

Trends of Modern Career Concepts of Physical Education and Sports

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Abstract: *The importance of physical education, sports and yoga has gained its momentum during the last few decades, especially during covid 19 pandemic every individual realised the outcome of physical literacy. The motor learning is the key concern of movement economy and it is only possible through participating physical activity in a regular manner. In schools and colleges physical education classes stressed on the structured physical education programme depending upon a framed curriculum. Physical education can be a base of a good numbers of challenging careers for future life. The present article discussed the various modern careers extracts from physical education, sports and yoga. The physical education students can choose any professional career depending upon his own interest and expertise.*

Keywords: Career, Sports and Physical Education.

I. INTRODUCTION

“You can discover more about a person in an hour of play than in a year of conversation,” – Plato

The inability to perform motor skills often causes frustration among students in physical activities, and repeated frustrated attempts lead to avoidance instead of adherence. It is the responsibility of physical education professionals to “educate” the body, giving proper knowledge about the potentiality of movement patters for developing motor skills. To provide healthy-lifestyle education, a quality program of physical education must be a core requirement in all schools and a central component in a comprehensive school health program (1). In order to do so it is necessary to increase curriculum time devoted to physical education. It is the appropriate time to analyse the design and delivery of school physical education programs to ensure that educational institutions are engaging, developmentally appropriate, inclusive, and instructionally powerful instructions to teach students about the importance of leading physically active lives (2).

Over time there has been a growing interest in elaborating on what the concept stands for and how it can be used in educational contexts. The concept has also been challenged by other scholarly discussions about ability and educability that has been considered parallel with the conceptualizing of physical literacy. scholars have been attempting to clarify the extent to which physical ability is recognized, conceptualized, socially configured, nurtured and embodied as construed in physical literacy in and through practices of physical education (3-5).

II. BACKGROUND

Beside the educative perspectives and all-round development of an individual, physical activity is considered one of the main components of healthy living. In addition to activities related to weight loss prevention, systemic inflammation and chronic non-communicable diseases, the potential benefits of exercise in reducing infectious diseases, including viral pathologies are well documented (6). Regular exercise is proven to help prevent and control non-communicable diseases such as heart disease, stroke, diabetes and several cancers. It also helps prevent high blood pressure, maintains a healthy weight and can improve mental health, quality of life and well-being (7).

Physiological and Health aspect of P.E:

Obesity and related illnesses are on the rise worldwide (8). Obesity is associated with a number of serious health consequences, including an increased risk of heart disease, type 2 diabetes, certain cancers, and death (9-13). As obesity continues to rise, the prevalence of concomitant diseases including type 2 diabetes and heart disease increases simultaneously (14); overweight people are twice as likely, and severe obese people are ten times more likely to develop heart disease than people who are overweight (15). Heart disease (CVD) is the leading cause of illness and death worldwide (16-17). Regular physical activity is associated with increased health benefits of reducing the progression of obesity, type 2 diabetes, and CVD (18-23). Several randomized clinical trials have shown that lifestyle interventions that include moderate exercise and a healthy diet improve cardiovascular health in vulnerable people (24-25). Exercise training helps to improve health and has been widely reported to prevent and correct chronic conditions (26). Regular exercise training (e.g., swimming) has been reported to improve lung function in the general population (27). Exercise habits, both in their critical nature and in their chronic state, dramatically alter the immune system [26]. Studies show that modification of exercise-related immune response depends on factors such as frequency, intensity, duration and type of effort applied (27).

Mental Health and P.E:

Research also shows exercise can minimize the symptoms of many existing mental illnesses (28). exercise as part of the treatment for specific mental illnesses. Some of the potential mental health effects of exercise include: Exercise decreases sensitivity to the body's reaction to anxiety (29). Cardio seems to be particularly beneficial for children and adults with attention deficit and hyper activity disorder (30-31). Exercise decreases stress hormones. Exercise decreases stress hormones like cortisol. It also increases endorphins—your body's "feel-good" chemicals—giving your mood a natural boost (32). Exercise can be a good source of social support. The benefits of social support are well-documented, and many physical activities can be social activities as well (33). So, whether you join an exercise class or you play softball in a league, exercising with others can give you a double dose of stress relief.

