
**AN ANALYSIS OF PERCEIVED ROLES OF PHYSICAL EDUCATION
FOR LIFE LONG PHYSICAL ACTIVITY: A PERSPECTIVE OF
TEACHER TRAINEES IN TTCS IN KENYA**

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ABSTRACT

The purpose of this research was to analyse the significant roles that physical education plays in the life long process from the perspective of teacher trainees in TTCs in Rift-Valley Zone, Kenya. Gross *et al* Model guided the study. Mixed-methods approach and descriptive survey research design were used in the study. The target population was teacher trainees in TTCs. There were 233 respondents who took part in the study. Simple random, stratified and systematic sampling procedures were used. Tools of research comprised questionnaire, and interview guide. Descriptive statistics were used to analyse the data. It was found that there are various roles of physical education and teacher trainees need to be exposed to them in TTCs. This study recommends that there should be proper training of pre-service teachers on accrued benefits of physical education and sports for lifelong physical activity in Kenya.

Keywords: Physical education, life-long physical activity, roles, training.

BACKGROUND

There are varied roles of physical education towards Life-Long Physical Activity (LLPA). According to Reuters (2010), a group of researchers say that sitting in front of a television (TV) set for hours may raise the risk of death from heart disease and other causes even in people who do not weigh too much. The Australian researchers say, compared to people who watched less than two hours of TV a day, those who watched more than four hours had a 46% higher risk of death from all causes and an 80% higher risk of cardiovascular attacks. Each hour spent sitting in front of the TV per day raised a person's risk of ill-health from cardiovascular disease by 9%,

according to the study appearing in the American Heart Association Journal. Although the study focused on watching TV, the findings suggest that sitting anywhere for extended periods of time - at a desk, in front of a computer or in class - may pose a health risk. This brings into sharp focus the issue of tuition and more tuition in schools that has been crafted in an attempt to raise performance in national examinations thus shielding children from physical education and activity so that they can concentrate on books (Kweyu, 2010 January 13th).

Researchers writing in an article appearing in The Standard newspaper of January 13th, 2010 (p 27) titled 'Obesity epidemic taking root in Africa' say the urban poor in sub-Saharan Africa are the latest victims of the obesity epidemic. The researchers writing in the open access Journal of Public Health in Nairobi, used data from seven African countries to investigate changes in body mass index (BMI) between early 1990 and early 2000. The research concluded that Africa's population was becoming rapidly urban and sedentary. Wanja (2010, September 20th) writing in the Daily Nation newspaper in an article titled, 'Kenya's Silent Killer', reiterated that cancer is now number three killer in the country, and that despite years of campaigns, sedentary lifestyles have retained their deadly grip on most people, especially the young. She quotes Dr Macleod of Aga Khan University Hospital, Nairobi saying that if one's lifestyle involves little exercise, then there is a risk of contracting cancer.

A spot check at Kericho District Hospital, Tenwek Mission Hospital Bomet, and Litein Mission Hospital, Buret, show a recorded increase in cases of children with diabetes who are seeking medication and also those attending regular clinics on management of diabetes among the youths. According to Langat, Hospital Superintendent – Kericho District (2010, November), Towett, Matron – Tenwek Hospital (2010, December), Bett, Hospital Administrator – Litein Mission (2010, December), the cases of diabetes were alarming and the situation is exacerbated by lack of exercise and poor dieting in the young population.

STATEMENT OF THE PROBLEM

Physical Education is an integral part of the education programmes for all pupils and students in primary and secondary schools respectively in this country. It teaches them how their bodies move and how to perform a variety of physical activities. They learn the health-related benefits of regular physical activity and the skills to adopt a physically active, healthy lifestyle. There is a direct correlation between regular physical activity and health among children and adolescents. Children who are physically active have vigorous cardio-pulmonary and respiratory systems: strong hearts and lungs. They have less body fat. And they have strong bones and muscles. All these factors make for a healthy living yet in the teacher training programme in physical education, most of the pedagogical acts are oriented towards academic performance, which

involves a capacity of imitation rather than the creation of knowledge and expression of self. I postulate that a teacher training programme should be built on philosophical reflection, which calls for autonomous, critical and caring thinking in physical education, which gives the prospective teachers some elements to improve their epistemological and pedagogical reality on the roles of physical education.

