

REVIEW ON PHYSICAL ACTIVITY PROGRAMMES, FITNESS COMPONENTS AND FITNESS PROFILES PERTAINING TO INDIAN STUDENTS

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Abstract:

Physical fitness is the ability to carry out daily task with vigor and alertness without undue fatigue and ample energy to enjoy leisure time pursuits and to meet unforeseen emergencies. Physical exercise is the means to an art, vigorous and lengthy life, inactivity will kill you. Many people say that exercise makes them feel better and more relaxed number of studies has shown that people improve psychologically as well as physically as a result of running programmes. The primary aim of physical education is not to develop star athletes, winning team of expert performance but a national vitality with character values and physical fitness. It aims to develop youth into citizen who have the capacity to enjoy vigor and interesting life. In this article, review on physical activity programmes, fitness components and fitness profiles pertaining to Indian students has been highlighted.

Keywords:Physical, Fitness, Activity, Students

INTRODUCTION:

Physical activity is important for a child's development of a healthy personality, which is based on the opportunities he or she has for mental, physical, social, and spiritual growth, as well as the environment in which he or she grows. The primary aim of physical education is physical fitness of the individual. The method can content in physical education to improve physical fitness are to be visualized. Physical education is a process through which an individual obtains optimal,

physical, mental and social skills and fitness physical activity. Physical education is a meaningful and worthwhile experience obtained through participation in physical activities that are physically wholesome mentally stimulating and satisfying and socially sound. Physical education is an educational process that has as its aim, the improvement of human performance through the medium of physical activities selection to realize this outcome. Physical education includes the acquisition and refinement of motor skills, the development and maintenance of fitness for optimal health and well-being the attainment of knowledge the growth of positive attitude towards physical activity. The benefits of physical fitness are numerous. The person who is physically fit has greater amount of strength, energy and stamina an improved sense of well-being better protection from injury because strong well developed muscles safeguard bones, internal organs and joints and keep moving parts limbers and improved cardio respiratory function. Physical activities help a man achieve high degree of physical conditioning. In schools there is a compulsory physical activities programmed for all boys and girls, so it would be interesting to find out which of the components have better physical fitness. There are many physical fitness tests to evaluate the ability of the students to carry out daily tasks without undue fatigue.

PHYSICAL ACTIVITY PROGRAMMES:

According to Emily Bremer et al. (2018), the school system is one area where children's physical activity levels can be enhanced by DPA policies and programmes. DPA policies are frequently disobeyed, with modest outcomes in terms of the accompanying benefits for participating children. As a result, the goal of this study was to assess a variety of psychosocial outcomes following a community-led, in-school DPA effort for children and youth aged 9 to 14. Methods: This study looked at the impact of a DPA programme that consisted of 20 minutes of teacher-led DPA for 20 weeks. A questionnaire was used to assess student results at three different times: baseline, mid-intervention, and post-intervention. At the end of the intervention, teachers were asked to fill out a questionnaire about programme adherence and student behavior. Mixed effects models including random intercepts for students, classes, and schools, as well as fixed effects for age and sex, were employed to test for intervention effects. We first did an omnibus test of the intervention effect, followed by three exploratory analyses investigating each outcome separately, relationships between outcomes and programme adherence, and data from the teacher

survey, due to the huge number of outcomes examined. Results: The study included 362 students (n = 265 experimental) from thirty classes (N = 19 experimental) from seven schools. The intervention had no overall effect ($z = 0.89$, $p = 0.38$), and exploratory analysis revealed significant changes only in self-esteem and subjective happiness, with the control group marginally rising in comparison to the experimental group. Teacher adherence to the programme was low, with only 21% of teachers reporting that they followed it. Overall adherence had no correlation with student reported outcomes; however, there were favorable relationships between adherence and teacher-reported student behaviour. Conclusions: The DPA programme assessed here had no more effect on the psychological well-being of primary school-aged children than standard practices. However, programme adherence was minimal, and it had no detrimental impact on the kids. Future research is needed to determine how best to promote DPA implementation during the school day and how school-based physical activity can improve student well-being.