Movement Economy:

The movement economy comprises of time, space and perfection of movement. They make repetitive tasks easier, more efficient and more effective. It is based on biomechanical principles and metabolic responses of our body. Movement economy can only be obtained through participating regular physical activities.

The benefits of movement economy include:

1. It grows the ability of group of muscle to exert systematic contraction, relaxation, stabilize and neutralize the motion
2. Extended working capacity of muscles.
3. Reduces exhaustion or fatigue of a particular group of muscle after repetitive work.
4. Decreases time and energy.
5. Improve motor skills.

Before describing the economy, it is helpful to first explain the effectiveness of the related term, because some of the revised studies are about economic efficiency and it is easy to define the economy, first describing efficiency. Efficiency, as understood by fitness professionals and sports biomechanists, has a host of explanatory cover issues in detail here. It is advisable to consult a review of the movement efficiency data, previously conducted by Cavanagh and Kram (34-35), for detailed information. It can be expressed as a percentage, depending to the following formula:

$$\text{Efficiency (\%)} = \frac{\text{Mechanical Work Done}}{\text{Energy cost of work}} \times 100$$

The efficiency equation number will be checked first. In doing any automotive work, mechanical work is done to meet the job requirements.

The economy can be defined as the expense of metabolic energy to perform a particular function. It has been shown above that heat capacity can be calculated on the basis of the high volume of oxygen used and the formation of ATPs for food metabolism (36).

Therefore, it is clearly stated that exercise is a major concern in improving physical activity and mental health, which is a major concern for physical education.

III. OPPORTUNITY AND CAREER IN PE & SPORTS

Physical activity and exercise can be effective treatment strategies for symptoms of both depression and anxiety, exercise that can bring short and long-term benefits for mood, sleep, and physical health. During the covid 19 pandemic as per the guidelines of WHO, people came to know that physical activity plays a major role for boost up the immunity and optimize our health and vigour. So the importance of physical activity is major area of concern now a days. The concept of fit people and fit nation is a notion of all over the world.

The benefits of physical activity and exercise have been demonstrated across the lifespan. We are meant to move and many of our body's systems work better when we are consistently physically active. We are in an era, where we love sports and realise the importance of sports. Playing sports (game) in schools and colleges level need not be considered just as a hobby. One can build their career in physical education to see various career options in it.

Most Government, public institutions, public and private institutions are appealing to fitness educators to earn better salaries and benefits. Candidates must have specific skills such as mobility, health and fitness, knowledge of a particular field of study in which the individual is concerned, awareness of the overall health and movement environment, motivation for training and teaching skills, translation and analysis thinking, leadership and organizational skills, interpersonal skills, critical thinking.

Physical education being one of the dynamic fields provides numerous opportunities for diverse career options. There are various careers to choose in the field of physical education like being a teacher, coach, sports manager etc. "Education can be described as a planned and programmed process which is applied in order to attain the desired changes in a peer's behaviour. In the general education teaching is defined as a thoughtful, planned and systematic organization of learning. Learning is a process of acquisition of specific knowledge, skills and habits" (37). "Physical education is defined as a process through which an individual obtains optimal physical, mental, and social skills and fitness through physical activity" (38).

IV. DIMENSIONS OF PE & SPORTS CAREER

Physical education teachers must make sure that students receive a quality physical education experience that results in student learning. To do this, programs must be guided by current research, thinking, and philosophy. One of the unique characteristics of physical education is that it is informed by many other disciplines. The information and curriculum provided in this book are deeply grounded in research from exercise physiology, psychology, motor control, and pedagogy and teaching.



Figure-1, Different Dimensions of Career in PE & Sports

All these disciplines, and others, are interwoven to provide students with a quality physical education experience designed to teach students skills, provide them knowledge, and develop positive attitudes toward all physical activity. Again, a strength of physical education is that it applies the evidence from a variety of areas to provide evidence-based practice (39). There are numbers of other related professional areas extracted from the physical education and sports. The domain of Physical Education careers is shown below in the figure-1.

A. Teaching

The Physical education teaching profession can be divided into two categories depending upon the level of the educational institution i.e., physical education teacher in school and assistant professor, associate professor and professor in college and universities.