The harmful consequences of sedentary lifestyle that has been adopted by a rapidly increasing segment of our population, especially school going children and the youth are apparent to even a casual observer.

One of the measures of success of a curriculum in schools is the learning which takes place. This success is accentuated by the training that teachers receive. Physical education is one of the compulsory subjects for the entire teacher trainees in TTCs in this country.

The preparation of teachers in physical education to be able to implement physical education curriculum effectively in primary schools puts this study in a sharp focus, because unless teacher trainees are aware of the roles that physical education play, they are likely to miss out on many opportunities. Therefore, the aim of this research was to fill the gap in teacher training and relating this process to the roles of Physical Education on the perspective of teacher trainees in TTCs in Rift- valley, Kenya.

SIGNIFICANCE OF THE STUDY

The MOE, KICD and TSC will use the findings to re-assess the frameworks of physical education existing in TTCs to come up with appropriate strategies on the policy of physical education in order to assure the future of our youth in terms of physical fitness. This research also inevitably enriches the literature on physical education and sports in teacher training institutions in Kenya and Africa as a whole, such literature is presently not available in this country as no previous studies have been done.

THEORETICAL FRAMEWORK

The Gross *et al* (1971) model used in this study is an implementation strategy of an innovation. Teacher trainees in TTCs can learn successfully physical education curriculum based on the clarity of the innovation by the implementers. This is one of the elements of this model. When trainees fully know the roles of physical education, they will appreciate the innovation.

LITERATURE REVIEW

Role of Physical Education

What are the physical benefits of physical education? The answer is simple, fight against diseases. The population's inactive life-styles put them at risk of diseases. Recent research has shown that degenerative diseases begin in early childhood. As Kaercher (1981:20) wrote, "There's increasing evidence in youngsters of high cholesterol in the blood, high blood pressure, obesity and other conditions that are associated with heart disease, stroke and other disorders". Bucher (1982:13) stated that medical specialists blame deaths due to heart disease, cancer, and stroke largely on "changes in lifestyle characterized by factors over which doctors have little or no control".

An article appearing in the Daily Nation by AFP (2010, October 4th) titled 'Disney throws its weight behind obesity campaign', the Walt Disney Company has thrown its weight behind the campaign championed by US First Lady Michelle Obama to push back child obesity with the launch of a massive effort to get American children to grow up in good health. As part of the campaign, Disney will make a \$1 million dollar grant to help build play spaces and gardens in 10 undeserved communities nationwide in the US. A lack of safe places to play in many US inner cities leads children to stay indoors and not get any exercise, and has been pointed to as one of the chief culprits behind the United States' childhood obesity problem. Childhood obesity affects three times more US children today than 30 years ago. In health terms, it means they are at greater risk for a whole host of maladies, ranging from high blood pressure to diabetes, heart disease and stroke.

Very little research is obtaining in Kenya on the state of play grounds for children in the slum areas/schools and other urban schools/centres, but with the population going up and the land grabbing menace in this country, the situation in US may soon be if not already a case in this country unless adequate measures are undertaken to train the children while they are still in school to be able to adopt healthy styles of engaging in physical education now and into the future.

Also, Physical activity enhances a person's life both socially and psychologically. Studies have shown that physical activity may modify anxiety and depression and there is evidence that poor physical condition predisposes individuals to poor mental health. Further as physical activity contributes to the general feeling of well-being. It is an avenue for expression of anger, aggression and happiness and a means for discovery of self as well as a social facilitator.

Muniu of Kenyatta University (Department of Sports and Games), while writing in an article (Exercise, Stress and Health) that featured in the University's newsletter, May 3 - 16, 2010 edition, said that stress response is an inbuilt mechanism that helps the human organism responds

to change. On perception of stress, the organism reacts by triggering the release of hormones which allow it to deal with the situation. These hormones produce physiological responses which can lead to an individual who is constantly tense hence over reacting even to minor events.

