

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

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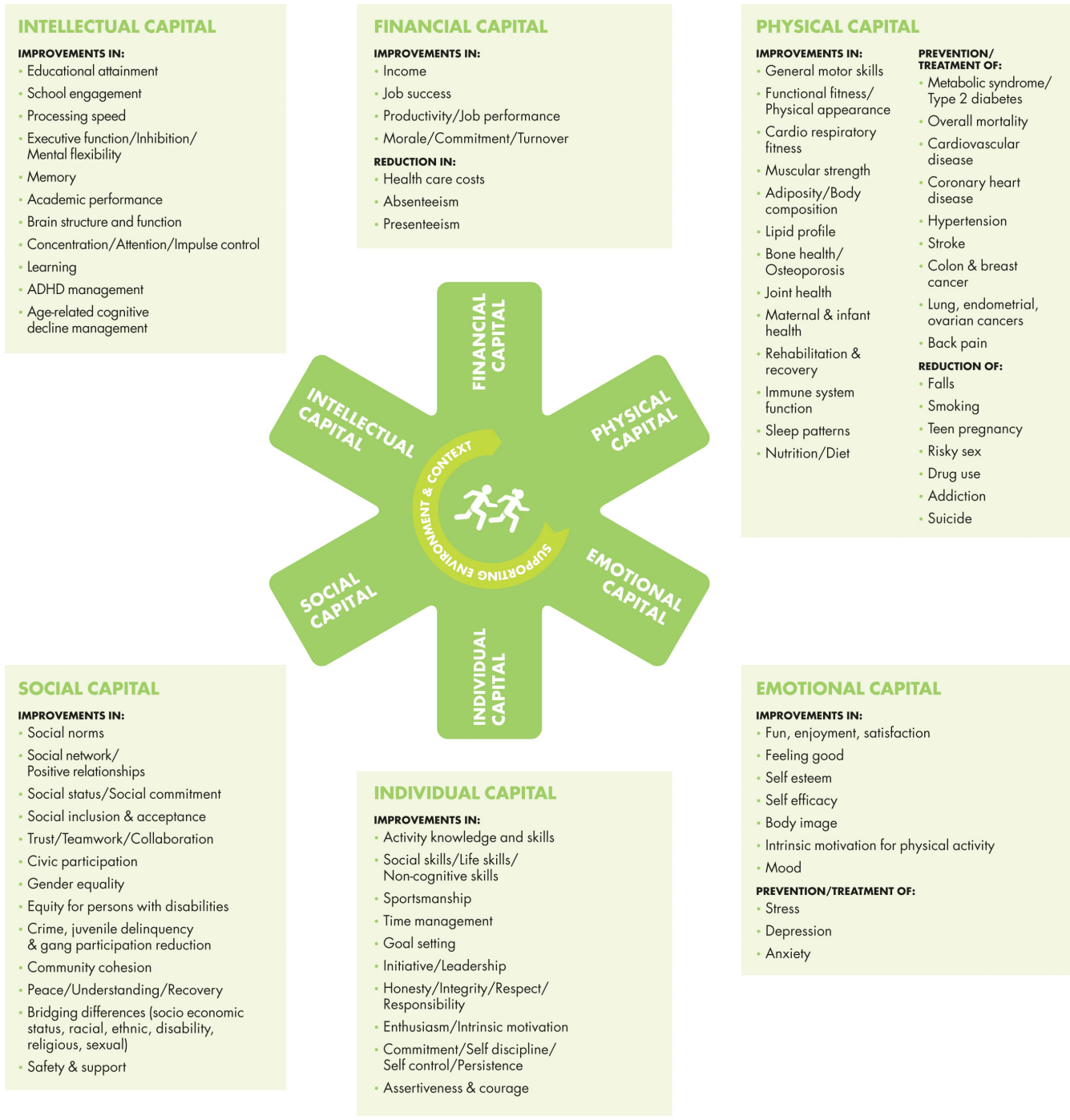
The use of metaphorical language in discussions of physical activity and health is pervasive. For example, policy documentation and academic literature alike are littered with metaphors, most of which have a martial character—e.g., society must ‘combat’ obesity; it needs to ‘fight’ and ‘defeat’ heart 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.

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Nike, Inc. initiated a multidisciplinary input and validation process with a pool of experts to develop this model, which is informed by more than 500 pieces of published research. The scholarly foundation for this work is further elucidated in "Physical Activity: An Underestimated Investment in Human Capital?" by Bailey, Hilman, Arent and Petitpas (forthcoming, 2012). © 2012 by Nike, Inc. All rights reserved.

Figure 1 — 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.

5. Intellectual Capital: The cognitive and educational gains that are increasingly linked to participation in physical activity. This feature of capital focuses particularly on the effects of regular exercise on cognitive functioning, on subject-specific performance at school, and on general academic achievement.

6. Financial Capital: Gains in terms of earning power, job performance, productivity and job attainment, along with reduced costs of health care and absenteeism/ presenteeism (i.e., lower productivity among those who are “present”) that are linked to regular physical activity participation.

The complete model and supporting evidence base are presented and discussed more thoroughly in the white-paper, *Physical Activity: An Underestimated Investment in Human Capital?* (Bailey, Hillman, Arent, & Petitpas, in review).

Governments and institutions globally are searching for high-return solutions to the health and social concerns of the day. The systemic increase in population physical activity levels, along with increased access to supportive environments and opportunities that promote an active lifestyle, may well be an effective strategy for achieving these goals. Of note, however, is that while physical activity participation is a necessary element of this strategy, participation alone is not sufficient to result in myriad benefits. With the exception of specific health and performance-based outcomes linked to Physical Capital, the benefits of physical activity are mediated by the social contexts in which the physical activity takes place. In fact, the social relationships developed within physical activity settings, as well as the values embedded within them, are as potent in realizing the impressive (and distinctive) range of outcomes as is the physical activity

itself. Consequently, consideration of the determinants, correlates, causal variables, mediators, moderators, and confounders of physical activity is a necessary feature of any model of physical activity, including the HCM.

Thus, the HCM needs to be understood in terms of outcomes that are largely conditional on specific contexts and experiences. Taken together, physical activity and positive contexts offer a very wide range of benefits to human health and function. As the Human Capital Model makes clear, these beneficial outcomes represent a valuable investment in terms of both quality and quantity of life. Moreover, the scope of this investment (across 6 capital domains) is much broader than what is normally considered with regard to physical activity promotion for all. Ultimately, the Human Capital Model is a call to consider investments in physical activity as powerful catalysts for personal and social change.

Notes

I. The expert informants consulted in the preparation of this review included Peter Anderson, Newcastle University, UK; Nancy Barrant, Robert Wood Johnson Foundation, USA; Stephen Corbin, Special Olympics International; Stephen Downs, Robert Wood Johnson Foundation, USA; Sarah Lee, Centers for Disease Control and Prevention, USA; Janelle Nanavati, Special Olympics International; Kenneth Shropshire, University of Pennsylvania, USA; Janice Thompson, University of Bristol, UK; and the current authors of this commentary.

References

1. Workshop led by Lisa MacCallum, Nike, Inc., Nithya Gopu, Independent Consultant, Marshall Clemens, IDI-agram, and Lindsay Frey, Consultant.