Physical Education Teacher: Physical education teacher teaches health education and physical education in the schools. Coaching of different games and sports is also the one duties of physical education teacher in schools. Apart from this they have the responsibility to monitoring of students, lunch, hall, attending faculty and parent-teacher conferences, and meeting organizing annual sports etc.

Assistant Professor, Associate Professor and Professor: In the college or universities can be worked as Assistant Professor, Associate Professor and Professor as per qualified to teach physical education in various specialized area of subjects.

B. Coaching

A sports coach is an instructor who trains, guides and motivates athletes, both professional and amateur, about the fundamentals of a sport. Sports coaches work with individuals as well as teams. Some of them may also focus on recruiting new athletes for college or professional teams (40). Well qualified coaches can work in national, state and regional teams, they can attach with schools, colleges, and universities or other clubs and organisations, government organisations, stadiums and even they can work as a faculty of training academies.

C. Trainers

Any interested physical educationist and sports professionals can able to work as trainer. They may work as fitness trainer, Gym trainer, Yoga and Health trainer in private and Government institution in a Gymnasium on part time or full-time basis. They are also eligible to work with professional academics and clubs as a fitness or Yoga trainer, rehabilitation trainer, personal trainer, mental counsellor, dance and aerobics trainer and so on.

D. Administrator

Any physical educationist is able to perform prestigious administrative jobs like Sports officer/Assistant director/Director in Colleges/Institutions and Universities. They are also eligible to work in International and National championship as programme officials and director.

E. Managerial Work

Interested physical educationist having the specialization in sports management are eligible to work in different managerial positions. The areas of sports management where the physical education professional can opt are:

- Athletic administration
- Sports agents
- Program director in community sports programme
- Sports marketing
- Fitness management
- Sports event management
- Sports hospitality management
- Sports tourism management and so on.

F. Others

Besides the above-mentioned challenging career options, there are other areas where the physical education students serve better with proper knowledge and diplomas of that very area. They can work as health practitioner such as chiropractor, occupational therapist, exercise therapist, sports nutritionist, geriatric and cancer exercise specialist, sports technologist, sports journalist for analysing the and reporting various sporting events, sports photographer, cheer leaders, sports scientists, sports psychologist, sports models and so on. The specified fields with working areas are discussed herewith,

Chiropractic: It is a healthcare profession that cares for a patient's neuromusculoskeletal system — the bones, nerves, muscles, tendons, and ligaments. A chiropractor helps manage back and neck pain through the use of spinal adjustments to maintain good alignment (41). Chiropractor's primary therapy is spinal manipulation, chiropractors may include other treatments such as:

- Relaxation
- Stimulation
- Hot and cold treatment
- Exercise
- Diet and weight loss counselling

Physical education students having practical knowledge and certification can able to opt this profession more successfully.

Occupational Therapist: Occupational therapists work to help people develop, recover, and improve while maintaining the skills that they need to live their lives. By helping people carry out their daily activities, occupational therapy aims to promote health and improve quality of life. Occupational therapy is a healthcare profession. It focuses on helping people do all the things that they want and need to do in their daily lives (42). These might include:

1. Work
2. School
3. Hobbies
4. Social situations
5. Household tasks

Exercise Therapist: Exercise therapist provide services that help restore function, improve mobility, relieve pain and prevent or limit permanent physical disabilities of people suffering from injuries or diseases.

Geriatric and cancer exercise Specialist: Geriatrics refers to the clinical aspects of aging and comprehensive health care of older persons. A geriatric fitness specialist is a combination of a fitness worker and an exercise therapist. To maintain immunity and good health cancer exercise specialist provides various kinds of exercises to the client.

Sports Nutritionist: Sports and fitness nutritionists often offer confidential consultations to monitor their clients' lifestyles, diet, training and use of medications and supplements, and to set short-term and long-term goals. A customized plan to achieve those goals can be created by a sports and fitness expert, who can also monitor clients to make sure they are on the right track.