According to Ana I Marques (2011), the Portuguese government has developed many physical activity (PA) programmes for the elderly. Since studies have demonstrated that these Sportsmen of health promotion interventions can reduce the negative consequences of the ageing process, the value of these programmes has grown. However, no research has been done to determine the overall characteristics of these programmes or whether they employ any kind of system to evaluate the quality of the services they provide. The EFQM Excellence Model, which will be at the heart of our current work, is a widely used approach. Thus, the primary objectives of this preliminary study were to 1) identify the general characteristics of the PA programmes developed by the Portuguese Local Public Administration and 2) determine the general characteristics of the PA programmes developed by the Portuguese Local Public Administration. 2) To identify the extent to which quality initiatives are being implemented in these programmes. An online questionnaire was issued to all Continental Municipalities (n = 278) to collect data. Absolute counts and percentages were used to express categorical data. The mean and standard deviation were used to express continuous data. QSR NVivo software was used to do qualitative content analysis on an open-ended question. The use of contingency tables and the calculation of chi-squared tests were used to assess associations between category variables. The significance level was set at $p 0.05$. The findings revealed that: a total of 125 PA programmes were identified in the 18 districts of the Portuguese mainland; ii) the majority's main goal (95.2 percent) was to

promote the participants' health; iii) different characteristics of the programmes were found in different regions of the country; iv) certain characteristics of the programmes were linked to the presence of other features; and v) only one PA programme developed quality initiatives. Finally, despite the fact that there are several PA programmes for senior citizens around the country aimed at improving participants' health, the vast majority do not implement quality control measures. Because customer happiness is influenced by the quality of a service, ongoing quality improvement of PA programmes for the elderly should be implemented, as they can be valuable and crucial for elderly satisfaction and adherence.

Zhu W, et al. (2010) studied key physical education program factors and a policy that may affect Texas students' physical fitness, a 39-question survey, administered as part of the Texas Youth Fitness Study (TYFS), and was sent to 5651 Texas schools via e-mail. The survey consisted of five sections: (a) demographics, (b) physical education/recess frequency and duration, (c) resources/environment, (d) school physical education policies, and (e) experience/perception of fitness testing. A total of 2576 responses were received, of which 1505 responses (elementary = 58.1%, middle school = 21.2%, high school = 19.4%, and "mixed" school = 1.3%) were used for the report. Most of the findings are consistent with those reported in recent national studies. In addition, there were four distinct aspects: (a) broad support among teachers for the Senate Bill 530 mandate, (b) strong evidence of adherence to the mandated testing protocols, (c) teachers' negative experiences related to the testing, and (d) lack of recess in some Texas elementary schools. The survey provided rich updated information on physical education programs and policies in Texas schools.

Escort A, et al. (2010) evaluated improvement in self-efficacy and personal and social responsibility among at-risk of dropping-out of school adolescents participating in a program in which Hellison's Teaching Personal and Social Responsibility Model was applied in physical education classes during the course of an academic year. Thirty at-risk adolescents aged 13-14 years old (23 boys, 7 girls) were assigned to an intervention group (12 boys and 3 girls) or a comparison group (11 boys, 4 girls), the latter of which did not participate in the program. Quantitative results showed a significant improvement in the students' self-efficacy for enlisting social resources and in self-efficacy for self-regulated learning. Qualitative results showed an improvement in responsibility behaviors of participants in the intervention group. This suggests

that the model could be effective for improving psychological and social development in at-risk adolescents, and that physical education classes may be an appropriate arena for working with these young people.

Martin MW, et al. (2010) reported that PE2GO is a self-contained physical education (PE) program that provides classroom teachers with the tools they need to lead developmentally appropriate PE lessons. The purpose of this study was to evaluate the PE2GO pilot programs in 6 school districts across the United States. We used paper and pencil surveys at pre intervention (n = 114) and mid intervention (n = 94) and an electronic survey at post intervention (n = 65). In addition an electronic survey was sent to administrators at pre-intervention (n = 18); focus groups were conducted with teachers at mid intervention for a broader perspective.

