

Covid 19: A Lesson For Improving Health And Physical Literacy

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Abstract: *Due to Covid 19 pandemic, people are almost in a helpless situation throughout the world. In this new normal condition the scope of normal physical activities has reduced in a tremendous way. Sometime the difficult situation teaches us the life lessons to cope up with the difficulties through appropriate measures which has a long lasting effect. This pandemic situation aware us about the health consciousness for building immunity through the medium of physical activity. The old saying "activity is the basis for life" is proven again. The importance of awareness about health and physical literacy is globally accepted. Fundamental movements are included in physical literacy and physical education programs because of evidence to lifelong participation in physical activity, health benefits and sporting success. The present study systematically and scientifically discussed about the various aspects of health and physical literacy and their implication in the modern society.*

Key Words: Covid 19, Health, Physical activity and literacy.

1. INTRODUCTION:

A pneumonia outbreak associated with a novel coronavirus, termed severe acute respiratory coronavirus 2 syndrome (SARS-CoV-2), was first documented in Wuhan, China, in December 2019 (1). Since then, the infection has spread across China and then to the other part of the world (2-4). At the beginning of June 2020, more than 7,676,209 confirmed new cases were reported, with more than 426,158 deaths attributed to the coronavirus infection (5). This novel virus was declared a public health emergency of international concern by the World Health Organization (WHO) on January 30, 2020 (6). The disease caused by the novel coronavirus was identified by WHO on February 12, 2020 as Coronavirus Disease 2019 (COVID-19) (7) and until November 23rd, 2020 the total number of Confirmed victims were 58,229,138 and confirm deaths were 1,382,106 across 220 countries (8).

As the COVID-19 virus is rapidly spreading, scientists are working to find drugs that can successfully treat the virus, with multi-center clinical trials being performed across the world. Remdesivir and chloroquine have been shown to be effective in controlling COVID-19 (9). Chloroquine phosphate, an established malaria prevention drug, was reported to be an effective and acceptable protection against COVID-19-related pneumonia (10). To date, however, there is no proven drug that can treat or prevent the novel COVID-19.

In the absence of appropriate vaccines or antivirals effective against COVID-19, non-pharmaceutical approaches remain the only way to dealing with the virus. Steps should be taken to isolate patients and persons testing positive for COVID-19, and there should be contact tracing and health monitoring, strict healthcare facility prevention and control of infections, and the implementation of other active public health control interventions with ongoing active monitoring and containment at all sites where outbreaks occur (11,12).

Because of its extensive spread, leading to fatal outcomes, it has been declared as a pandemic and a global health emergency by the World Health Organization (13). Due to this global outbreak, governments in various countries have been forced to take swift and protective measures as a means of limiting people's exposure to the virus (14) and for tracking the infected cases several technology based measures have taken.

In India, strict lockdown was imposed on all cities along with implementation of travel bans and cancellations, closing of schools and colleges, postponing classes and Work from home for the working population. As mandated by the Indian government, all citizens must stay at home unless required to go out for valid reasons like medical emergencies and groceries and helping sick or the disabled. Since an increasing number of governments have imposed nationwide quarantine a major problem that emerges is the risk harmful effects of physical inactivity due to personal restrictions to attain outdoor activities. (14).

These restrictions lead to a hindrance in participating in outdoor activities including physical activity and exercise and disrupt normal routine activities (14). Staying at home is one of the safest measures currently but may have negative impacts on health of the people. Staying at home may promote sedentary behaviour, cause an increase in the time of sleeping, lying down or reclining for doing activities like playing video games, reading books or using mobile phones which may further lead to worsening of physical condition (15).

2. CONSEQUENCE OF COVID 19 :

With regards to physical inactivity and periods of lockdown or restricted and regulated movement, there is some evidence emerging in India. The various aspects of this impact discussed separately.

- **Economic Impact** : The economic impact of the 2020 coronavirus pandemic in India has been effected negatively. India's growth in the fourth quarter of the fiscal year 2020 went down to 3.1%, according to the Ministry of Statistics.

