

## **A public health approach to increase physical activity and health education: The Biokinetic Humanitarian Project**

M.H. NOORBHAI

*MRC/UCT Research Unit for Exercise Science and Sports Medicine, Department of Human Biology, Sports Science Institute of South Africa, University of Cape Town, South Africa.  
E-mail: info@thebhp.org*

*(Received: 19 September 2013; Revision Accepted: 25 September 2013)*

### **Abstract**

Physical activity has comprehensive benefits promoting well-being, health and improving quality of life. Unfortunately, physical inactivity is the fourth leading cause of deaths due to NCDs worldwide which contribute to over three million preventable deaths. Currently, more emphasis is placed on lifestyle convenience through the use of technology while there is less emphasis placed on the meaningfulness and importance of physical activity and health. Due to the epidemic, it is noteworthy that there are distinct differences between both the modern and early eras regarding health and lifestyle. Behaviours and determinants attributed to physical activity regarding these lifestyles include age, gender, ethnicity, the environment, fitness levels, nutrition and health status respectively. Previous research has stipulated that public health interventions should focus on the management and positive outcomes of such determinants. Interventions advocating both physical activity participation and exercise education are needed across all domains, locally and internationally. It is vital to have intervention strategies that target individuals so that they are able to adjust to the environment they're in. Among these interventions is the Biokinetic Humanitarian Project (BHP) which aims to provide exercise testing, exercise prescription and health education in underprivileged communities, sport and university settings, primary health care and other settings in need. The BHP intervention hopes to inculcate the meaningfulness and disseminate physical activity and health education to individuals. It is imperative that the spotlight in physical activity research is drawn towards future interventions, where NCDs and health status around the world will improve and potentially be alleviated.

**Keywords:** Physical activity, health education, NCDs, Biokinetic Humanitarian Project.

### ***How to cite this article:***

Noorbhai, M.H. (2013). A public health approach to increase physical activity and health education: The Biokinetic Humanitarian Project. *African Journal for Physical, Health Education, Recreation and Dance*, 19(4:2), 993-998.

### **Introduction**

The modern era places an emphasis on the use of technology and science in making an individual's lifestyle more convenient through the use of transport, telecommunications and urbanisation (Mendis, 2010). Although more emphasis is placed on convenience, there is less importance focused on the meaningfulness of physical activity and health. How do we retain and perform physical activity with the rapid evolvement of technology? Among other factors, unfortunately

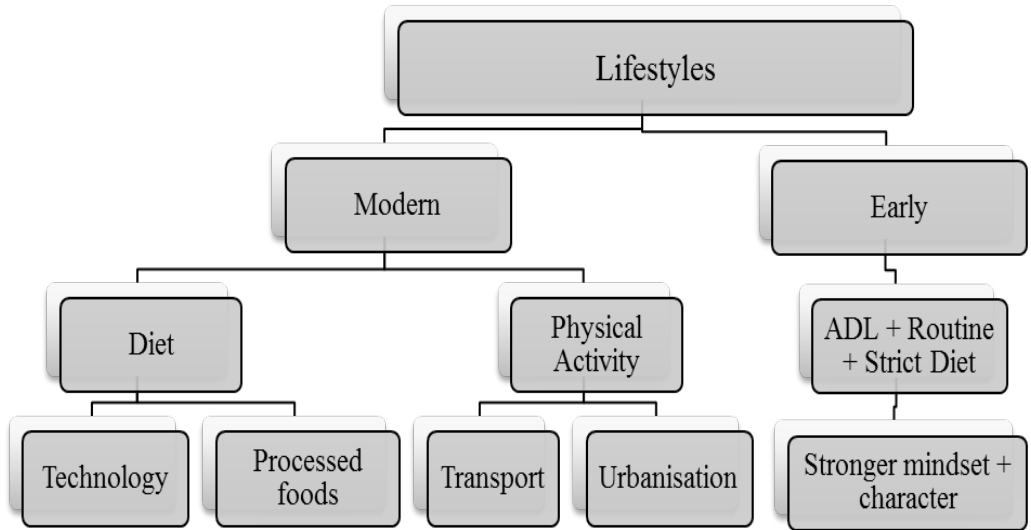
most companies are directed towards a monetary goal in obtaining financial freedom before 'the correct perspectives' regarding health and physical activity are put in place. Passion is placed before principle and this is one of the detrimental effects of the decreased awareness and education of physical activity and a healthy lifestyle (Keipies, Bellucci & Hansen, 2012).

