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Physical Fitness among School Children: Review of Empirical Studies and Implications for Physical and Health Education

Ignatius O. Nwimo* Scholarstica A. Orji
Department of Human Kinetics and Health Education, Ebonyi State University, PMB 053, Abakaliki, Ebonyi State

Abstract
A systematic review of the literature was conducted to synthesize the recent available data on physical fitness among school children, so as to suggest implications of the studies' findings for Physical and Health Education. Systematic searches of electronic databases and reference lists identified fifteen peer-reviewed studies on the subject matter meeting the inclusion criteria. These studies were reviewed in terms of aim, study design, population and sample, assessment tools, measures, and fitness outcomes. Based on the studies' findings, implications for Physical and Health Education programmes in school are suggested. These include among others that since physical fitness scores of the boys are lower than those of girls, primary school PHE curriculum planners are challenged to re-examine the PHE curriculum so as to include activities that might aid primary school pupils improve on their strength and endurance, among others, in the PHE programme. Interventions to promote physical fitness should not only consider gender and age of schoolchildren, but also selected socio-demographic and behavioural factors, especially socioeconomic class and leisure activities. The need to stress physical fitness or physical training as an important objective of the educational programme in order to develop an appreciable level of physical fitness in the present day school children is also recommended.
Keywords: physical fitmess, school, children, review, empirical studies

1. Introduction

Physical fitness is an adaptive state which can be defined as a set of attributes that people have or achieve which relate to the ability to perform physical activity (Howley, 2001). Physical fitness can be divided into health-related fitness and skill or performance-related fitness. Health-related fitness consists of those components of physical fitness that are affected by habitual physical activity and that are related to health status. Health-related fitness has been defined as a state of being able to perform daily activities with vigor, and traits and capacities that are associated with a low risk of premature development of hypokinetic diseases and conditions (Bouchard & Shephard, 1994). On the other hand, skill or performance-related fitness is linked to the attributes related to performance outcomes in various sports or in certain occupations.

Tremblay, Boudreau-Larivière and Cimon-Lambert (2012) observed that promoting healthy physical activity (PA) behaviours in children between the ages of 0 to 5 years has immediate impacts on the health and well-being of children and serves as a powerful strategy to prevent or minimise the occurrence of chronic diseases in later life.

According to the Toronto model presented by Bouchard and Shephard (1994), the components of health-related fitness are defined as morphological, muscular, motor, cardiorespiratory and metabolic fitness. Morphological fitness refers to body composition and bone strength (Skinner & Oja, 1994). Body composition describes the amount of fat mass and fat free mass and considers also whether body fat is peripherally or abdominally distributed (Howley, 2001). Muscular or musculoskeletal fitness refers to muscular strength, muscular endurance and flexibility, and motor fitness refers to postular control (Skinner & Oja 1994). Cardiorespiratory fitness reflects the ability of cardiovascular and respiratory systems to supply oxygen to the working muscles during heavy dynamic exercise (Howley, 2001), and direct measurement of maximal oxygen uptake (VO2max) during a maximal exercise test is regarded as the gold standard for the evaluation of cardiorespiratory fitness. Metabolic fitness refers to carbohydrate and lipid metabolism usually defined usually by glucose tolerance, insulin sensitivity, lipid profile and the ratio of lipid to carbohydrate oxidized at rest of during steady-state exercise (Bouchard & Shephard, 1994).

Fitness is considered an important marker of health already in youth, (Ruiz, Ortega, Meusel, Harro, Oja & Sjostrom, 2006) and there is increasing evidence that high levels of fitness during childhood and adolescence have a positive influence on adult health status (Ruiz, Ortega, Meusel, Harro, Oja & Sjostrom, 2006). Several meta-analyses showed a decrease in cardiorespiratory fitness during recent years and stabilisation in muscular strength (Macfarlane & Tomkinson, 2007). Available original reports all around the world show different trends depending on geographical region (Eisenmann & Malina, 2002). This review is meant to decipher the handy researches so as to suggest implications for early physical and health education programme in school.