Working areas of Sports nutritionist

- Energy availability
- Estimated RMR (resting metabolic rate)
- Daily energy requirements
- Exercise recommendations specific to your goals
- Fuelling recommendations
- Assessing and counselling patients
- Developing nutrition plans
- Conducting body composition testing
- Providing medical nutrition therapy

Sports Technologist: Over the last two decades, the application of science had led to a rapid evolution of sports equipment, footwear, clothing and accessories (43). The physical education students having the knowledge of technology able to operate various technical electronic tools to promote better teaching learning as well as promotion of sports to a greater extends.

Sports Journalist: Sports journalists are responsible for covering sports events and writing about athletes, teams, and coaches involved. They may also be tasked with creating content that revolves around other aspects of sports culture, such as machine or clothing design, fan behavior, etc. Sports journalists need to have a strong knowledge of the sports they are talking about — they need to know who the players are, what positions they play, how they play best, and so on. This helps them to write more informative essays that will appeal to their readers (44).

Sports Scientists: Sports Scientist provides professional advice and support to athletes and coaches to help them understand and improve athletic performance; adopt an evidence-based approach, which ensures quality in order to evaluate and develop effective strategies or interventions for training and / or competition. A Sports Scientist may work one or more roles from a pure researcher to a practicing physician and may work in fields outside of sports where the function of the human body is a vital factor. It is a very specialized higher education and a research-oriented field.

Sports advertisement and Models: The main purpose of advertising is to sell a product or service. To be more precise, it is a way of direct contact with consumers. The result of this is that it helps brands to sell their products or services. One of the most prominent of these is sports advertising Sports advertising can be considered as segregation of marketing segments that focus on promoting both, organizations (and their products) as well as sporting events and involved teams. The main purpose of this marketing strategy is to devise more exploitation strategies Game components to develop a product or service. These categories may include broadcasting, social media, ticket sales, advertising, digital forums, and public relations (45).

Cheer Leader: Cheerleading, a group activity where features of dance and acrobatics are combined with announced slogans to entertain spectators at sporting events and to promote great fun and excitement. When it comes to side work intended to support school sports, cheerleading has gained recognition as a game in itself and often works outside the school context altogether. Cheerleading has long been regarded as an American iconic work that reflects the spirit of school, leadership, youth, and sexual attraction. (46). Fitness professionals and gymnastic athletes can choose this challenging career as a career.

V. CONCLUSION

The present article discussed the importance of physical activities for health and movement quality which is a core area of physical education and sports. Physical education is one of the developing fields of educational study as well as the profession. Physical education comprises the knowledge and study of all body activities and psychomotor activities during the playing and movement. Physical education is the study of physical movement, safety and health and well-being. There is a wide range of activities linked with physical education including sports, dance and weight training. This article discussed the modern career concept derived from physical education and sports. Anybody can choose physical education as major area of study for better and challenging career.

REFERENCES

- [1]. Allensworth, D., & Kolbe, L. (1987). The comprehensive school health program: Exploring an expanded concept. *Journal of School Health*, 57, 409–412.
- [2]. The New Physical Education, March 1, 2000, <https://www.ascd.org/el/articles/the-new-physical-education>.
- [3]. J. Evans, Making a difference? Education and ‘ability’ in physical education, *Eur Phys Educ Rev*, 10 (2004), pp. 95-108
- [4]. J. Evans, B. Davies, J. Wright (Eds.), *Body knowledge and control. Studies in the sociology of physical educational health*, Routledge, London (2006), pp. 207-217

