HARNESSING THE MOVEMENT SCIENCE ELEMENTS IN ADVANCING HEALTH AND OPTIMIZING HUMAN POTENTIAL FOR NATIONAL PROSPERITY

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Abstract
This paper discusses the concept, goals, and benefits of movement science and its role in optimization human potential through participation in physical activities. Discussion equally catered on how human potential serves the capacity for humans to improve themselves through studying, training, and practice to reach the limit of their ability to develop aptitudes and skills. To achieve national prosperity, all the available resources must be put to use. Human resources are the active resources that move other resources to action. However, people who are responsible for putting plans into action must themselves be physically fit. This can be achieved through participation in physical activities that promote health. Regular exercise improves cognitive function, concentration, and mood, leading to higher productivity and efficiency in the workplace. Employees who engage in physical activities are less likely to experience burnout and absenteeism. It was recommended that by fostering a culture of physical activity and leveraging advancements in movement science, nations can build healthier, more productive, and more cohesive societies, ultimately driving sustainable economic growth and prosperity.

Keywords: Movement, Human Potential, National, Prosperity

Introduction

For every notion, human potential is a prerequisite for engineering its resources in order to achieve an overall level of prosperity. One reason why national prosperity is hinged on the combination of human potentials is that humans are the active national resources that put plans into action; they use their potential by putting into use other resources to achieve the stated goals. For a nation to achieve prosperity, its citizens and people must have the opportunity and freedom to thrive. Prosperity is underpinned by an inclusive society with a strong social contract that protects the fundamental liberties and security of every individual. It is difficult to prosper in the face of a poor state of health and constant medication. Research has established a correlation between sedentary or inactive living and hypokinetic diseases, such as high blood pressure and cardiovascular.

Thus optimizing human potential and advancing health movement science for national prosperity involves a multi-faceted approach that encompasses health, education, social cohesion, economic development, and innovation. By fostering a culture of physical activity and leveraging advancements in movement science, nations can build healthier, more productive, and more cohesive societies, ultimately driving sustainable economic growth and prosperity. Human potential is the possibilities human beings are capable of accomplishing (Lacroix, 2014). Human potential is well understood as a process of human resource development to match the needs, vision, and ideology of an organization to achieve the set of goals. Human potential is our ability to express

our inner selves and become the best version of ourselves. It is very closely related to intelligence, learning, cognition, and training. Because everyone is good at something they don't realize it, learning and cognition are intrinsic. Human potential is the capacity for humans to improve themselves through studying, training, and practice to reach the limit of their ability to develop aptitudes and skills. This paper discusses the concept, goals, and benefits of movement science and its role in optimization human potential through participation in physical activities. The article equally discussed how optimization human potential can contribute to national prosperity.

Concept of Movement science

The study of human movement from the perspective of physical science is known as kinesiology and is practiced in physical education therapy, orthopaedics, and physical medicine. The three main fields of study of mechanics, anatomy, and physiology, most specifically biomechanics, musculoskeletal anatomy, and neuromuscular physiology, formed the basis of the study of the human body as a machine for performing work. There are numerous dimensions in elements of kinesiology. Biomechanics, exercise physiology, motor control and motor learning, motor development sports, and exercise physiology and sociology of exercise

The major goal of movement science (MOVESCI), also known as kinesiology, is to fully develop the intellectual abilities of humans during their learning experiences through participation in physical activity. (MOVESCI) emphasizes the study of human movement from biological and behavioural perspectives. Movement science/ kinesiology is the study of human movement. It encompasses the physiological, biomechanical, and psychological dynamic principles and mechanisms of movement. Movement science aims to understand how people move, the factors that influence movement, and how to improve performance and prevent injury through movement analysis and intervention. Optimizing human potential and movement science for national prosperity involves harnessing the full capacity of individuals through physical activity, sports, and exercise to enhance productivity, health, and economic growth. Participation in physical activity provides significant benefits.

Promoting Physical Health

Human movement science (HMS) is an interdisciplinary field that aims to understand the mechanisms and processes involved in human movements. Areas such as sports and exercise medicine, sport and exercise science, health promotion, and sports and exercise pedagogy, among others, interrelate with the broad spectrum of HMS. The HMS is a specialized area of study that focuses on the application of knowledge related to the mechanisms and techniques for restoring and optimizing human functional capacity and well-being throughout the lifespan (Elliott, 1999).