2. Research Strategy

The following sources were identified in order to collect information on available research on the health and skill-related fitness among school children: review of (hard copy) journals and published research on the subject matter, synthesis of on-line journal research publications and review of physical and health education conference abstracts. In reviewing the various data sources, the analytic strategy was to ask: who is writing what, about who, from where, for whom, in what forums, with what results, using what methods and in which communities? Rivilisa, Haya, Cairneyc, Klentroua, Liua, and Faughta (2011) applied this strategy in reviewing physical activity and fitness among children.

3. Research Findings

Reyes, Tan, and Malina (2003) compared the physical fitness of school children resident in an urban Colonia and in a rural indigenous community in Oaxaca, southern Mexico. Two measures of performance-related fitness (standing long jump, 35-yard dash [32 m]) and four measures of health-related fitness (grip strength, sit and reach, timed sit-ups, distance run) were taken on 355 rural (175 boys, 184 girls) and 324 urban (163 boys, 161 girls) school children, 6-13 years of age. Urban children were significantly taller and heavier than rural children. Absolute grip strength did not consistently differ between rural and urban children, but when adjusted for age and body size, strength was greater in rural children. Explosive power (standing long jump) and abdominal strength and endurance (timed sit-ups) were better in urban than in rural children without and with adjustment for age and body size. Urban–rural differences in running speed (dash) and flexibility (sit and reach) varied by age group and sex. Younger rural children and older urban girls performed better in the distance run, whereas older rural and urban boys did not differ in endurance. The size advantage of urban children does not necessarily translate into better levels of performance- and health-related physical fitness. The observed differences may be related to activity habits associated with school physical education and lifestyle in the respective communities.

Nwimo (2008) assessed the health-related physical fitness of 64 10-year and 64 11-year old randomly selected primary school boys in Okwuato, Aboh Mbaise of Imo State, Nigeria using the modified Army Physical Fitness Test and the Eurofit Battery of Fitness Test. Five test items of pull-ups, push-ups, sit-ups, sit-and-reach and 1.6km run-walk were used to determine the health-related physical fitness of the boys. Means, standard deviations and t-test statistics were used in the data analysis. Results showed muscular strength, muscular endurance and flexibility of the 11-year old boys differed from those of the 10-year old boys and the differences were significant ($p < .05$), except for push-ups and sit-ups. The 10-year old boys had a better cardiorespiratory endurance index (10-year old, $M = 7.98$; 11-year old, $M = 6.75$) as measured from the 1.6km run-walk than the 11-year olds, but the difference was not significant. However, the health-related physical fitness scores of the pupils fell short of existing health-related physical fitness scores of their contemporaries in both developed and developing countries. Since health-related fitness scores of the boys are lower than those of their contemporaries elsewhere, primary school Physical and Health Education (PHE) curriculum planners are challenged to re-examine the PHE curriculum so as to include activities that might aid primary school pupils improve on their strength and endurance, among others, in the UBE program. It is suggested that high fitness levels should be the goal of every primary school in the UBE program.