Equally, a study was conducted in Trois Rivieres, Ontario, Canada with 546 primary school students who received an additional five hours per week of physical education (additional time was taken from academic subjects, with the exception of English). At the end of six years and throughout the last five years of the study, the children in the experimental group (extra physical education) had consistently better academic grades and achievement in physical education as compared to their counterparts in the control group (Hmarinen, J. & Valimaki, I. (Eds.), as retrieved 4thFebruary, 2016).

Finally, playing sport can help with the development of a child's social skills, learning how to be part of a team, achieving goals, responsibility, gaining confidence, all help in the emotional growth of a child, regardless of gender. It is also a great way of keeping them fit of course, and with child obesity rising year by year taking part in a sporting activity is a great way to make sure a child is getting the exercise they need (Tremarche et al, 2007).

The April 8,2003, edition of the *Journal of the American Medical Association (JAMA)* reported that young overweight and out-of shape children viewed their quality of life as low as those children who were dying from terminal illness, such as cancer. Many reports show very low self- esteem in all out-of shape and overweight children.

METHODOLOGY

The study was carried out in TTCs in Rift Valley Zone in Kenya. The zone has 14 counties. The research approach adopted was mixed methods according to the tenets of Caracelli & Greene (1997). Descriptive survey design was used to produce carefully planned statistical information about aspects of physical education that interest policy makers and educators as claimed by Kothari (2009).

Target population were public TTCs in Rift Valley Zone with 1,563 trainees, and 11 physical education specialists, and 5 Kenya Teacher Colleges Sports Association officials.

To get a sample that reflected the TTCs accurately as a microcosm (representative sample) and significantly reduce chances of sampling errors in the study, colleges to participate in the study were randomly picked. Each college was assigned a random number.

The student teachers comprising a heterogeneous group in the selected colleges to respond to the questionnaire were first stratified by criterion, which was into sub-groups of males and females in order to constitute a homogenous group. This stratification was applied in order to obtain a primary sampling unit of homogeneity. Student teachers in each stratum were further stratified

into Study Options of either A (Science) or B (Arts). This latter grouping formed the units of students to be sampled. The sampling fraction using the sampling frame of each college (N) and the sample size decided (n) was calculated, expressed as n/N . Krejcie and Morgan (1970) have given a table that provides a generalised scientific guideline for sample size decision. This table was used to obtain the sample size of the student respondents in the study. A random start with the systematic sample was done, for instance, in one of the colleges with 1 student in 5 to select in a female sample in Option A study, a random start was randomly drawn at the 4th student and subsequently every 5th student on the list was picked. All the games coordinators and the teachers of physical education in the selected colleges were interviewed. A sample of the teachers responded to the research questionnaire.

Research tools were mainly questionnaire and interview guide.

This study ensured that the items in the research instruments were valid and reliable for the study. Piloting was done in one of the neighbouring public TTCs outside the Rift-Valley Zone. The pilot college had similar conditions as those of colleges under study in terms of staffing, facilities and student teachers' enrolment. The used questionnaire had reliability (r) = 0.77. A correlation of ≥ 0.5 is acceptable, with a ratio tending towards 1 seen as approaching perfect correlation or reliability.

Data collection phase for the purpose of informing on the research objective was done by administering research tools to the research respondents in person and at the same time encouraged the participants to respond individually to all items. Enough time was given to all the respondents to give their well thought out answers.

Data was analysed using descriptive statistics such as frequency tables, percentages, and means, among others.

ETHICAL ISSUES

The respondents were made fully aware of the nature, objectives, purpose and methods of data collection of the research. They were also guaranteed of confidentiality and anonymity of their responses.

RESULTS

Physical education plays a multiplicity of roles in the lives of pupils, students or young adults and even in the lifelong process. The trainees were asked to rank some perceived importance of physical education and sports. The elements ranked were based on researches done in the past by

various scholars. The ranks given by the teacher trainees are shown in Table 1. The teacher trainees ranked these aspects of physical education and sports and the results are given based on how each trainee gave their ranking in a scale of 1-6 with Rank 1 - physical education and sports helping in the prevention of non-communicable diseases having a percentage of 39.5. Rank 6 - assists in proper use of leisure time had a response of 5.3%. The results show that teacher trainees are fully aware of the vital roles of physical education and sports.