The World Bank and rating agencies had initially revised India's growth for FY 2021 with the lowest figures India has seen in three decades since India's economic liberalization in the 1990s. State Bank of India research estimates a contraction of over 40% in the GDP in Q1. The contraction will not be uniform, rather it will differ according to various parameters such as state and sector. On 1 September 2020, the Ministry of Statistics released the GDP figures for Q1 (April to June) FY21, which showed a contraction of 24% as compared to the same period the year before (16).

- **Social impact** : Physical distancing is the only measure to control the influence of Covid-19 and it should be promoted, but we need to see the impact of this pandemic on the society how it has revived the social discriminatory practices.

The consequence of Covid-19 has been multiple and not only limited to society at large. From the economic point of view, both rural and urban have been impacted adversely. Everyone has seen the issues being faced by migrant workers, they depend on daily earnings, they have hardly any savings which they could spend during any emergency. In case of emergency situations which impact the society at large comes the problem of psychological trauma. The lockdown has proved that "man is a social being" because the continuous lock down for about four months have impacted people psychologically as well and the increasing rate of domestic violence faced by women and children (17).

- **Psychological Impact** : The psychological effects of the pandemic are best understood in terms of psychiatric and psychological problems. In India, the first and foremost responses to the pandemic has been fear and a sense of clear and imminent danger. Fears have ranged from those based on facts on unfounded fears based on information/misinformation circulating in the media, particularly social media (18). Some features are unique to psychological presentations related to disasters. First, the overlapping of psychological problems is very common. Second, most people presenting with psychological disturbances are 'normal people' who have been overwhelmed by an extraordinary stressor. Third, a vast majority of people presenting with disaster-related psychological disturbances recover spontaneously over time or with brief psychological inputs. However, descriptions of psychological disturbances in particular domains help frontline personnel communicate and ensure appropriate selection of intervention (19).

There is a positive correlation between physical activity and mental well-being. Physical activity is a key, critical way to manage mental health well-being regardless of them having a diagnosed mental health condition. Studies have shown that enforced sedentary behaviour has led to depressive feelings and low moods in healthy people within seven days (20). Taking into consideration the current situation worldwide with countries in enforced periods of lockdown and isolation, this may potentially have a significant impact on the mental well-being of many people as they do not engage in any form of physical activity (21).

The stress and strain of household life, as well as being a health care professional at this time, and the wider societal impact of COVID-19 have led to altered sleep patterns in many people and specifically in healthcare professionals on the front line in the fight against COVID-19. Sleep is important in helping to maintain overall occupational performance and overall well-being. It is also vital to maintain optimal immune response during these times. Proper sleep pattern is most important prophylactics to keep people's physical and mental state healthy during the pandemic.

- **Health Impact** : There are many things to consider when looking at the implications of physical inactivity during COVID-19 on physical and mental health and social care (20).

The differences in health and social systems in countries are largely effected the people who experience COVID-19 and recovery from it will still have ongoing needs. They would have had a prolonged period of physical inactivity. Focus and attentions must be taken for this population (20).

During pandemic periods, routine health care services have been put on hold or paused in many countries around the world. Services such as routine screenings, diagnostics and elective surgeries have been hampered and put on hold. Even after health care services resumed for this population, it may still take some time for services to clear the backlog caused by periods of lockdown. This may have far-reaching effects. To quantify the impact of physical inactivity on the world's major noncommunicable diseases (NCDs), life expectancy could be averted. Increment on the major NCDs recently highlighted by the United Nations as threats to global health (22) : coronary heart disease (CHD); cancer, specifically breast and colon cancers, which are convincingly related to physical inactivity; and type 2 diabetes increases rapidly.

- **Physical Impact :**

With the increment of physical inactivity there is the likelihood of musculoskeletal deconditioning (20). During periods of lockdown the scope of people's daily activity movements is restricted, musculoskeletal deconditioning is likely to happen with most people. For fit and healthy people the susceptibility of this disease was be less noticeable, but in older people and child or people with diagnosed health conditions or people who were already functioning very close to the functional threshold, musculoskeletal deconditioning will be more pronounced. This musculoskeletal deconditioning may have a significant impact on these vulnerable populations and may potentially increase the risk of injuries related to falls, such as hip fractures (20). This will in turn have implications for health and social care services already under stress.