Mak, Ho, Lo, Thomas, McManus, Day, and Lam (2010) designed a study to investigate the relation between health-related physical fitness and weight status in Hong Kong adolescents. 3,204 students aged 12-18 years participated in the Hong Kong Student Obesity Surveillance (HKSOS) project in 2006-2007. Anthropometric measures (height, weight) and health-related fitness (push-up, sit-up, sit-and reach, 9-minute run) were assessed. Body mass index (BMI) was computed to classify participants into normal weight, underweight (Grade I, II/III), overweight, and obese groups. The associations of health-related physical fitness with BMI and weight status were examined by partial correlation coefficients and analysis of covariance, respectively. More boys than girls were overweight or obese (18.0% vs 8.7%), but more girls than boys were underweight (22.3% vs 16.7%). Boys performed significantly ($p < 0.001$) better in sit-up (38.8 vs 31.6 times/min) and 9-minute run (1632.1 vs 1353.2 m), but poorer in sit-and-reach (27.4 vs 32.2 cm) than girls. All four physical fitness tests were significantly positively correlated with each other in both sexes, and BMI was only weakly correlated with sit up and sit-and-reach tests in boys. Decreasing performance (p for trend < 0.05) was observed from normal weight to overweight and obese for push-up, sit-up, and 9-minute run in both sexes. From normal weight to Grade I and Grade II/III underweight, decreasing performance (p for trend < 0.05) for sit-up and sit-and-reach in both sexes and for push-up in boys was observed. It was concluded that the relations between BMI and health-related physical fitness in adolescents were non-linear. Overweight/obese and underweight adolescents had poorer performance in push-up and sit-up tests than normal weight adolescents. Different aspects of health-related physical fitness may serve as immediate indicators of potential health risks for underweight and overweight adolescents.

Du Toit, Pienaar and Truter (2011) conducted a study to determine the relationship between physical fitness and academic achievement in an urban South African group of primary school children. A one-way cross-

sectional design was used to assess physical fitness of children 9 to12 years (N = 212) by means of the FitnessGram, the Bruininks-Oseretsky Test of Motor Proficiency II, percentage body fat and Body Mass Index (BMI). Average end-of-the-year academic marks served as measurement of academic achievement. Relationships between the variables were determined by Spearman correlation coefficients and effect sizes, and a stepwise discriminant analysis. The results show a significant correlation between total strength scores and academic performance in the total group and between several fitness variables and academic performance in the female group. Significant correlations were found between specific strength tests and academic performance among older boys (12 years) and older girls (11 & 12 years). Several fitness parameters discriminated between high and low academic achievers. A positive relationship between physical fitness components and academic achievement was found with more significant correlations among girls than boys, as well as among older boys and girls.

O'Dwyera, Foweathera, Strattona and Ridgersc (2011) carried out a study to determine the moderate to vigorous physical activity (MVPA) levels of preschool children. Fifty children (4.4 ± 0.5 years; 54% boys) were recruited from six schools located in areas of high social and economic deprivation in one large city in England. Physical activity was quantified using uni-axial accelerometry every 5 s for 7 consecutive days. Children's stature and body mass were assessed to calculate body mass index (BMI). Non-overweight and overweight were defined using UK age and gender referenced cut-off points. The final sample included 27 boys (26% overweight) and 23 girls (43% overweight). Independent sample t-tests were used to examine differences in moderate-to-vigorous physical activity between non-overweight and overweight children. There was a non-significant difference in MVPA between overweight and normal weight children ($p = 0.06$). Overweight boys exhibited significantly lower scores than non-overweight boys for time spent in moderate intensity activity ($p = 0.02$). No group met physical activity recommendations of 60 minutes of MVPA a day. The study concluded that physical activity levels of UK preschool children are worryingly low. These data support previous research that has shown that overweight preschool children engage in less MVPA than their non-overweight peers. However, neither group engages in enough activity to benefit health. There is, therefore, a need to identify contexts for increasing preschool children's physical activity levels.

Zhua, Wub and Caimeyc (2011) investigated the associations between obesity and motor coordination ability in Taiwanese children with and without developmental coordination disorder (DCD). Two thousand and twenty nine children (1078 boys, 951 girls) aged nine to ten years were chosen randomly from 14 elementary schools across Taiwan. They used bioelectrical impedance analysis to measure percentage of body fat (PBF) and the Movement Assessment Battery for Children test (MABC test) to evaluate the motor coordination ability. Using cut-off points based on PBF from past studies, boys and girls were divided into obese, overweight and normal-weight groups, respectively. In boys, total impairment scores and scores on balance subtest in the MABC were significantly higher in the obese and overweight groups when compared against the normal-weight group. Girls in the obese and the overweight groups had higher balance impairment scores than those of the normal-weight group. Among boys, the prevalence of obesity was highest in the DCD group, when compared to the borderline DCD and TD boys. A higher percentage of DCD girls were overweight and obese than TD girls. Obesity may be associated with poor motor coordination ability among boys and girls, and particularly in relation to balance ability. Children with DCD may have a higher risk to be overweight or obese in Taiwan.