According to the World Health Organization (WHO), physical activity is any bodily movement produced by skeletal muscles that requires energy expenditure. Physical activity refers to all movement, including during leisure time, for transport to and from places, or as part of a person's work. Both moderate- and vigorous-intensity physical activity improve health. Promoting regular physical activity and sports can lead to a healthier population, reducing the prevalence of chronic diseases such as obesity, diabetes, and cardiovascular conditions. This translates to lower healthcare costs and increased savings for the government and individuals. Physical well-being contributes to better mental health, higher energy levels, and improved quality of life,

enabling individuals to contribute more effectively to the economy. The above expression underscores the role of human movement in sustaining and maintaining human health, which makes it possible to strive toward national prosperity. Knowledge acquired through exercise can be used and applied in the workplace; this therefore enhances human potential in many areas.

In addition, this area of study contributes significantly to optimal physical functioning in sports and health. The objective of this field is to improve our understanding of human movement and to support physical activity in all aspects of daily life, including occupational and recreational activities (Malm et al., 2019). The study of human movement offers valuable insights into the physiological, neural, and psychological adaptations that occur as a result of exercise. Additionally, it sheds light on the role of regular physical activity in preventing and managing chronic diseases (Matheson et al., 2011) and the mechanisms by which the brain controls and coordinates everyday movements (Sallis, 2009). Nutrition, psychology, occupational health, and physical therapy are just a few of the areas where human movement scientists are crucial. Understanding and resolving a range of health concerns and enhancing people's quality of life depends on their experience and knowledge of human movement. Human movement scientists are important because they bring their knowledge of movement analysis, biomechanics, and exercise physiology to other fields. Their contributions enhance the health and well-being of people and communities, and their multidisciplinary approach may result in ground-breaking fixes for difficult medical problems and also help in Optimization of human potential.

The Impact of Physical Activity on Work Performance

This is another major contribution of MOVESCI to optimize human potential participation. Aaron (2024) noted that. In today's fast-paced and demanding work environment, finding ways to enhance productivity and performance is crucial. While many individuals turn to time management techniques and productivity hacks, one often overlooked factor that can significantly impact work performance is exercise. Engaging in regular physical activity not only improves physical health but also has numerous positive effects on mental well-being, cognitive function, and overall work performance. Regular exercise improves cognitive function, concentration, and mood, leading to higher productivity and efficiency in the workplace. Employees who engage in physical activities are less likely to experience burnout and absenteeism.

Research has consistently shown that physical activity has a profound impact on various aspects of work performance. Studies have found that employees who engage in regular exercise are more likely to experience higher job satisfaction, increased energy levels, improved concentration, and enhanced creativity. Additionally, studies have linked regular physical activity to reduced stress levels, improved time management skills, and increased resilience to work-related challenges.

Motivation and Physical Activity

One important factor to consider is the role of motivation in maintaining a regular exercise routine. Intrinsically motivated individuals, who find physical activity enjoyable and personally rewarding, are more likely to adhere to their exercise regimen. On the other hand, those who view exercise as a chore or obligation may struggle to maintain consistency. Therefore, finding physical activities that you genuinely enjoy and that

align with your interests and preferences is key to staying motivated and reaping the benefits of exercise.

Physical Activity and Cognitive Function

Regular exercise improves cognitive function, including memory, attention, and decision-making skills. Exercise increases blood flow to the brain, which promotes the growth of new neurones and enhances neural plasticity. This, in turn, leads to improved cognitive performance and greater mental clarity. By incorporating physical activity into your routine, one can enhance their ability to focus, problem-solve, and make sound decisions, ultimately boosting their work performance.

Physical Activity and Mental Well-being

Exercise is not only beneficial for physical health but also plays a crucial role in promoting mental well-being. Studies have linked regular physical activity to reduced symptoms of anxiety and depression, increased self-esteem, and improved overall mood. By releasing endorphins, the body's natural feel-good chemicals, exercise acts as a natural antidepressant and stress reliever. This can significantly impact work performance by reducing the risk of burnout, increasing resilience, and fostering a positive mindset.

Physical Activity and Energy Levels

Maintaining high energy levels throughout the workday is essential for optimal performance. Regular physical activity boosts energy levels and fights fatigue. Exercise improves cardiovascular health, increases oxygen flow, and enhances metabolism, resulting in improved energy levels and stamina. By incorporating physical activity into one daily routine, individuals can boost their energy levels, stay alert and focused, and perform at their best throughout the workday.

