benefits of physical activity to physical health and human function, including the prevention and mitigation of non-communicable diseases and conditions, such as heart disease, diabetes, cancer, and obesity.

2. Emotional Capital: The psychological and mental health benefits associated with physical activity, including increased levels of self-esteem and self-efficacy, reduced depression and anxiety, reduced social isolation, and a greater ability to process stressful events.

3. Individual Capital: The elements of a person’s character—e.g., life skills, interpersonal skills, values—that accrue via participation in play, sports and other forms of physical activity. Reported benefits in this area include teamwork, co-operation, moral and social responsibility, and resilience.

4. Social Capital: The outcomes that arise when networks between people, groups, organizations, and civil society are strengthened because of participation in group-based physical activity, play, or competitive sports. This domain of capital includes the development of both pro-social behaviors and social inclusion through participation in physical activity.

1. Bailey is with RBES Ltd., Birmingham, United Kingdom. Hillman is with the Dept of Kinesiology and Community Health, Psychology, and Internal Medicine, University of Illinois at Urbana-Champaign. Arent is with the Human Performance Laboratory, Dept of Exercise Science and Sport Studies, Rutgers University, Newark, NJ. Petitpas is the Director of the Center for Youth Development and Research, Dept of Psychology, Springfield College, Springfield, MA.
The comprehensive benefits of sports and physical activity are underestimated today. This model shows the surprising spectrum of benefits of physical activity to an individual and economy. Each “capital” defines a set of resources that underpin our well-being and success.