Lia, Wub, Cairneyc and Hsiehd (2011) conducted a study to evaluate concomitant changes in motor coordination and health-related physical fitness of Taiwanese children with and without DCD over a three-year period. The Movement Assessment Battery for Children (Movement ABC) test was used to evaluate motor coordination, while health-related physical fitness included several core components: (1) body mass index (BMI), (2) sit and reach forward, (3) long jump, (4) sit-ups, and (5) 800-m run. Both the Movement ABC and fitness tests were implemented once each a year for three years. Twenty-five children with DCD and 25 TD children, matched by age and gender participated in this study. The TD group showed significant long-term changes in BMI and long jump while the DCD group showed significant increases in BMI values and decreases in flexibility, measured by the sit and reach task. In general, children with DCD performed worse on the items of flexibility, muscle strength and muscle endurance after the first year. Compared to age- and gender-matched norms, children with DCD not only were less physically fit, but showed a significant long-term decline in flexibility and abdominal or core strength (sit-ups). In years two and three, there was a significant negative correlation between poor fitness and motor coordination. Based on the results of this longitudinal study, greater attention should be paid to monitoring and improving physical fitness of children with DCD to prevent further health-related problems while intervention.

Toriola and Monyeki (2012) conducted this study to determine the health-related physical fitness (HRPF), body composition and physical activity (PA) status among adolescent learners. A total of 283 adolescents learners (111 boys and 172 girls) with mean age of 14.90±0.72 years from the Physical Activity and Health Longitudinal Study (PAHLS) were participants in the study. Body composition according to the standard procedures of the International Society for the Advancement of Kinanthropometry (ISAK), HRPF using the

Eurofit protocol test and PA levels using the International Physical Activity Questionnaire (IPAQ) were assessed and administered. Subsequently, total PA scores were calculated. The results show that on average, the boys (165.41±9.55cm) were significantly taller than the girls (157.88±6.94cm) ($p < 0.000$). Girls had a slightly higher significant BMI (21.43±4.37 kg/m²) than the boys (20.01±3.71kg/m²) ($p = 0.002$). When the learners were categorised based on their BMI scores, the girls were more overweight (32.4%) compared to the boys (17.1%). Additionally, the girls (%body fat 26.01±8.51) were substantially ($p < 0.000$) fatter than the boys (13.19±8.56). Furthermore, the results also indicated that the boys had consistently better performances in all the HRPF tests than the girls ($p < 0.000$). More girls (19%) than boys (16%) watched TV for more than 3 hours daily. A total of 85 (30%), 78(27.5%) and 88(31.1%) of the adolescent students had low, moderate and high PA involvement. It was concluded that girls were more overweight and less active than boys. In view of the health implications of the findings, there is a need to create enabling environment and opportunities that will promote physically active lifestyle and develop life-long positive attitudes towards PA among the learners. It was recommended that community-based strategies should be designed to facilitate effective and sustainable PA intervention programmes in schools.

Guedes, Neto, Lopes and Silva (2012) investigated the association between socio-demographic and behavioural factors and health standards based on physical fitness component scores in a sample of Brazilian schoolchildren. A sample of 1457 girls and 1392 boys aged 6 to 18 years performed a test battery of 5 items: 1) sit-and-reach, 2) curl-up, 3) trunk-lift, 4) push-up, and 5) progressive endurance run (PACER). The cut-off scores for gender and age suggested by the FitnessGram were adopted. The findings showed that the socio-demographic and behavioural factors significantly associated with the ability of schoolchildren of meeting the health standards varied according to the fitness test. In the 5 tests used girls presented lower chance of meeting the health standards. Age and socioeconomic class were negatively associated with the performance in all physical tests. Schoolchildren aged ≤ 9 years or from families of lowest socioeconomic class presented approximately twice the chance of meeting the health standards than those aged ≥ 15 years and from more privileged families, specifically in the push-up (OR = 2.40; 95% CI 2.01–2.82) and PACER (OR = 2.18; 95% CI 1.84–2.54) tests. Interventions to promote health-related physical fitness should not only consider gender and age of schoolchildren, but also selected socio-demographic and behavioural factors, especially socioeconomic class and leisure activities.