Physical Activity and Stress Management

The demands of work can often lead to high levels of stress, which can negatively impact both mental and physical well-being. Research has proven that exercise serves as an effective stress management tool, assisting individuals in managing work-related pressures and mitigating the risk of stress-related illnesses. Physical activity stimulates the production of endorphins, which act as natural stress relievers and promote relaxation by reducing the levels of stress hormones in the body. By incorporating exercise into your routine, you can effectively manage stress, improve your resilience, and maintain a healthy work-life balance.

Movement Science Educational Outcomes and Cognitive Development

Movement Science, through structured physical education programs, enhances cognitive development in children and adolescents. This leads to better academic performance and the development of critical thinking skills. Physically active children have greater motor competence and a faster maturation compared with their sedentary peers. Recent research also suggests that physical activity during childhood may also promote cognitive development and therefore improve academic performance. Research by Birkbeck analysing the impact of physical activity on children's cognitive and academic outcomes has found that physical activity improves on-task behaviour, creativity, problem solving, and memory in typically developing primary school-aged children. (Fotini, 2023)

Two theories propose cognitive explanations for the beneficial effects of PA. First, the skills acquisition theory

postulates that the motor and cognitive complexity of PA influence cognitive processes (Omporowski & Pesce, 2019). Exercise, sports, and performance arts have a positive impact on cognition. For example, PA can be considered cognitively engaging when it requires complex movement patterns rather than simple repetitive movements. Research suggests that the response to practicing complex tasks may interact with the level of physical effort required. Second, the theory of embodied cognition underscores the significance of establishing a connection between the body, the brain, and the external environment to support mental processes (Wilson & Foglia, 2017). Two meta-analyses have investigated the hypothesis that cognitively engaging PA leads to greater cognitive benefits than other types of PA by comparing randomized controlled trials (RCTs) of (a) aerobics, (b) motor skills, and (c) cognitively engaging PA interventions (Luftig, 2000). Both studies found that physical activities with greater cognitive engagement—for example, those requiring greater attention, remembering rules, and constantly thinking of action plans—involving academic content or frequent rule changes, emphasizing variability, and/or integrating social and emotional skills—have a greater positive effect on executive functions than those with lower cognitive engagement.

Some physical activities include components that engage specific cognitive skills in addition to the physical exercises (Vazou, Pesce, Lakes, & Smiley-Oyen, 2019; Pesce *et al., 2016*). For example, activities like dance incorporate a creativity element. Research suggests that creativity plays a crucial role in achieving success in life (Sternberg, 2002). Frey and Osborne (2017) assert that creativity is crucial for our future society (Florida, 2007). Creativity can help students solve problems and challenges outside an educational context. Creativity will be vital for jobs in the future as a result of rapid technological advancement (Lucas, Bridgers, Griffiths & Gopnik, 2014). Today's children will likely work in roles that don't exist, utilizing new technologies like artificial intelligence. Creating an education environment that harnesses children's capacity to innovate will help in their journey to navigate this uncertainty. Some have shown that younger children perform better than college students on a creative problem-solving task (Lucas, Bridgers, Griffiths & Gopnik, 2014). While creativity has been studied in children, in particular with regards to play, there is currently no clear-cut pattern of changes in creativity over the school of childhood and adolescence (Alfonso-Benlliure & Santos, 2016). (Alfonso, Santos, 2016) (Runco & Aossey, 1996). Russ, 2003; Sali, 2015; Urban, 1991). Some argue that life experiences and/or environmental factors influence these mixed results (Runco & Aossey, 1996).

An embodied approach to creativity emphasizes movements and interactions with the environment (Wyrick, 1968), while also promoting exploration and originality (Kozbelt, Beghetto, & Runco, 2010). Creative practice as a means to train cognition has also been studied through non-physical interventions for primary school-aged children. Specifically, different art interventions, including music drama (Costa, 1999; Roden, Grube, Bongard, & Kreutz, 2014; Joronen, Rankin, & Astedt, 2008). Luftig, 2000). Visual art has shown evidence of promise. Therefore, we suggest that incorporating creativity into a PA intervention could enhance positive impacts on cognitive and metacognitive processes, either through additive or moderating effects. Interest in the effects of physically creative practices on outcomes is recent; a few studies applying creative dance interventions on children have indicated positive influence between dancing and a range of cognitive measures (D'Souza & Wiseheart, 2018);

Neville & Makopoulou, 2020; Santos, Jiménez, Sampaio & Leite, 2017; Santos, Jiménez, Sampaio, & Leite, 2017).