The COVID-19 pandemic means that many of us are staying at home for a longer period of time and sitting down more than we usually do. It's hard to do the sort of exercise as normally people do. It's even harder for the people who don't usually do a lot of physical exercise.

Still, it's very important for people of all ages and abilities to be as active as possible. WHO's Be Active campaign aims to help promote physical activity for some fun at the same time.

Regular physical activity benefits both the body and mind. It can reduce the risk of hypokinetic diseases such as high blood pressure, help manage weight and reduce the risk of heart disease, stroke, type 2 diabetes .It also improves bone and muscle strength and increases health related physical fitness. For older people, activities that improve coordination, balance and quality of life.

Regular physical activity can help maintain proper mental health as well by reducing the risk of depression, cognitive decline and delay the onset of dementia - and improve overall feelings (20). Due to long term of physical inactivity or sedentary lifestyle lead to decrease in cardiorespiratory fitness, joint stiffness, muscular strength ,coordination and all the parameters of physical fitness which affect the motor ability of the population.

3. REMIDIAL MODIFICATION :

Concept of Health:

In 1948, the World Health Organization (WHO) defined health with a phrase that modern authorities still apply.

“Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.”

In 1986, the WHO made further clarifications:

“A resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities.”

This means that health is a resource to support an individual's function in wider society, rather than an end in itself. A healthful lifestyle provides the means to lead a full life with meaning and purpose (23).

In keeping with the biomedical perspective, early definitions of health focused on the theme of the body's ability to function; health was seen as a state of normal function that could be disrupted from time to time by disease. The concept of such a definition of health is: "a state characterized by anatomic, physiologic, and psychological integrity; ability to perform personally valued family, work, and community roles; ability to deal with physical, biological, psychological, and social stress"(24). Then in 1948, in a radical departure from previous definitions, the World Health Organization (WHO) proposed a definition that aimed higher: linking health to well-being, in terms of "physical, mental, and social well-being, and not merely the absence of disease and infirmity" (25). For a long time, it was set aside as an impractical ideal and most discussions of health returned to the practicality of the biomedical model (26).

For attaining quality of life, it is progressively recognized that health is maintained and improved not only through the advancement and application of health science, but also through the efforts and intelligent lifestyle choices of the individual. According to the WHO, the main determinants of health include the social and economic environment, the physical environment and the person's individual characteristics and behaviors (27).

More specifically, key factors that have been found to influence whether people are healthy or unhealthy include the following:(27-29)

- Ecinimical status
- Social support networks
- Education and literacy
- Employment/working conditions
- Social environments
- Physical environments
- Personal health practices and coping skills
- Healthy child development
- Biology and genetics
- Health care services
- Gender
- Culture

The concept of the "*health field*," as distinct from medical care, emerged from the Lalonde report from Canada. The report identified three interdependent fields as key determinants of an individual's health. These are:(29)

- Lifestyle: the aggregation of personal decisions (i.e., over which the individual has control) that can be said to contribute to, or cause, illness or death;
- Environmental: all matters related to health external to the human body and over which the individual has little or no control;
- Biomedical: all aspects of health, physical and mental, developed within the human body as influenced by genetic make-up.

Wellness :

The best way to maintain health is to preserve it through a healthful lifestyle rather than waiting until sickness or infirmity to address health problems. People use the name wellness to describe this continuous state of enhanced well-being.

The **WHO** defines wellness as follows:

“Wellness is the optimal state of health of individuals and groups. There are two focal concerns: the realization of the fullest potential of an individual physically, psychologically, socially, spiritually, and economically, and the fulfillment of one’s roles and expectations in the family, community, place of worship, and other settings.”

Wellness promotes active awareness of and participating in measures that preserve health, both as an individual and in the community. Maintaining wellness and optimal health is a lifelong, daily commitment (30).

