wjpmr, 2019,5(9), 89-92

SJIF Impact Factor: 4.639

WORLD JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.wjpmr.com

Review Article

ISSN 2455-3301

WJPMR

PHYSICAL ACTIVITY LEVEL IN SOUTH ASIANS: A REVIEW

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Article Received on 26/06/2019 **Article Revised on 15/07/2019** **Article Accepted on 06/08/2019**

ABSTRACT

South Asians are an inherently high-risk group for developing abdominal adiposity, diabetes, cardiovascular diseases. Physical inactivity was considered to be the fourth leading risk factor for global mortality. Physiotherapy is required for healthy ageing and well living in multi-dimensional streams of healthcare. However, we need to understand the barriers for implication of physical activity. This is a review on physical activity levels of South Asians and the barriers we come across in reaching our goals in the elite young adults in the 21st century.

KEYWORDS: Review, physical activity levels, South Asians, high risk group for metabolic diseases, Physical inactivity.

INTRODUCTION

South Asia, commonly known as the Indian sub-continent, is home to almost **one-fourth of the world's population** and is comprised of many diverse ethnic, linguistic and religious groups. Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, India, Pakistan and Srilanka form South Asia. Also –The South Asian Association for Regional Cooperation (SAARC).

South Asia being 3.5% of the world's land surface area and having one fourth of the world's population, makes it both the most populous and the most densely populated geographical region in the world. Overall, it represents about 39.49% of Asia's population, over 24% of the world's population, and is home to a vast array of people.[1,2,3]

The Problem: It representing such a big size of the world's population, the problem is as grave. Although there are significant cultural differences between regional countries, South Asians are an *inherently high-risk group* for developing abdominal adiposity, diabetes, cardiovascular diseases.[4] South Asia has the highest number of patients with diabetes and the prevalence of diabetes among adults is over 10% in many parts of the region. This increased metabolic risk among South Asians appears to be multi-factorial, where unhealthy dietary habits and physical inactivity are coupled with genetic predisposition.[4] The risk is presumed to be double as the gaming world has resorted to mass socialisation on media and is prone to be continuous physical inactivity.

Thus, Physical inactivity which was considered to be the fourth leading risk factor for global mortality is now causing an estimated 3.2 million annual deaths (6% of global deaths).[4]

I. DISCUSSION

Most young people are *presumed to be healthy but*, as per WHO, an estimated *2.6 million* young people aged *10 to 24 years die* each year and a much greater number of young people suffer from illnesses 'behaviours' which hinder their ability to grow and develop to their full potential. Nearly 2/3rd of premature deaths and 1/3rd of the total disease burden in adults are associated with conditions or behaviours initiated in their youth (*e.g.* tobacco use, *physical inactivity*, high risk sexual behaviours, injury and violence and others.).[5]

Our Elite Future Society Representatives, nearly 10-30% of young people suffer from health impacting behaviours and conditions that need urgent attention of policy makers and public health professionals.

These are:

- Nutritional disorders (both malnutrition and over-nutrition),
- tobacco use,
- harmful alcohol use, other substance use,
- high risk sexual behaviours,
- stress,
- common mental disorders, and
- injuries (road traffic injuries, suicides, violence of different types)

Specifically affect this population and have long lasting impact.[5]

Physiotherapy promotes and provides "Motivation To Move To Abate Lifestyle Disorders". Physiotherapy is required for healthy ageing and well living in multi-dimensional streams of healthcare. However, we need to understand the barriers of our motto, which would hamper our goal to imply it.

Other Studies, including The Harvard alumni study, have shown that the mortality rates were significantly lower among those who were physically active, even after adjusting for other lifestyle risk factors. Hence it is evident and proven fact that regular physical activity has

- Numerous cardio-metabolic beneficial effects,
- Improves mental well being

The ongoing worldwide epidemic of cardiovascular and metabolic disease is evidence to the fact that the general population is physically inactive.[4,6]

- Lack of understanding about benefits, communication gap with health care professionals, cultural beliefs and lack of culturally sensitive facilities are some of the potential barriers for physical activity in South Asians.[7]
- The desire to walk, cycle and participate in sports and recreational activity is low among South Asians in comparison with the general population reviewed in several studies.[8,9,10]
- To monitor trends and evaluate public health or individual interventions aiming at increasing levels of physical activity, reliable and valid measures of habitual physical activity are essential. Several routine instruments are available to measure physical activity, including self-report questionnaires, indirect calorimetry, direct observation, heart rate telemetry, accelerometers and movement sensors. All of these methods have well-known limitations and for physical activity there is currently no perfect gold-standard criterion.[11]
- Valid and appropriate measurement of physical activity is a challenging task because of the relative contribution of other health-related dimensions of physical activity, such as caloric expenditure, aerobic intensity, weight bearing, flexibility, and strength. [12]

