

PHYSICAL ACTIVITY AS PREPARATION FOR FUTURE LIFE: SITUATION ANALYSIS IN SCHOOLS

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ABSTRACT:

The study was descriptive in nature and a survey design was used to examine physical activities of students inside schools. A secondary purpose was to analyze the role of physical training instructors (PTIs) and roles of overall school opportunities for physical training. Total respondents were n=200, consisting of 50 male and female PTIs; 150 male and female students were selected using a stratified random sampling technique. A questionnaire was developed to examine sport activities of schools, supervision of PTIs, encouragement and motivation from teachers and heads of schools. Data were collected through personal visits and analyzed through chi-square within SPSS. It was found that the majority of PTIs did not perform duties in a professional manner. They did not take interest in the physical wellbeing of students. They did not teach basic rules of sports to students. They did not plan and/or arrange physical activities for students. The role of the institution in promoting healthy activities at school was a missing component. It was recommended that properly trained PTIs be appointed in schools. Proper physical training of students is highly encouraged at school level for healthy living throughout the lifespan.

Introduction

In the second decade of the 21st century, nearly everyone has access to computers or mobile devices and is actively using it. This type of engagement, particularly for youth, is beneficial in order to update knowledge; it can, however, be detrimental to physical wellbeing. Youth is the future of any nation, and every country portrays policies and standards for

optimal wellbeing. In the past, physical education and activities, particularly for youth, were readily available. Provisions of these physical activities were not only available in schools but were also equally and jointly celebrated in village lives. Village life in Pakistan seemed optimal when there were many physical activities for youth like Kabadi, Cricket, Valley Ball, Tug of war, Field Hockey, Foot ball, Badminton, Gully Danda, Hide and

Seek, Weight Lifting and Wrestling. The elders of villages supported these physical activities. Numerous competitions were held among different villages, towns, at Tehsil level and at district level. Youngsters were involved in physical activities and Pakistan dominated in Cricket, Field Hockey, Wrestling, Squash and Kabaddi). Now many of those sports at national level have declined because of limited interest in youth. This situation has created many physical and health issues in Pakistan society. According to Khan and Hassandra (2016), high levels of physical inactivity and psychological disturbances have been identified lately in Pakistani community.

According to the World Health Organization (WHO, 2003), health is defined as a combination of physical, mental and social wellbeing, not only the absence of disease. Physical activity (PA) is a major source of achieving complete physical, psychological, social and mental health. According to Ogori and Agolla, (2009), students appear to be at risk because of academic stress and physiological changes. PA is defined as movements that are produced by muscles of the body through energy (WHO, 2013). PA is considered an important element in maintaining

physical and psychological problem. Physical activities help in the prevention of number of diseases like heart disease, many types of cancer, obesity, hypertension (Center for Disease Control, 1996), depression and anxiety (Abu-Omar, Rutten & Lehtinen, 2004; Haarasilta, Marttunen, Kapiro & Aro, 2004). In contemporary societies, life is relatively easy and productive because of technological advancements, but PA has been reduced. According to WHO (2010), physical inactivity is a leading contributor to the onset of disease which are non-communicable. Globally, 6-10 % of deaths are caused by physical inactivity (Khan & Hassandra, 2016) and 20-40 % of death rate can be reduced through participation in regular PA (Andersen, Schnohr, Schroll, & Hein, 2000). Life-expectancy can be increased by 0.68 years with regular PA (Lee et al., 2012). According to Hallal and colleagues (2012), overall physical inactivity has been recorded as 31.1% in Australia, 27.5% in Africa, 17 % in South Asia, 43.3% in the Americas, 34.8% in Europe, and 43.2% in the Eastern Mediterranean region. With reference to Pakistan, according to Khuwaja and Kadir (2010), 30-39.9% of adolescent of males and 40-49.9% of females are physically inactive in Pakistan. Another alarming statistic involves 80-89.9% of boys and

90% of girls in the adolescent group do not accomplish at least one hour of moderate level of physical activity daily. Heart disease among middle-aged adults is quite high, and a quarter of Pakistani adults suffer from high blood pressure and breast cancer.

Benefits of Physical Activities

Physical activities have many benefits. Some of these are described below:

Healthy Living

Education is central to any association between the health of students and physical activity in schools. Teachers who are better trained in providing physical education to students achieve improvement in physical fitness of students to those teachers who are lacking in better physical education pedagogy (Starc & Strel, 2012). In the United States of America (U SA), the National Association of Sport and Physical Education (NASPE, 2012) American Heart Association (AHA) strongly advocate for participation in PA through Physical Education as one of the best strategies to combat major health issues, such as obesity, high blood pressure and high cholesterol. They further surmise that no other subject other than physical education