Steps that can help people attain wellness include:

- Eating a balanced, nutritious diet from as many natural sources as possible
- Engaging in at least 150 minutes of moderate to high-intensity exercise every week, according to the American Heart Association
- Screening for diseases that may present a risk
- Learning to manage stress effectively
- Engaging in activities that provide purpose
- Connecting with and caring for other people
- Maintaining a positive outlook on life
- Defining a value system and putting it into action
- Positive behavioural modification

4. DIMENSION OF HEALTH :

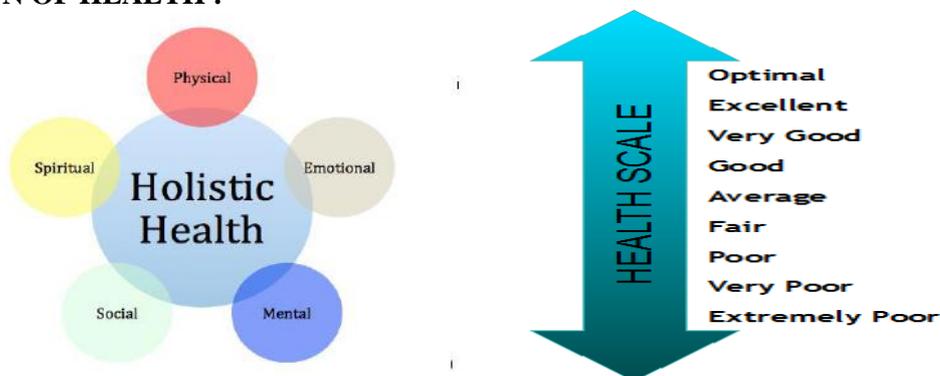


Figure-1 Holistic health dimension and Health Scale

The dimensions of of health include physical, mental, emotional, spiritual, and social. These five dimensions of health provide a full range of holistic health as a change in any component affects the others. This interrelationship between the dimensions of health is one of the key aspects that one need to understand (31).

- **Physical**

The physical dimension of health include the bodily aspect of health. It reflects more to the traditional definitions of health as the absence of disease and injury. Physical health ranges in quality along a continuum where a combination of diseases and a person who is at optimum physical condition (think health not fitness). Physical health can affect the other dimensions of health as a decline in physical health can result in a decline in other forms of health.

- **Mental**

Mental health refers to the cognitive aspect of health. Sometime mental health is linked to emotional health. Mental health is more the functioning of the brain, while emotional health refers to the person’s mood often connected to their

hormones. It refers to the person's ability to use their brain and think. This may be to solve problems or to recall information, but the focus is on the cognitive aspect of the person. Mental health affects the other dimensions of health.

- **Emotional**

Emotional health is about the person's mood or general emotional state and it related to person's behavioural pattern.. It is our ability to recognise and express feelings adequately.. The relationship between emotional and mental health is clear and as such some illnesses relate to both, such as: depression and anxiety. Emotional health affects the other dimensions of health .

- **Spiritual**

Spiritual health relates to our sense of overall purpose in life. People often find this purpose from a belief or faith and value based system. A purpose in life is said to be healthier than those meaningless lives. Spiritual health will very easily affect emotional and mental health as having a purpose in life can help you to apply yourself to achieving goals related with the faith and values.

- **Social**

The social dimension of health refers to our ability to make and maintain meaningful relationships with others members of the society. Good social health includes not only having relationships, but behaving appropriately within them and maintaining socially acceptable standards and values. The basic social unit is the family, and these relationships impact a person's life the most. Other key relationships are close friends, social networks, teachers, and other members of the society.

5. PHYSICAL ACTIVITY :

Physical Activity (PA) is defined as any bodily movement produced by skeletal muscles that require energy expenditure (32,33). There are two components of physical activity that need to considered:

- A. Aerobic fitness: this usually includes moderate to vigorous activity that makes you feel a bit warm and causes an increase in your breathing rate, breathing depth and your heart rate.
- B. Strength and balance: This is often the forgotten component of physical activity, but it is an essential part and has many benefits. Physical activity may include (34).

- Active recreation
- Sports participation
- Cycling
- Walking
- Play
- Dance
- Gardening
- House cleaning
- Carrying heavy shopping

During the COVID-19 pandemic, it is even more important for all people to be physically active. Even if it is only a short break from sitting at your desk and doing some walking or stretching. Doing something as simple as this will (34).

- Ease muscle strain
- Relief mental tension
- Improve blood circulation
- Improve muscle activity
- Create some routine to your day in these unprecedented times.

6. HEALTH LITERACY:



Fig. 2. Interactive health literacy framework

Source: Parker R. Measuring health literacy: what? So what? Now what? In Hernandez L, ed. *Measures of health literacy: workshop summary, Round- table on Health Literacy*. Washington, DC, National Academies Press, 2009:91–98.