The study took place September 2004 through May 2005. Results indicate that teachers were satisfied with the PE2GO program and the perceived effects it had on their students. Teachers reported that students increased their time engaged in physical activity (128.7-181.1 minutes per week pre-to-post intervention). Administrator support was important (i.e., associated with improvement), but not always present. In conclusion, the PE2GO program holds promise for the concept of providing in-class physical activity opportunities for students.

Jago R et al. (2009) examined whether 6th grade students can achieve moderate to vigorous physical activity (MVPA) from 1) activity-based physical education (AB-PE) with 585 participants and 2) a curricular-based (CB-PE) program with 1,544 participants and randomly sampled heart rates during lessons. AB-PE participants spent between 54-66% with a heart rate >140 bpm. CB-PE participants spent between 49-58% with a heart rate >140 bpm. Girls' mean heart rate was 3.7 bpm lower than the boys. PE can be readily modified so that students spend more than 50% of time in MVPA.'

ASSESSMENT OF FITNESS COMPONENTS:

According to Zainal, Sultan, et al. (2017), uniformed arm units are put up to serve as the first line of defence and to aid university members in the event of an emergency. They must maintain the highest degree of physical condition in order to perform their tasks properly. The goal of this study is to look at the physical fitness levels of UniSZA's armed uniform package unit, as well as the factors that differentiate their levels of fitness. This study included 120 participants, 60 from

each group, with an average age of 20.45 years for males and 20.63 years for females. Standard physical fitness tests were performed, and Multivariate Analysis of Variance (MANOVA) was used to analyse their performance in physical fitness, with physical fitness performance as the dependent variable (DV) and uniform unit categories as the independent factors (IV). The significant factors that differentiate the groups were determined using a pairwise comparison follow-up test. The results demonstrate that there is a substantial difference in male and female performance on physical fitness tests. $f(20, 98) = 1.68, p 0.0001$. However, a follow-up test reveals that PALASPORTSMEN units, both male and female, have the highest level of physical fitness among uniform personnel ($p 0.05$). The fitness standards of the other armed package units investigated are not up to par. It is recommended that the trainers of these uniformed forces improve their training programmes and the ty-Sportsmen of physical activities they engage in during their training sessions.

The goal of the study, according to Gezachew and Menigistu (2015), was to evaluate some selected physical fitness components of Jimma University sport science department students. A total of 136 people were screened for this investigation using systematic random sampling. A cross-sectional study design was adopted because the subjects were only examined once. An anthropometric test and physical fitness tests were used to acquire quantitative data. Age, sex, weight, height, body mass index (BMI), push-up test, Illinois agility test, sit and reach test, and sit-up test were all given a mean and standard deviation. Furthermore, the subject was investigated using multiple comparison tests, such as the push-up test, the Illinois agility test, the sit and reach test, and the sit-up test. The significance level was set at $P 0.05$ for each of the statistical tests. The statistical analysis was performed using the SPSS 20 software. In comparison to worldwide norms, the mean BMI of both male and female first, second, and third-year sports science students was in the normal range. Both male and female first-year sport science students outperformed second and third-year sport science students in the push-up, agility, sit-and-reach, and sit-up tests, though there was no significant mean difference at $p0.05$. In most physical fitness assessments, male sports science students meet worldwide standards. In most physical fitness assessments, female sports science students do not meet international standards. Students in the sports science department must engage in regular active activity in order to improve their physical fitness. Sport science students should take a pre-physical fitness assessment before joining the department to be more advantageous in all aspects. Sport experts

and those in connected industries are supposed to advise and educate on the relevance and value of physical fitness. Students in the sports science department should participate in a special physical fitness programme. For sports science students and other students, further research on the benefits of physical fitness for their everyday routine is needed.