Liu, Zillifro, and Nichols (2012) tracked health-related physical fitness in 11 year-old youths over their three-year middle school period. The FitnessGram test battery was administered four times to 116 boys and 129 girls in the US during the period. Results indicated that BMI and estimated %BF tracked best, followed by PACER, sit and reach, push-up, and curl-up. Fitness levels in the estimated %BF and curl-up in the least fit quartiles (at baseline) tracked better than those in the fittest quartiles, and initially at-risk youths had higher probabilities of falling into at-risk categories three years later than those initially in healthy groups. In addition, boys became healthier in the estimated %BF and girls tracked poorer than boys in the PACER. Further, the numbers of girls in the at-risk categories increased considerably in four fitness measures (estimated %BF, BMI, PACER, and push-up) during the middle school period, whereas boys' corresponding numbers either dropped or did not change in all the fitness measures.

Kumar and Singh (2012) compared the physical fitness of government and non-government school boys of Chandigarh. The AAHPER Youth Physical Fitness Test (Test Item Six : Pull-up, Sit-up, Shuttle Run, Standing Broad Jump, 50 yard Dash and 600 Yard Run/Walk) was conducted on 4000 male students ranging between 13 to 16 years students in different schools from Government (N = 2000) and Non-Government (N = 2000) area of Chandigarh (UT). To compare the mean differences between the government and non-Government school boys', t-test was computed with the help of SPSS Software. The level of significance chosen was 0.05. There were significant differences obtained between government and Non-Government school boys. The finding revealed that Non-Government school boys are superior in their physical fitness than their counterparts.

Yadav (2012) carried out a study to compare the health related physical fitness among boys studying in different school of Mathura. For the survey the investigator has chosen schools namely Kendriya Vidyalaya and Shree Ji Baba Saraswati Vidhya Mandir, Mathura. One hundred subjects, (50 from both schools) were randomly selected. The following variables were tested in their respected schools (i.e., endurance, agility, abdominal strength, Shoulder strength, body composition and flexibility). The reliability was established on the basis of test retest method. Flexibility (Sit and reach test was used and it was recorded in cm), muscular strength (bend knee sit-ups test was used and it was recorded in numbers), shoulder muscular strength (Bend arm hang test was used and it was recorded in second), agility (Shuttle run test was used and it was recorded in one tenth of second), cardio-vascular endurance (12 min run-walk test was used to measure the cardio-vascular endurance and it was recorded nearest every 25meter), body composition (Fat percentage).To find out the significant differences among the schools, t-test was employed and the level of significance was 0.05 level of confidence. The results showed that there were no significant differences in health related physical fitness among boys studying in different schools. Specifically, there were no significant differences in health related physical fitness components

namely Endurance, Agility, Flexibility, Body Composition, Abdominal strength, and Shoulder strength. From the findings it was observe in case of flexibility and body composition, Shree Ji Baba Saraswati Vidhya Mandir, was better in compare to Kendriya Vidyalaya, but statistically not significant. In case Cardio-Vascular Endurance, Abdominal Strength, Agility and shoulder Strength Kendriya Vidyalaya was better in compare to Shree Ji Baba Saraswati Vidhya Mandir.