The field of health literacy is a work in progress. Because health literacy is complex, it is not very amenable to randomized controlled trials. Evidence was included if the editors and reviewers felt that the intervention is reasonably certain to strengthen health literacy. These promising interventions to use a term introduced by the Institute of Medicine of the United States National Academies are described with the hope that they will attract the interest and support of policymakers, be rigorously tested and, if found to be cost effective, brought to scale. This book is intended for multiple audiences. Policy makers and those who advise them can take note and develop legislation, assign resources and create programmes based on the priorities identified and actions recommended. Public health practitioners and those from other sectors can look at where their practices fit and do not fit with the action identified and (1) share their experiences to build a richer inventory of health literacy initiatives; (2) seek collaboration with others who are engaged in similar activities to build intersectoral synergy; and (3) support the collection of evaluation data to examine and document promising practices (35).

7. DETERMINANTS OF HEALTH LITERACY:

- C. **High literacy rates in population groups benefit societies.** Literate individuals participate more actively in economic prosperity, have higher earnings and employment, are more educated and informed and contribute more to community activities and enjoy better health and well-being.
- D. **Limited health literacy significantly affects health.** Limited health literacy is one of the key factors in association with less participation in health-promoting and disease detection activities and poor adherence to medication increases significantly negative impact on health.
- E. **Limited health literacy effects as a social gradient.** People with limited health literacy most often have lower levels of education and people of lower income groups. Limited general literacy affects people's health cannot always be clearly separated from how limited health literacy affects people's health (Fig. 4).
- F. **Building personal health literacy skills for sustainable lifelong process.** Nobody is ever fully health literate. Everyone at some point needs help in better understanding or acting on important health related issues and information. Even highly educated individuals may find health systems too complicated to understand, especially when a health condition makes them more vulnerable to lead their daily life.
- G. **Competence related to health literacy varies according to context, culture and setting.** These factors include communication skills, knowledge of health topics, culture and religion.
- **Limited health literacy is associated with high health system costs.** Limited health literacy cost more than US\$ 8 billion, an estimated 3–5% of the total health care budget in Canada in 2009. In 1998, the United States National Academy on an Aging Society estimated that the additional health care costs caused by limited health literacy were about US\$ 73 billion. 1.2 billion, only slightly behind China. Lack of health literacy poses a great threat to our nation's economic stability as health care expenditures are on the rise, along with an expanding population (37).