Chen et al. (2006) reported that the 3 min step test is a widely used method to evaluate physical fitness, but whether this method is valid when performed at altitude is unknown. The purpose of this study was to examine the effect of altitude on the fitness score of the 3 min step test, and the role of ambient temperature in this effect. In study I, 11 healthy volunteers (aged 18.1 +/- 1.1 years) performed a 3 min step test at sea level and at altitude (1950 m). Plasma lactates and stress hormones, as indicators of metabolic stress, were measured before and after the test. To determine the role of ambient temperature, we performed study II at sea level with the same step test simulating the altitude temperature condition (24 degrees C at high altitude versus 32 degrees C at sea level) with 23 subjects (aged 20.4 +/- 0.4 y). In study I, plasma lactate of the subjects was elevated during the step test at sea level and to a greater extent at high altitude. Plasma cortisol and testosterone levels were elevated only at high altitude.

Dunn A.L, et al. (2006) made a study to describe the levels of obesity, adiposity measures, physical activity and fitness in Cree children aged 9-12 years. Cross-sectional survey study took place in northern Quebec, Canada. Height, body mass, waist circumference and five skin fold thicknesses were measured. Physical activity was assessed by having children wear a pedometer for two days. Children performed the 20-metre shuttle run test (SRT) to determine their physical fitness level. Of 82 participating children, 33% were overweight (but not obese) and 38% were obese according to an international reference. The mean sum of five skin fold measures exceeded the 95th percentile of Canadian children. Compared with the Third National Health and Nutrition Examination Survey, the majority of children exceeded the 85th percentile for waist circumference (62%) and at the supriliac (80%), subs scapular (72%), and triceps (54%) skin fold sites. 90% of children scored below the 20th percentile in the SRT compared with normative data from Quebec children. Based on pedometer scores, only 49% of children were sufficiently active. There is a high prevalence of overweight and central adiposity in this population, with low physical activity and fitness levels. This profile may result in adverse health outcomes.

FITNESS PROFILES PERTAINING TO INDIAN STUDENTS:

According to Ranjit M. Anjana et al. (2014), the increased prevalence of diabetes and obesity in India can be linked, at least in part, to rising levels of physical inactivity. However, there has never been a statewide survey in India on physical activity levels that included both urban and rural areas throughout all of the country's states. The goal of this study was to analyze physical activity trends across India as part of the Indian Council of Medical Research-India Diabetes (ICMR-INDIAB) investigation. The ICMR-INDIAB study's first phase was carried out in four Indian states (Tamilnadu, Maharashtra, Jharkhand, and Chandigarh, representing the south, west, east, and north, respectively) with a total population of 213 million people. The Global Physical Activity Questionnaire (GPAQ) was used to assess physical activity in 14227 people aged 20 years or older [urban: 4,173; rural: 10,054], who were chosen from the aforesaid regions using a stratified multistage design. 54.4 percent (n = 7737) of the 14227 people surveyed were inactive (males: 41.7 percent). 31.9 percent (n = 4537) were active (males: 58.3%), and 13.7 percent (n = 1953) were highly active (males: 61.3 percent). Subjects in urban areas were more inactive than those in rural areas (65.0 percent vs. 50.0 percent; p 0.001). Males were substantially more active (p 0.001) than females. The job domain had more active minutes than the commuting and enjoyment domains in all four locations. Individuals in Chandigarh, Jharkhand, Maharashtra, and Tamilnadu reported no recreational activities at 88.4 percent, 94.8 percent, 91.3 percent, and 93.1 percent, respectively. With age, the percentage of people who do not engage in any leisure activity grew (Trend 2: 199.1, p 0.001). According to the survey, a huge majority of Indians are sedentary, with only about 10% participating in leisure physical exercise. As a result, immediate steps must be taken to get more people moving so that India can fight its two epidemics of diabetes and obesity.

Sibi and Saha (1995) conducted a study of sets concept, movement concept and physical fitness among the school boys of West Bengal. The purpose of the study was to utilize the physical education programme to help an individual to develop physically, mentally and socially through psychomotor, cognitive and effective learning process. These processes are interrelated and influenced by one another to bring desirable changes in behavior. The sample for the study was drawn from rural (R) urban (U) and semi urban (SU) areas of India Murshidabad and 24 districts in west Bengal. Each group composed of 33 subjects. The ages of the subjects were 14 through

16years. The test batteries include test items, namely (1) Leg flexed sit-ups for 30 seconds: (2) Side stepping for 30 seconds: (3) squat thrust for 30 seconds: (4) modified pull-ups for 30 seconds and (5) standing broad jump. The coefficient of correlation of 0.346 between physical fitness and movement concepts was significant at 0.01 levels. It was concluded that there was a significant positive correlation between physical performance and movement concepts.