Evelinea, Valeryb, Jessicac, Ilsea and Greeta (2012) conducted a study in order to examine preschooler's PA levels and the associations with lesson context, teacher behaviour, and environment during preschool physical education. A random sample of 573 preschoolers (288 boys; Mage = 5.4 years, SD = 0.4) from 35 preschools was examined during one PE class. Findings indicated that preschoolers accumulated 12 min (33%) of moderate-to-vigorous PA (MVPA), 5 min (13%) of light PA, and 20 min (54%) of sedentary behaviour during PE. Forty-seven percent of the variance in pupils' MVPA may be attributed to differences between PE classes. Less knowledge content, less promotion, less management, less preschoolers per 100 m2, using obstruction material, and not using throwing equipment were significantly associated with higher MVPA levels. These predictors explained 56% of the variance in MVPA at the PE class-level. To conclude, PE in its current format contributes only a small amount to the PA requirements of preschoolers. Preschoolers' MVPA levels were related to modifiable PE characteristics indicating that preschool PE can be restructured to increase MVPA.

Basterfield, Pearce, Adamson, Frary, Parkinson, Wright, and Reilly (2012) assessed the relationships between 2-year changes in objectively measured physical activity, sedentary behaviour, and adiposity in English children. Prospective cohort study set in Northeast England, of a socio-economically representative sample of 403 children. Measures were change in accelerometer-determined physical activity and sedentary behaviour from age 7 to 9 years (data collected 2006/2007 and 2008/2009; analyzed in 2010) and concurrent change in adiposity (fat mass index derived from bioelectric impedance) and change in BMI Z-score. Decline in MVPA was associated with a greater increase in fat mass index in boys but not girls. Declining MVPA was associated with increased BMI Z-score in boys but not girls. Increased sedentary behaviour was not associated with increased BMI Z-score in either gender. It was concluded that avoiding mid–late childhood reductions in MVPA may reduce excessive fat gain, although such strategies may have greater impact on boys than girls.

Nascimentoa, Ferreirra, Goulardinsb, Marquesc, Casella, and Oliveirab (2013) carried out a study examine physical fitness among children with developmental coordination disorder (DCD) with varying degrees of severity (moderate and severe - mDCD, sDCD), and a group of children without DCD (wDCD), in the city of Manaus, Brazil. Initially, 180 children aged 6–10 years old participated in this study. After being diagnosed according to the DSM-IV-TR, 63 children were then divided into three groups (21 in each group). Health-related physical fitness was measured by means of the Fitnessgram, which included several core components, namely, body composition, muscle strength and endurance, flexibility, and cardiorespiratory resistance. The results showed no statistically significant differences between both groups in any of the assessed components. However, when analyzing the results of each component according to the criteria of the Fitnessgram, we observed that, regardless of the classification group, less than half of the children achieved scores that, according to the motor tests, would classify them as having a healthy fitness. Children with sDCD, mDCD and wDCD presented similar levels of health-related physical fitness, with an unsatisfactory performance for the component strength and muscular endurance. We therefore emphasize the importance of further research in this area, more particularly when it comes to following the development of motor skills and physical fitness in children with DCD, as well as the observation of the interactions between these variables over time.

4. Implications for Physical and Health Education

A summary of some of the findings of the studies could show that urban–rural differences existed in most physical fitness components such as speed (dash) and flexibility (sit and reach) varied by age group and sex. Younger rural children and older urban girls performed better in the distance run, whereas older rural and urban boys did not differ in endurance. The size advantage of urban children does not necessarily translate into better levels of performance- and health-related physical fitness. The observed differences may be related to activity habits associated with school physical education and lifestyle in the respective communities.

Muscular strength, muscular endurance and flexibility of the 11-year old boys differed from those of the 10-year old boys and the differences were significant, except for push-ups and sit-ups. The 10-year old boys had a better cardiorespiratory endurance index as measured from the 1.6km run-walk than the 11-year olds, but the difference was not significant. However, the health-related physical fitness scores of the pupils fell short of existing health-related physical fitness scores of their contemporaries. More boys than girls were overweight or obese, but more girls than boys were underweight. Boys performed significantly better in sit-up and 9-minute run but poorer in sit-and-reach than girls. Physical fitness tests were significantly positively correlated with each other in both sexes, and BMI was only weakly correlated with sit up and sit-and-reach tests in boys. Decreasing performance was observed from normal weight to overweight and obese for push-up, sit-up, and 9-minute run in both sexes.