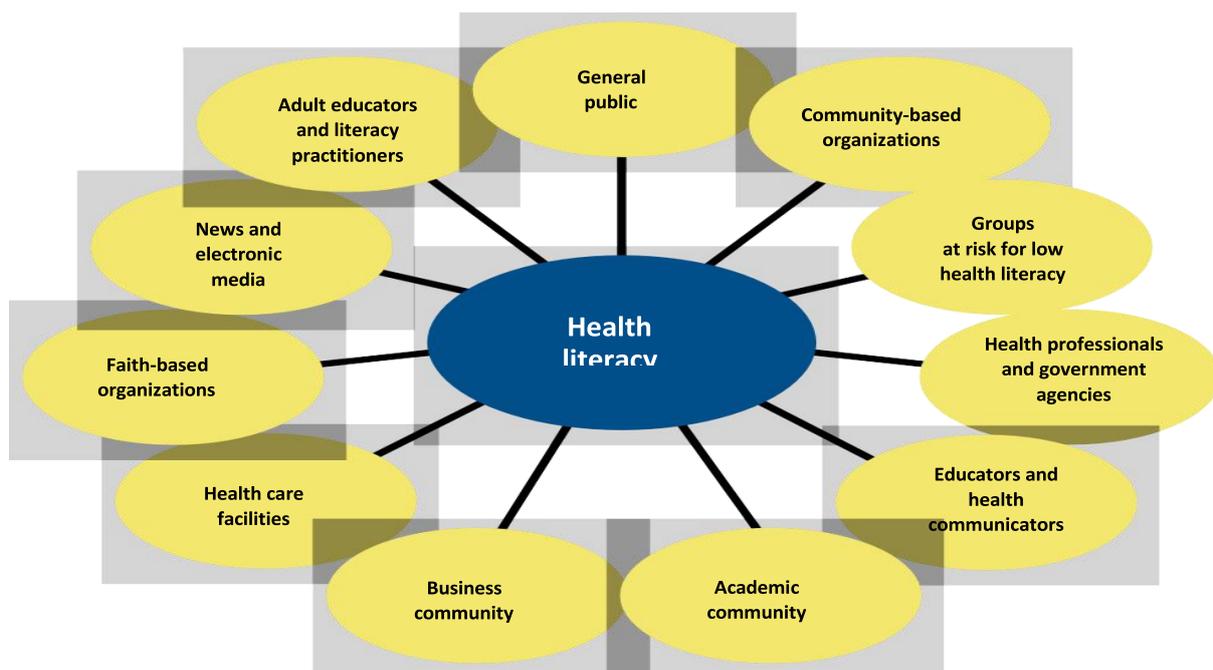


Figure-3. Major stakeholders involved in health literacy (36)

Source: adapted from: Mitic W, Rootman I. *An intersectoral approach for improving health literacy for Canada; a discussion paper*. Vancouver, Public Health Association of British Columbia, 2012.

A health-literate India would be a society in which everyone is able to get safe high quality health care because:

- Everyone has the opportunity to use reliable, understandable information that could make a difference in their overall well-being.
- Health and science content would get included in school curricula.
- People would be able to accurately assess the credibility of health information presented by the media
- Public health alerts would be presented to inspire people to take needed action.
- The cultural contexts of diverse people would be integrated into this content.
- Doctors would communicate clearly with their patients, using everyday vocabulary and there would be ample time for discussions between patients and doctors (36,37).

8. PHYSICAL LITERACY :

What is Physical Literacy (PL), really? Is it nothing more than a powerful metaphor that captures the imagination? A certain set of fundamental movement skills (FMS)? Is it a philosophical rebuttal of mind-body dualism? Or is it old wine in a new bottle, a catchphrase that rebrands plain old physical activity? One can draw from numerous contemporary definitions to support each of these positions. In an attempt to reconcile these disparities, this article first traces the diversification of the concept as it has been appropriated for a variety of instrumental ends. An analysis of the metaphor underlying PL is offered, and from this a new definition encompassing the disparate definitions while retaining fidelity to the original holistic concept is presented. Finally, a model of PL development that suggests a series of research questions across a range of disciplines is proposed. With development of a better articulated theory of PL, researchers may be able to validate the construct and practitioners may be able to employ it effectively to help fulfill its promise (38).

Whitehead (39) presents PL as an aspect of lived embodiment and a pathway to a better quality of life. Drawing on existential and phenomenological perspectives, she asserted a monist view that erases mind-body duality through awareness of the self as active embodiment, and claimed that through a fuller realization, exploration and expression of human physicality humans heighten self-awareness). She provided the following definition:

A. Physical literacy can be described as the ability and motivation to capitalise on our motile potential to make a significant contribution to the quality of life. As humans we all exhibit this potential; however, its specific expression will be particular to the culture in which we live and the motile capacities with which we are endowed.

B. An individual who is physically literate moves with poise, economy and confidence in a wide variety of physically challenging situations. Furthermore the individual is perceptive in 'reading' all aspects of the physical environment, anticipating movement needs or possibilities and responding appropriately to these, with intelligence and imagination.

C. A physically literate individual has a well-established sense of self as embodied in the world. This, together with an articulate interaction with the environment, engenders positive self-esteem and self-confidence. Furthermore, sensitivity to and awareness of our embodied capacities leads to fluent self-expression through non-verbal communication, and to perceptive and empathetic interaction with others.

D. In addition the individual has the ability to identify and articulate the essential qualities that influence the effectiveness of his/her own movement performance, and has an understanding of the principles of embodied health, with respect to basic aspects such as exercise, sleep and nutrition (40).