The interviewed physical education specialists corroborated the information given by the trainees. The benefits they mentioned included the following: physical (prevents diseases), social (leisure), moral, economic, good academic performance, and psychological (stress relief).

Table 1: Perceived roles of physical education and sports

| Aspects of physical education | Rank | Percentage ranks |
|---------------------------------------|-------------|-------------------------|
| Prevents non-communicable diseases | 1 | 39.5 |
| Improves academic performance | 2 | 28.4 |
| Important to the economy of a country | 3 | 11.3 |
| Boosts a learner's self-esteem | 4 | 8.2 |
| Enhances a child's social life | 5 | 7.3 |
| Assists in proper use of leisure time | 6 | 5.3 |

DISCUSSIONS

Physical education and sports are not confined to physical well-being and health but also contribute to the full and well-balanced development of the human being. The student teachers were asked to rank some of the roles that they felt physical education play. Their ranking shows that the students readily acknowledge that physical education and sports is a necessity in life. Physical education and sports was seen first as contributing in prevention of certain diseases in children and also in old age. WHO (2002) argues that exercises help to maintain a healthy lifestyle and yet children do not do enough exercises to give any health benefits. The WHO (2002) has identified schools as important settings for promotion of physical activity among children. Several other researchers have contributed powerful evidence for effective physical education in schools as seen in cases of diabetes, osteoporosis, among others (Surgeon General's Report on Physical Activity and Health, 2010; Castelli *et al*, 2007). This, therefore, means that teachers who are the most influential need to be equipped with adequate skills, knowledge,

values, and attitudes. It also means the provision of the necessary facilities and equipment towards this end.

The teacher trainees ranked physical education contributing towards academic achievement of the learners as second. In most cases sitting anywhere for extended periods of time - at a desk, in front of a computer or in class - may pose a health risk. This brings into sharp focus the issue of tuition and more tuition in schools that has been crafted in an attempt to raise performance in national examinations and thus shielding children from physical education and activity so that they can concentrate on books and this research would not agree the more with Kweyu (2010 January, 13th).

Therefore, cutting back on physical education at the expense of academic subjects is not a good idea, considering the new research showing exercise's benefits to the brain by improving blood flow and spurring cell growth. The brain is like a muscle; the more it is exercised the better it becomes (Taras, 2005). It should be remembered that every time national examination results are announced in Kenya by KNEC, several head teachers are locked outside their schools by the schools' parents for posting poor results. The head teachers in turn have shifted into tuition and more tuition with the hope that improvement will be realised which in most cases is not. The missing link for whole improvement is the implementation of physical education in schools and it will definitely spur improvement by all means. This is in agreement with studies done in Belgium and Japan and other countries (Carlson *et al*, 2008).

Physical education then contributes to a successful academic programme. It increases cognitive ability due to heavier dendrite-rich brain, improves cognitive functioning by increasing the number of capillaries serving the brain through delivery of more oxygen and glucose and removal of carbon dioxide. This agrees with Bencraft's (1999) suggestions. Even in young children, concepts like around, over, under, front, behind, and below are best captured naturally in physical education lessons and likewise, issues like speed, distance, shape, colour, and position. The same also applies to language skills in young children. Language problems are fairly common among pre-schoolers and since correcting these problems early is essential to a child's late academic success (Hardman, 1998b), this research finds the training of primary schools teachers in physical education very paramount and more so the roles that physical activity plays in the young children's academic prowess.

In conclusion therefore, there is a positive relationship of physical activity and academic performance as has been explored. The studies mentioned above support one another in suggesting that when a substantial amount of school time is dedicated to physical education/activity, academic performance meets and may even exceed that of students not

receiving additional physical activity (Shepherd, 1997). If physical educators are to strengthen the pupils' all-round quality education through physical education pedagogy in the primary schools, then quality should permeate the training of pre-service teachers and it should be carried out systematically. Only then can it be conducive to enhancing the quality of physical education teaching as well as to developing pupils' own all-round qualities in primary schools.