- [5]. J. Evans, D. Penney Levels on the playing field: the social construction of physical 'ability' in physical education curriculum. *Phys Educ Sport Pedag.* 13 (2008), pp. 31-47.
- [6]. Laddu DR, Lavie CJ, Phillips SA, Arena R. Physical activity for immunity protection: inoculating populations with healthy living medicine in preparation for the next pandemic. *Prog Cardiovasc Dis.* 2020 doi: 10.1016/j.pcad.2020.04.006.
- [7]. Physical activity, 26 November 2020, <https://www.who.int/news-room/fact-sheets/detail/physical-activity>.
- [8]. Hales CM, Carroll MD, Fryar CD, Ogden CL. *Prevalence of Obesity Among Adults and Youth: United States, 2015–2016*. U.S. Department of Health and Human Services; National Center for Health Statistics; Centers for Disease Control and Prevention (2017).
- [9]. Brown CD, Higgins M, Donato KA, Rohde FC, Garrison R, Obarzanek E, et al.. Body mass index and the prevalence of hypertension and dyslipidemia. *Obes Res.* (2000) 8:605–19. 10.1038/oby.2000.79
- [10]. Guh DP, Zhang W, Bansback N, Amarsi Z, Birmingham CL, Anis AH. The incidence of co-morbidities related to obesity and overweight: a systematic review and meta-analysis. *Bmc Public Health.* (2009) 9:88. 10.1186/1471-2458-9-
- [11]. Lamona S, Wilson PWF, Schaefer EJ. Impact of body mass index on coronary heart disease risk factors in men and women - The Framingham Offspring Study. *Arterioscl Thromb Vas.* (1996) 16:1509–15. 10.1161/01.ATV.16.12.1509
- [12]. Wilson PWF, D'Agostino RB, Sullivan L, Parise H, Kannel WB. Overweight and obesity as determinants of cardiovascular risk - The Framingham experience. *Arch Intern Med.* (2002) 162:1867–72. 10.1001/archinte.162.16.1867
- [13]. Van Gaal LF, Mertens IL, De Block CE. Mechanisms linking obesity with cardiovascular disease. *Nature.* (2006) 444:875–80. 10.1038/nature05487
- [14]. Moore JX, Chaudhary N, Akinyemiju T. Metabolic syndrome prevalence by race/ethnicity and sex in the United States. national health and nutrition examination survey, 1988-2012. *Prev Chronic Dis.* (2017) 14:160287. 10.5888/pcd14.160287
- [15]. Kivimaki M, Kuosma E, Ferrie JE, Luukkonen R, Nyberg ST, Alfredsson L, et al.. Overweight, obesity, and risk of cardiometabolic multimorbidity: pooled analysis of individual-level data for 120 813 adults from 16 cohort studies from the USA and Europe. *Lancet Public Health.* (2017) 2:e277–85. 10.1016/S2468-2667(17)30074-9 .
- [16]. Virani SS Benjamin EJ, Callaway CW, Chang AR, Cheng S, Chiuve SE, et al. *Heart Disease and Stroke Statistics 2018 At-a-Glance*. American Heart Association; (2018).
- [17]. Division for Heart Disease and Stroke Prevention *Heart Disease Fact Sheet Centers for Disease Control and Prevention* (2017). (accessed January 19, 2019).
- [18]. Ashor AW, Lara J, Siervo M, Celis-Morales C, Oggioni C, Jakovljevic DG, et al.. Exercise modalities and endothelial function: a systematic review and dose-response meta-analysis of randomized controlled trials. *Sports Med.* (2015) 45:279–96. 10.1007/s40279-014-0272-9
- [19]. Hambrecht R, Wolf A, Gielen S, Linke A, Hofer J, Erbs S, et al.. Effect of exercise on coronary endothelial function in patients with coronary artery disease. *N Engl J Med.* (2000) 342:454–60.
- [20]. Laughlin MH, Bowles DK, Duncker DJ. The coronary circulation in exercise training. *Am J Physiol-Heart C.* (2012) 302:H10–23. 10.1152/ajpheart.00574.2011
- [21]. Pettman TL, Buckley JD, Misan GM, Coates AM, Howe PR. Health benefits of a 4-month group-based diet and lifestyle modification program for individuals with metabolic syndrome. *Obes Res Clin Pract.* (2009) 3:221–35. 10.1016/j.orcp.2009.06.002
- [22]. Platt C, Houstis N, Rosenzweig A. Using exercise to measure and modify cardiac function. *Cell Metab.* (2015) 21:227–36. 10.1016/j.cmet.2015.01.014
- [23]. Vega RB, Konhilas JP, Kelly DP, Leinwand LA. Molecular mechanisms underlying cardiac adaptation to exercise. *Cell Metab.* (2017) 25:1012–26. 10.1016/j.cmet.2017.04.025
- [24]. Miele EM, S.Headley AE. The effects of chronic aerobic exercise on cardiovascular risk factors in persons with diabetes mellitus. *Curr Diab Rep.* (2017) 17:97. 10.1007/s11892-017-0927-7