As Biokineticists and sports medicine professionals today, we are faced with the challenge and minor dilemma of our clients and patients having a convenient lifestyle but mostly sedentary. A century ago, their lifestyles were less convenient but more physically active. Among studies conducted, these explained one of the reasons that there is a contrast with life expectancy and quality of life with the two early and modern generations (WHO, 2009). Developing countries have less emphasis on nutritional value and patient education but a higher demand on labour, whereas first-world countries have more focus towards patient education and physical activity importance but less attention is targeted towards nutritional changes. Country to country, these factors vary and are specific to each country depending on what the situations and circumstances are (GAPA, 2010).

The likes of other global modalities such as solar energy and power is underused and therefore energy income has decreased due to increased global energy expenditure (WHO, 2009; GAPA, 2010). Has the evolution of technology made the world more sedentary and therefore increased the prevalence of non-communicable diseases (NCD's)? Are the mindsets and awareness regarding physical activity and health of the current generation weaker? What global physical activity measures can be put in place to prevent these?

### **Behaviours attributed to physical inactivity**

There are distinct differences between both the modern and early eras regarding health and lifestyle. In the early era (before technology reached evolution), activities of daily living (ADL) and routine was exorbitantly different. In addition, people had a stronger mindset and character regarding physical activity (Australian Government, 2013). The essence and convenience of current transport, telecommunications and information technology were absent. Individuals went to school and work by foot or bicycle. In addition, they had to walk a fair distance to catch a train. To send a message to a neighbour or a friend, they walked to give the message, whereas today short message services and emails are daily rituals (Fig. 1) (Brown, Heath & Martin, 2010).



*ADL = Activities of daily living*

**Figure 1:** Contrast in lifestyles between early and modern eras

Physical activity has comprehensive benefits promoting well-being, physical and mental health, prevention of disease and decreasing the onset of diseases, improving quality of life and social aspects and contributing to environmental stability. Unfortunately, physical inactivity is the fourth leading cause of deaths due to NCDs worldwide which contributes to over three million preventable deaths. Physical inactivity is related to other risk factors such as high blood pressure, obesity, high cholesterol and high glucose (GAPA, 2010).

Exercise science is well advanced today in assisting athletes and the general population with lifestyle, well-being and sporting goals (Brown, Heath & Martin, 2010). It would therefore be interesting to know what earlier generations would have achieved if these scientific principles were applied to their active lifestyles with the absence of modern technology. This poses a thought as to whether technology can really be utilised currently, either more in assisting or decreasing the onset of NCD's.

### **Determinants of physical activity**

Determinants of physical activity can vary from person to person, state to state, country to country. Determinants of physical activity include age, gender, ethnicity, culture, society, health status, environment, nutrition and fitness levels. Research states that high quality prospective interventions on the determinants of physical activity with associated behaviours should be implemented (Uijtdewilligen, Nauta & Singh, 2010).

Among individuals that participate in exercise, they typically move through various phases of exercise participation that are determined by diverse factors. These factors are stemmed from two categories. The first category entails individual characteristics and personality traits, exercise history, skills and health behaviours whereas the second category entails environmental characteristics such as access, cost, time barriers and social supports (Uijtdewilligen, Nauta & Singh, 2010; Australian Government, 2013). From a public health perspective, making structural changes to the environment is more likely to make a difference than programmes targeting the individual. People of all ages and levels of activity within a neighbourhood would be influenced by changes to the area (Australian Government, 2013). In contrast, it is vital to rather have intervention strategies that target the individual so that they are able to adjust their ADL accordingly, irrespective of what environment they are in.

### **Intervention for physical activity participation and education**

Physical activity has been shown to benefit people of all ages. It leads to healthy growth and social development in children and reduces the risk of sustaining chronic diseases and ailments. It is evident that interventions advocating both physical activity participation and health education are needed across all domains, locally and internationally (WHO, 2009).

### **The Biokinetic Humanitarian Project**

The Biokinetic Humanitarian Project (BHP) is a non-profit organisation and is aimed at providing physical activity and health education in underprivileged communities around South Africa through fundamental exercise testing and screening, patient education and exercise prescription. The initiative is open to all interested students, communities and health professionals who would like to volunteer their assistance on any capacity. This would be a perfect opportunity to give back to the community in an active way. The BHP is mainly targeted at underprivileged communities, students residing at schools and universities, public health settings and other settings which are in need (BHP, 2013).