Additional barriers among students are:

- Academic obligations,
- Family and work obligations. [13]
- Poor social support,
- Finance,
- Lack of energy, health, and
- Lack of free time. [14]

Thus Physical inactivity is also affected by individuals' way of thinking and lack of motivation. Those who are physically inactive realise that they need to take time for physical activities. [15]

SPECIFIC REVIEW OBSERVATION

Physical activity among *children and adolescents (*5–18 years) has been found to correlate with a number of factors, which can broadly be categorized as

- Interpersonal (social factors: e.g., parental/peer physical activity modelling and support)
- Intrapersonal (biological and psychological factors: e.g., ethnicity, sex, socioeconomic status, enjoyment, achievement orientation, self-efficacy, intention, interest, perceived benefits) and
- Structural (environmental factors: e.g., providing more activities, safety, having accessible facilities, better provision of clubs, clean parks and play areas).[16]

Authors have found that with increased urbanisation and busy work schedules the leisure time is also reduced and even if it is there, Majority of *South Asian adults* were inactive during their leisure time. *In the females, skilled workers, professionals and those with higher education were more inactive. Promoting leisure time activity has also become a challenge* in South Asia due to cultural and attitudinal barriers. [17]

There is also a *challenge of nutritional transition* as Indians are moving away from traditional diets high in cereal and fiber to more western pattern diets high in sugars, fat, and animal-source food (fast food culture) that are closely associated with different non communicable diseases (NCDs) seen in later years[18,19]

Research articles on World Health Organization STEP survey from the South-Asian countries were retrieved online and reviewed.

STEPS SURVEY IN	N=	PREVALENCE OF INACTIVITY	MALE VS FEMALE INACTIVITY
Bhutan	2484	58.6%	Females > Males[4]
India	39,064	72.3%	Males > Females
Bangladesh	9,275	27%	Females > Males[4]
Maldives		90%	
Nepal		5.5%	Males > Females
Sri lanka	11,680	25%	

Inter-comparison showed that Bhutan inactivity was lower as compared to Maldives due to it being mostly an agrarian society with nearly 50% of the labour force engaged in agriculture as compared to Maldives where most are involved in the tourism industry.

The most active regional country in the STEPS surveys was Nepal, possibly due to 80% of the Nepalese population being involved in agriculture.[4,20,21,22]

In all regional countries, work and transport (add coma only- no other correction in this line) related activity was higher compared to leisure time activity. Hence it is important to consider individual country profiles, proportions of urbanity and cultures when delivering public health messages focused on leisure time activity.[4]

These Factors thus need to be seriously considered when formulating future interventions which aim to improve or measure Physical Activity (PA) in the region.

Suggested Solutions After Brainstorming By Different Authors Are Majorly Only 2 !!

- Inculcating time management in students.[23]
- *Physical activities should contain many elements (e.g., fun, fitness, competition) to suit varying interests.* The primary correlates of physical activity among students (e.g., fun/enjoyment, fitness, enjoyment of competition, interest) ie intrinsic motivators are found to be so varied and individually based that it is difficult to formulate a concise understanding as to what makes physical activity universally attractive to young people.[15]

Analysing existing literature and research work opened other questions, such as

- Whether *enough importance* is given to promotion of physical activity among students?
- Whether *educational institutions actually* encourage students to implement physical activity?
- Whether there is *enough Role modelling* by parents.

They being our elite future representatives – we need to start from there.

The influence of friends and family on implementation of physical activity plays a large part.[5]

As per a report published by Lancet the three major causes of mortality-ie cardiovascular, respiratory and diabetes together contribute to the high proportion of total deaths in India in 2016 and there is quite a lot of variation amongst the states . Also they have reported that around 4 million Indians succumb to death annually and mostly prematurely i.e. between 30-70 years and thus represent the world's greatest health losses and needs to implement policies to improve the conditions.[24]

As per report presented by Swagata Yadavar in November 2017 " for the first time a study estimated the key drivers of disease, disability, and premature death in all 29 states, many of which have populations the size of large countries, and include people from over 2000 different ethnic groups, per a press release from the Lancet. The research analysed 333 diseases and injuries and 84 risk factors for each state in India between 1990 and 2016, as part of the Global Burden of Disease study." She has also stated that, "As incomes rose over the last 26 years, India's burden of disease shifted: More deaths in India (61.8%) in 2016 were due to non-communicable diseases such as cardiovascular diseases and chronic obstructive pulmonary disease, while in 1990 (53.6%) more deaths were due to communicable, maternal, neonatal and nutritional (CMMND) diseases."[25,26]

Thus the Society is to be targeted at large to implement our ideas to fight for this serious issue.

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