Physical education and sport and the economic contribution in a country was ranked third by the trainees. Investment in sport will not be effective unless underpinned by the provision of quality physical education programmes for all. The regular practice of appropriate physical activity in communities can bring significant economic benefits in terms of reduced health care costs, increased productivity, healthier physical and social environment, better performing schools and greater sports achievements. International research indicates that every dollar invested in physical activity promotion leads to a saving of \$3.2 in medical costs (ICSSPE, 2001). Kenya also stands to benefit from investing heavily in the delivery of physical education curriculum in institutions of learning. Already excelling re-known athletes and other sportsmen and women are having an impact in the economy of this country as seen in their investments in Rift-Valley's urban centres like Eldoret, Iten, Nandi Hills, Kapsabet, Kericho, Kitale, Kapenguria and other places like Nyahururu. Even football is opening new fronts for our soccer players. In a BBC interview with Nene on 7th February, 2010, the mother of McDonald Mariga (Mildred Wanyama) while congratulating her son for being the first Kenyan footballer ever to play for Inter-Milan in the Italian League said sports had become one of the best paying jobs and encouraged parents to allow their children who have talents in sports to pursue the sports alongside their academics. This nation can also invest in sports tourism and the youth of this nation can build careers in sports like teaching, journalism, instructors, and coaches, sport managers, sports medicine amongst others. Therefore, Otuoma's (the minister for Sports and Youth Affairs) (2010, December 28th) call for action to build at least a stadium in every county in this nation could not have come at a more opportune time.

Apart from the discussed roles above, there are other roles that physical education play. The main idea here centres on the training of teachers who will impart the right knowledge, skills, values and attitudes to the learners in primary schools. This is because teachers are the single most group to influence the adoption of the right attitude towards physical education by the learners. The teachers when armed with adequate knowledge can confidently transact, and more so transform the meta-orientation of learners. This argument agrees with what many experts stress as the important role of schools in providing opportunities for regular physical education/activity for fitness among children and teens. This growing body of evidence demonstrates benefits of physical education beyond fitness (Robert W. J. Foundation, 2009). Even public figures should portray the fitness levels that pass the right message to the public. An article by Angira in Daily Kenya Living (Daily Nation, Tuesday February 8th, 2011 p.3) titled

“Get off your lazy backside”, the importance of physical fitness in law enforcement cannot be gainsaid. The sad thing, however, is that most officers are not keen about physical fitness and even the skills essential in ensuring safety of themselves and more importantly, the public. The article says that according to Lieutenant Walker, Fitness Director, Buffalo Police Department Academy, USA, a fit officer is a better officer, and can send the right message to the community and this includes criminals. Ludington and Diehl (2005) conclude that when you lose weight, you gain energy, happiness and life.

CONCLUSION

This research found that physical education plays a crucial role towards academic performance of learners in school, prevents onsets of certain diseases, boosts the economy, contributes to development of positive self-esteem and proper use of leisure time, and social development of an individual. From this understanding, whenever a trainee is denied appropriate training, the professional community and enhanced understanding of the roles of physical education are diminished.

RECOMMENDATIONS

Based on conclusion made in this research, it has come out very clearly that proper training of pre-service teachers on accrued benefits of participation in physical education and sports needs to be re-emphasised in TTCs in Kenya. These trainees should be the ones to champion formation of national and regional organisations for physical health and education, and sports like the AAHPERD, CAHPERD in this country with branches right at the grassroots to sensitise the population on the accrued benefits of engaging in physical education, physical activity and sports for LLPA.

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ABBREVIATIONS

AAHPERD - American Alliance for Health Physical Education Recreation and Dance

BBC - British Broadcasting Corporation

FPE - Free Primary Education

ICHPER.SD - International Council for Health, Physical Education, Recreation, Sport and Dance

ICSSPE - International Council for Sport Science and Physical Education

KNEC - Kenya National Examination Council

KTN - Kenya Television Network

MOE - Ministry of Education

MOHEST - Ministry of Higher Education Science and Technology

NASPE - National Association of Sports and Physical Education

PE - Physical Education

PHE - Physical Health and Education

QAS - Quality Assurance and Standards

TTC - Teacher Training College

UNICEF - United Nations Children and Education Fund

USDHHS - U.S. Department of Health and Human Services

WHO - World Health Organization