- [25]. 73. Drenowatz C, Sui X, Fritz S, Lavie CJ, Beattie PF, Church TS, et al.. The association between resistance exercise and cardiovascular disease risk in women. *J Sci Med Sport.* (2015) 18:632–6. 10.1016/j.jsams.2014.09.009
- [26]. 13. Platt C, Houstis N, Rosenzweig A. Using exercise to measure and modify cardiac function. *Cell Metab.* (2015) 21:227–36. 10.1016/j.cmet.2015.01.014
- [27]. 14. Vega RB, Konhilas JP, Kelly DP, Leinwand LA. Molecular mechanisms underlying cardiac adaptation to exercise. *Cell Metab.* (2017) 25:1012–26. 10.1016/j.cmet.2017.04.025
- [28]. Mazyarkin Z, Peleg T, Golani I, Sharony L, Kremer I, Shamir A. Health benefits of a physical exercise program for inpatients with mental health; A pilot study. *J Psychiatr Res.* 2019;113:10-16. doi:10.1016/j.jpsychires.2019.03.002
- [29]. Aylett E, Small N, Bower P. *Exercise in the treatment of clinical anxiety in general practice - a systematic review and* Vysniauske R, Verburch L, Oosterlaan J, 30. Molendijk ML. The effects of physical exercise on functional outcomes in the treatment of ADHD: A meta-analysis. *J Atten Disord.* 2020;24(5):644-654.
- [30]. Den Heijer AE, Groen Y, Tucha L, et al. Sweat it out? The effects of physical exercise on cognition and behavior in children and adults with ADHD: A systematic literature review. *J Neural Transm (Vienna).* 2017;124(Suppl 1):3-26. doi:10.1007/s00702-016-1593-7
- [31]. meta-analysis. *BMC Health Serv Res.* 2018;18(1):559. doi:10.1186/s12913-018-3313-5
- [32]. Budde H, Machado S, Ribeiro P, Wegner M. The cortisol response to exercise in young adults. *Front Behav Neurosci.* 2015;9:13. doi:10.3389/fnbeh.2015.00013
- [33]. American Psychological Association. Manage stress: Strengthen your support network. Updated October 2019.
- [34]. CAVANAGH, P. R., & KRAM, R. (1985a). The efficiency of human movement—a statement of the problem. *Medicine & Science in Sports & Exercise*, 17, 304-308.
- [35]. CAVANAGH, P. R., & KRAM, R. (1985b). Mechanical and muscular factors affecting the efficiency of human movement. *Medicine & Science in Sports & Exercise*, 17, 326-331.
- [36]. Sparrow W. A. and Newell K. M. (1998), Metabolic energy expenditure and the regulation of movement economy, *Psychonomic Bulletin & Review* 1998.5(2). 173-196.
- [37]. Demirel, Ö (1993). *General teaching methods*. Ankara: USEM publications, (Chapter 1).
- [38]. Lumpkin, A. *Physical education and sport: a contemporary introduction*, 4th ed. United States: McGraw-Hill, 1998.
- [39]. Robert P. Pangrazi and Aaron Beighle, 2020, *Dynamic Physical Education for Elementary School Children—19th Edition*, Human Kinetics.
- [40]. How to Become a Sports Coach, February 23, 2021, <https://www.indeed.com/career-advice/finding-a-job/career-in-sports-coaching>.
- [41]. What Is a Chiropractor? Medically Reviewed by Dan Brennan, 2021, <https://www.webmd.com/a-to-z-guides/what-is-chiropractor>.
- [42]. Barrell Amanda, 2020, What is occupational therapy? Everything you need to know, Occupational therapy: What it is, who it treats, and more (medicalnewstoday.com)
- [43]. Pande Mayank, 2018, How technology has started to impact and transform Sports, <https://www.sportskeeda.com/sports/sports-technology>.
- [44]. What Does a Sports Journalist Do? 2022, <https://climbtheladder.com/sports-journalist>
- [45]. Gadiya Monish, 2019, Sports Advertising: The Marketing Game Changer is Here! <https://www.kreedon.com/sports-advertising-in-2019/>
- [46]. Grindstaff Laura Anne, 2020, cheerleading sports, <https://www.britannica.com/sports/cheerleading>