Boys in most instances had higher physical fitness scores than girls had but lower than those of their contemporaries. Since physical fitness scores of the boys are lower than those of their contemporaries elsewhere, primary school Physical and Health Education (PHE) curriculum planners are challenged to re-examine the PHE curriculum so as to include activities that might aid primary school pupils improve on their strength and endurance, among others, in the PHE programme. It is suggested that high fitness levels should be the goal of every primary school in the PHE programme.

Girls were more overweight and less active than boys. In view of the health implications of the findings, there is a need to create enabling environment and opportunities that will promote physically active lifestyle and develop life-long positive attitudes towards PA among the learners. It was recommended that community-based strategies should be designed to facilitate effective and sustainable PA intervention programmes in schools. Girls also presented lower chance of meeting the health standards. Age and socioeconomic class were negatively associated with the performance in all physical tests. Schoolchildren aged ≤ 9 years or from families of lowest socioeconomic class presented approximately twice the chance of meeting the health standards than those aged ≥ 15 years and from more privileged families, specifically in the push-up tests. Interventions to promote health-related physical fitness should not only consider gender and age of schoolchildren, but also selected socio-demographic and behavioural factors, especially socioeconomic class and leisure activities.

5. Conclusion

Physical and Health Education teaches school children how to enhance their own and others' health, wellbeing and physical activity participation in varied and changing contexts. It offers students an experiential curriculum that is contemporary, relevant, challenging, enjoyable, and physically active. In Health and Physical Education, children develop the knowledge, understanding, and skills to strengthen their sense of self, build and maintain satisfying relationships. It also helps them be resilient, make decisions, and take actions to promote their health and physical activity participation. As pupils mature, they develop and use critical inquiry skills to optimise health behaviour.

They also learn to use resources for themselves and the communities with which they identify, and to which they belong. Integral to Health and Physical Education is the acquisition of movement skills, concepts, and strategies that enable students to confidently, competently and creatively participate in a range of physical activities. Pupils develop expertise in movement skills, physical activities, and movement concepts as a foundation for lifelong physical activity participation and enhanced performance. In doing so, they develop an appreciation of the significance of physical activity, outdoor recreation and sport in Nigerian society and globally. Movement is a powerful medium for learning through which pupils can acquire, practice, and refine personal, interpersonal, behavioural, social, and cognitive skills.

Physical and Health Education also addresses how personal, social, cultural, and environmental factors influence the health, wellbeing, and physical activity patterns of individuals, groups, and communities. It provides opportunities for school children to develop the skills, self-efficacy and dispositions to advocate for, and positively influence, their own and others' wellbeing in creating a sustainable future. Healthy, active living benefits individuals and society in many ways. This includes promoting physical fitness, healthy body weight, psychological wellbeing, cognitive capabilities and learning.

A healthy, active population improves productivity, pro-social behaviour, and personal satisfaction, and reduces the occurrence of chronic disease. Health and Physical Education teaches students how to optimise their health and wellbeing and contribute to building healthy, active communities. Physical education activities are important for children's proper growth and development. Regular fitness activities started in early childhood can enhance bone development and delay osteoporosis, reduce the risk of heart disease, challenge to the developing bodies of all school-aged children. Furthermore there is strong evidence that regular physical activities improve self-concept and confidence, assist children coping with stress and is related to physical activity participation in adult years. The civilization of Sparta, Athens and Rome in the history of the world has stressed physical fitness or physical training as an important objective of the educational programme. Therefore, there is need to also stress physical fitness or physical training as an important objective of the educational programme in order to develop an appreciable level of physical fitness in the present day school children.

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