Confusing aspects about PL include that it is often presented as a separate concept, but cannot be defined or exist without Physical Education (P.E.). In simple terms, PL is PE (41), Kirk describes PL as a "philosophical position on physical education". This position relates to the holistic discourse in PE, embedded within an inclusive ideology. Therefore, many of physical literacy's characteristics are not new and have been borrowed from PE, specifically literature relating to "quality PE" and "lifelong physical education". For example, around the turn of the century there was much literature in the US describing an approach titled the "new PE" (42), an approach first introduced in the US in 1959 (43). The "new PE" was also described as "quality PE" which had an emphasis in the neo-PE curriculum requiring teachers to adopt a social-critical perspective "for understanding 'new kids' and the context of 'new times'" (44). In 2001, Pangrazi (45) published in his 13th edition book, the essential components of a quality PE programme:

- Being guided by content standards [curriculum];
- Student centred and developmentally appropriate;
- Having physical activity and motor skills forming the core of the programme;
- Teaching management skills and promoting self-discipline;
- Promoting inclusion of all students;
- Emphasising learning correctly rather than outcome;
- Promoting a lifetime of personal wellness; and
- Teaching responsibility and cooperation, and promoting diversity (45).

The Elements of Physical Literacy



Figure-4. Physical literacy cycle (46).

Motivation and Confidence (Affective)

Motivation and confidence building is one of the important aspects of promoting physical literacy, there should be ample opportunity of joy, and happiness so that everybody responds spontaneously.

Physical Competence (Physical)

There should be a variety of physical activities and everybody must understand the importance of physical activity for promoting and maintenance of good health.

Knowledge and Understanding (Cognitive)

Priority must be given to the cognitive aspects of an individual otherwise it may difficult to promote health literacy.

9. DEVELOPMENT OF PHYSICAL LITERACY :

According to Pot and Hilvoorde (47) being physically literate is of utmost importance when social circumstances afford great social influences on sport practice that cannot be ignored. PA engagement is the central goal of physical literacy (40,47). The phenomenological basis of physical literacy; “the context in which an action is performed influences the meaning of that action, which has major consequences for learning and understanding motor actions”(47). Competitive sport is associated with competition, whereas physical literacy is aimed at personal physical development and realization of individual potential. Thus, interpreting physical literacy as fundamental movement skills deters the significance of its application in the sport domain which positively related with physical, mental and social aspects.

A physically literate individual will display the following attributes:

Physical literacy can be described as a disposition characterised by the motivation to exhibit the potential by participation in physical activities in a regular manner for reaching the quality of life.

Individuals who are physically literate will move with poise, economy and confidence in a wide variety of physically challenging situations in the unforeseen emergencies.

Physically literate individuals will be able to anticipate all aspects of the physical environment, anticipating movement needs or possibilities and responding appropriately to those with intelligence and imagination.

These individuals have a well-established sense of self esteem and self confidence as embodied in the world. Which will lead to fluent self-expression through non-verbal communication and to perceptive and empathetic interaction with others members of the society.

In addition, physically literate individuals will have the ability to identify and articulate the essential qualities that influence the effectiveness of their own movement performance, nutrition, sleep patterns and positive behavioural modification for well being.

Physical literacy is the foundation of long-term participation and performance to the best of one's ability. Physical Literacy is the cornerstone of both participation and excellence in physical activity and sport. Ideally, physical literacy is developed prior to the adolescent growth spurt (48).

Fundamental Movement Skills and Fundamental Sport Skills

The Four Environments

To develop physical literacy, children should learn fundamental movement skills on

- ✓ Ground,
- ✓ Ice,
- ✓ Water and
- ✓ Air (49-50).

People with Disabilities

Everyone deserves the right to have opportunities to develop physical literacy. Although physically challenge peoples are unable to perform all forms of physical activity or sport, they should still be provided with the same opportunities to learn fundamental movement skills, fundamental sport skills, and become active for life. As a result, many resources have been created to support physical activity provider and parents in accommodating the needs of all participants to have increased physical activity and positive experiences out of it.

10. CONCLUSION :

Covid 19 pandemic dramatically changes our life, which make us realising the importance physical activity for developing and maintaining good health. There are various dimensions of health which is directly reflected to the wellness of an individual. To attain the highest level of wellness and develop the quality of life, physical activity is the most important component, which affect our sleep pattern and thus boost our immune system. To fight against the deadly virus we have to develop health consciousness by spreading the global health and physical literacy.

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