Creative movement

According to Oppici, Frith, and Rudd (2020), creative movement is a "functional and original movement solution to achieve a task goal." As architects of the learning environment, teachers are in a position to promote the exploration of movement (Kozbelt, Beghetto, & Runco, 2010). Teachers have the ability to provide children with significant problem-based activities within genuine movement environments (Chow, 2007; Windschitl, 2002). The opportunities in their environment support children's pathways to creativity in movement (Renshaw, IDavids, Shuttleworth, & Chow, 2009; Rudd, 2020). What we teach, where we teach it, and how we teach it shapes the motor learning environment. Tools such as improvisation and active open-ended problem-solving instructions in relation to movement, using a non-judgemental approach, open the window to experimentation and thus creativity (Kirsh, Muntanyola-Saura, & Jao, 011). Creative movement in an educational context puts the child “in charge of the task they are performing” (Oppici, Frith, & Rudd, 2020). This could foster cognitive involvement and self-control, crucial components that underpin embodied learning (Diamond & Ling, 2016).

Social Cohesion and Community Development of Social Capital

A physical education curriculum can equip youth with the necessary knowledge, skills, behaviors, and confidence to engage in physical activity throughout their lives. Similarly, engaging in physical activity correlates with academic benefits such as enhanced concentration, memory, and classroom behavior. The World Health Organisation (2001) states that physical activity encompasses the development of physical abilities and conditioning, motivating students to continue sports and physical activity, and providing recreational activities. A global, lifelong, and democratized education must certify the contribution of physical activity and sports practice throughout life. It contributes to the preservation and enhancement of mental and physical health, gives a nourishing leisure-time activity, and also helps an individual to overcome the drawbacks of present stressful living. At the community level, it fosters the development of social qualities, social relations, and fair play, all of which are crucial not only for sport but also for life in society (Ravi & Kumar 2017). This builds social capital, which is essential for social cohesion and community development. Engaging youth in sports programs can deter them from negative activities and promote positive behavior, leadership skills, and community involvement. It helps in imparting important social values among the youth, such as fairness, self-discipline, solidarity, team spirit, tolerance, and fair play (Bailey, 2005). Thus, as an integral part of movement science, sports and physical activities foster social interactions, community spirit, and teamwork. This will go a long way in enhancing productivity, cooperation, creativity, and hard work, thereby optimising human potential toward achieving the desired goal of national sustainable development and prosperity.

Economic Development through Sports Industry

We have established the relationship between sustainable developments, national prosperity, and economics. Sports is an important component in movement science, and the sports industry itself can be a significant economic driver, creating jobs in coaching,

sports management, sports medicine, and related fields. Tourism and events Hosting sports events can boost tourism, generate revenue, and enhance a country's international reputation. According to Dahiru (2022), sports have emerged as the single most influential factor in uniting the global human race. This has led to its unprecedented global acceptance and sponsorship. Thus, sport has become a phenomenon of influence on world peace, the economy, and the development of social relationships. Sports provide a multi-dimensional avenue for economic diversification. Sports training and the application of principles and theories of movement science optimize an individual's potential, enabling him to become the batter required by the sports team. Thus, apart from providing job opportunities, sports are used to generate money through hosting of completion, tourism, and other sports entrepreneurial activities. This is why almost every country in the world recognizes the developmental role of sports and invests significant financial resources in them.

Conclusion

Physical fitness, achieved through regular exercise and/or spontaneous physical activity, confers resilience by inducing positive psychological and physiological benefits, blunting stress reactivity, protecting against the potentially adverse behavioral and metabolic consequences of stressful events, and preventing many chronic diseases. Monument science is a vital tool for building human potential. The benefit to sustainable development and national property is not restrictive; therefore, any attempt at discussion on the topic cannot be exhaustive. Physical fitness, achieved through regular exercise and/or spontaneous physical activity, confers resilience by inducing positive psychological and physiological benefits, blunting stress reactivity, protecting against the potentially adverse behavioral and metabolic consequences of stressful events, and preventing many chronic diseases. Implementing policies that encourage physical activity, such as building public sports facilities, parks, and promoting active transportation (walking, cycling), can support a more active and healthier population. Integrating physical education into the national curriculum ensures that children and adolescents develop physical literacy and understand the importance of maintaining an active lifestyle. Optimizing human potential and movement science for national prosperity involves a multi-faceted approach that encompasses health, education, social cohesion, economic development, and innovation.

Recommendations

Therefore, a nation seeking to enhance sustainable economic growth and national prosperity should prioritize the physical and psychological fitness of its leaders. Therefore, nations can build healthier, more productive, and more cohesive societies by fostering a culture of physical activity and leveraging advancements in movement science through the study and application of its elements.

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