C. Babu (2000) conducted a comparative study of anthropometric measurements and physical fitness components of physical education students of Kerala and Tamilnadu. The Study finds significant difference in the components of physical fitness among male students of Kerala and Tamilnadu. Significant difference ($P < 0.05$) existing between Kerala and Tamilnadu samples on speed (50 yard dash) strength (pull ups) and sit-ups) and power (standing broad jump). Tamilnadu boys dominated on speed, strength and power.

CONCLUSION:

Research requires expertise for finding the researches known about the problem and how others have investigated it. The investigator has searched the related literature carefully and is also thoroughly grounded in the terminology concepts and technical skills necessary to understand and analyses the data gathered.

A brief summary of previous researches and writings of authors provide evidence that the researcher is familiar with what is already known, and with what is still unknown and untested. The knowledge of steps taken by others helps to eliminate the duplication of what has been done and provides useful hypothesis and helpful suggestions for significant investigation.

REFERENCES:

1. Ana I Marques (2011). Comparative Study of Social Maturity among Non-Sports Women and Sports Women. *International Educational E-Journal, Quarterly*, Vol.4(3), pp. 81-86.
2. C. Babu (2000). Physical fitness and depressive symptoms during army basic combat training, *Medicine and Science in Sports and Exercise*. Vol., pp.1-17.
3. Chen. et al. (2006). An Analysis of the Components of Emotional Maturity and Adjustment in Combat Sport Athletes, *American Journal of Applied Psychology*, 4(1), pp.13-20.

4. Dunn A.L, et al. (2006), Six-month physical activity and fitness changes in Project Active, a randomized trial. *Medicine & Science in Sports and Exercise Journal*, Vol. 30 (7), pp.1076-1083.
5. Emily Bremer et al. (2018). *Physical activity levels of urban and rural young children in the Iowa Bone Development Study*, Iowa Research Online the University of Iowa's Institutional Repository. pp. 01-55.
6. Escort A, et al. (2010). Physical fitness and anthropometrical differences between elite and non-elite judo players. *Biology of Sport*, Vol. 22 (4) pp315-328.
7. Gezachew and Menigistu (2015). An Analysis of the Components of Emotional Maturity and Adjustment in Combat Sport Athletes, *American Journal of Applied Psychology*, 4(1), pp.13-20.
8. Jago R et al. (2009). Effects of different doses of physical activity on cardio respiratory fitness among sedentary, overweight or obese postmenopausal women with elevated blood pressure: A randomized controlled trial, *Journal of the American Medical Association*, Vol. 297(19) pp. 2081-2091.
9. Martin MW, et al. (2010). A Comparative Study of Physical Fitness Reaction Ability and Kinesthetic Perception among National Level Gymnasts Kho-Kho Players and Professional Chow-Dancers. *Asian Journal of Physical Education and Computer Science in Sports*, Vol. 5(1), pp. 25-27.
10. Ranjit M. Anjana et al. (2014). The Association of Adolescent Fatness and Fitness with Risk Factors for Adult Metabolic Syndrome: A 22-Year Follow-up Study, *Journal of Physical Activity Health*, Vol. 11(4), pp.823-30.
11. Sibi and Saha (1995). Secular trends in body dimensions and physical fitness among adolescents in Sweden from 1974 to 1995. *Scand J Med Sci Sports*. Vol. 13(2):128-37.
12. Zainal, Sultan, et al. (2017). Association between aerobic fitness, body composition, and physical activity in 9 and 15-year-olds. *European Journal of Sport Science* 9 (3), 141-150.
13. Zhu W, et al. (2010). A Comparative Study of Physical Fitness Reaction Ability and

Kinesthetic Perception among National Level Gymnasts Kho-Kho Players and Professional Chow-Dancers. Asian Journal of Physical Education and Computer Science in Sports, Vol. 5(1), pp. 25-27.