The benefits of the BHP intervention include:

- An enhancement of well-being, lifestyle, quality of life and health among individuals.
- Awareness and knowledge of health and exercise is limited and therefore patient education will serve as a means of filling these gaps.
- Interest and initiative regarding physical activity, adequate lifestyle and nutrition are limited among the general population. These are primarily due to financial and socio-economic constraints and so the BHP would be complimentary for the public.

- Individuals know where they stand with regards to their health status, annually or bi-annually (BHP, 2013).

A better health promotion condoning healthier living should be associated with better communication and new motivational tools. Therapeutic education for patients with chronic non-communicable diseases will be the challenge of the near future as their prevalence increase due to ageing of the population and decrement lifestyles (Kolbe-Alexander, Buckmaster, Nossel, Noakes & Lambert, 2008). Research indicates that efforts should be made on the personal level by health professionals with the client or patient. In addition, efforts should also be made on the national level (policies, legal frame-works and patient education) by a magnitude of professionals where it can be both accurately and continually implemented (Kolbe-Alexander, Buckmaster, Nossel, Noakes & Lambert, 2008).

As health professionals, we can only try our best to motivate and inculcate the knowledge to our clients and patients towards the correct path and ultimately focus on additional future interventions, where NCD's and health status around the world will improve and be alleviated (Table 1).

**Table 1:** Summary of the public health approach (BHP) to increase physical activity and health education

<b>Challenges</b>	<b>Behaviours</b>	<b>Determinants</b>	<b>Intervention</b>
Non-communicable diseases and global burden of cardiovascular diseases	Sedentary lifestyle, lack of interest and initiative, physical inactivity and poor diet	Age, gender, ethnicity, educational background, society, environment and nutrition	Physical activity participation and education regarding health, exercise and diet

## References

Australian Government (2013). Department of Health and Ageing: National physical activity recommendations for older Australians: Discussion Document at <http://www.health.gov.au>. September 2013.

BHP Content, (2013). Biokinetic Humanitarian Project (2013) at [http:// www. thebhp. org/index.php/about](http://www.thebhp.org/index.php/about). August 2013

Brown, D.R., Heath, G.W. & Martin, S.L. (2010). *Promoting Physical Activity: A Guide to Community Action* (2<sup>nd</sup> ed.). Champaign, IL: Human Kinetics.

Global Advocacy Council for Physical Activity, International Society for Physical Activity and Health (2010). The Toronto Charter for Physical Activity: A Global Call to Action at <http://www.global.pa.org.uk>. September 2013.

Global Advocacy for Physical Activity (GAPA), The Advocacy Council of the International Society for Physical Activity and Health (ISPAH) (2010). NCD Prevention: Investments that work for Physical Activity at [http://www. globalpa.org.uk/investmentsthatwork](http://www.globalpa.org.uk/investmentsthatwork). September 2013

Keipes, M., Bellucci, A. & Hansen, E. (2012). Risk factors and disease prevalence in 3331 personal check-ups performed in preventive medicine between 2006 and 2011. Cross-sectional and follow-up study. *Bull Soc Sci Med Grand Duche Luxemb.*, (2), 25-35.

Kolbe-Alexander, T.L, Buckmaster, C., Nossel, C., Noakes, T.D. & Lambert, E.V. (2008). Chronic disease risk factors, healthy days and medical claims in South African employees presenting for health risk screening. *BMC Public Health*, 8, 228.

Mendis, S. (2010). The policy agenda for prevention and control of non-communicable diseases. *Br Med Bull.*, 96, 23-43

Uijtdewilligen, J., Nauta, J. & Singh, A.S. (2011). Determinants of physical activity and sedentary behaviour in young people: A review and quality synthesis of prospective studies. *Br J Sports Med*, 45, 896-905

World Health Organisation (2009). *Global Health Risks: Mortality and Burden of Disease Attributable to Selected Major Risks*. Geneva, Switzerland: World Health Organisation.

World Health Organisation (2009). *Interventions on Diet and Physical Activity: What Works? Summary Report*. Geneva, Switzerland: World Health Organisation