has the potential to fulfill health needs. If schools are to play a positive role in children's health then Physical education as a school subject must be taught by qualified and well-educated teachers, focusing on healthy behaviors. According to Tassitano et al. (2010), physical education plays an important role in students' healthy behaviors. Students who study physical education are more active; they eat more fruit and watch less TV as compared to those who do not study physical education as a subject. By increasing physical activity and keeping caloric intake to appropriate ingestion levels, overweight or obese females lose Body Mass Index (Madsen, Gosliner, Woodward-Lope, & Crawford, 2009). This reduces the probability of obesity among grade-V male students (Cawley, Frisvold, & Meyerhoefer, 2013). Provision of physical education by qualified teachers represents measures opportunities for raising cognition and behaviors in students of elementary classes (Wilson et al., 2012). If students participate five days per week in physical education, they are 25% more likely to be of normal weight when they are adults (Mensschik, Ahmed, Alexander, & Blum, 2008). According to Simms, Bock, and Hackett (2013), participation in physical education with more frequency improves mental

health and dietary choices. The quality of physical education improves health-related fitness and psychological wellbeing of students in high school (Sdrolas, 2009). Physical education is effective in reducing obesity in childhood (Gonzalez-Suarez, Worley, Grimmer Somers, & Dones, 2009), and students at high school levels have less waist circumference when they frequently participated in physical education (Wardle, Brodersen, & Boniface, 2007). Students transferred skills learned in physical education to adult life (McKenzie & Lounsbery, 2014), while physical education improved PA and academic outcomes of students (Sallis et al., 2012). Students also had higher levels of cardiovascular fitness (Madsen et al., 2009). This is related to higher levels of vigorous PA in females (Cawley, Meyerhoefer, & Newhouse, 2007). This has provided knowledge, skills, abilities, behaviors and confidence that appear to be directly related by products of physical activity throughout the lifespan (Houston & Kulinna, 2014).

Motor Skills

Many researchers have proven that there is a strong relationship between physical education and motor skills. Provision of quality physical education can lead to

improving fundamental motor skills of elementary school students (Elsa-ved, 2014; Andruschko, 2013), improving object control in early elementary age (Amui, 2006), positively influencing more advanced throwing skills (Lorson, 2003), and improving fundamental movements of children (Fotrousi, Bagherly, & Ghasemi, 2012).

Impact on Brain Function and Academic Achievement

Proponents of physical education claimed that participation in physical education increased brain function and academic achievement in students. According to Eddy (2011), the relationship between physical activities and academic achievement is consistently reported in the literature. Activities in which students were involved in during physical education classes (e.g., sport, exercise, and games) were directly related to sport and games out of the school. In an unpublished report, (Schneider, 2014) explained how brain scans reveal cognitive function improvement in active children who returned to resting intensities prior to undertaking cognitive tasks. Many research studies provided evidence that, in standard-based schools, physical education programs improves brain function and higher student academic achievement.

According to Pesce, Crova, Cereatti, Casella, and Bellucci (2013), physical education developed attention of elementary-aged students and improves adolescent nonverbal and verbal abilities, reasoning powers, spatial and numerical abilities (Ardoy et al., 2013). It also improved academic achievement with more frequent physical education classes per week. According to Trudeau and Shepherd (2008), after meeting an appropriate level of physical activity span of more time in physical education and less time in classroom does not hinder academic achievement; academic achievement of students increases when students invest more time in physical education when compared to in the classroom. Similarly, Hamilton (2014) said students gained higher grade points in semesters when they engaged in physical education as compared to semesters where less time for physical education was evidenced. Physical education increases cognitive abilities such as fluid intelligence and perceptual speed in grades 2 to 8 (Reed, Maslow, Long, & Hughey, 2013), as well as increasing working memory performance of students (Fisher, Boyle, Paton, Tomporowski, & Watson, 2011).

PA has positive effects on children's brain function and academic achievement. Several investi-

gations have revealed this. PA in childhood has been shown to positively influence functions of the brain (Chaddock, 2013). PA also results in better recall and develops better memory storage (Fedewa & Ahn, 2011); aerobic PA improves cognitive function through choice response and reaction time (Ruiz, Ortega, Castillo, Martin-Matillas, & Kwak, 2010). Additionally, there is a relationship between PA and cognitive function in students (Sibley & Etnier, 2003).

Physical fitness levels of students also affect their schooling and academic performance along with having better futures. Researchers (Chaddock, Pontifex, & Hillman, 2011; Welk et al., 2013) have proven positive effects of physical fitness on student performance in different dimensions. Fitness is positively associated with academic achievement when students remain in healthy fitness zones (Wittberg, Northrup, & Cottrell, 2012; Hartman, Smith, and Visscher, 2014). It is also associated with attention, working memory and speed of memory responses in 10-year-old students (Hillman, Castelli, & Buck, 2005). Fibrous and compact white-matter tracts in brain are increased, thereby creating improved working memory (Chaddock, Erickson, Prakash, Kim, & Voss, 2010)

Mental Health

Evidence suggests that active participation in physical education has a strong association with mental health. Young people can achieve substantive psychological benefits from participation in physical activities by improving control over anxiety, depression and social development (WHO, 2009). Tomson, Pangrazi, Friedman and Hutchison (2003) found that in 462 boys, aged 8-12 years the relative risk of depression symptoms in boys who were not participating in any physical activities was 2.4 times higher than those boys who were participating in physical activities. They further claimed that this association between physical activity and depression was not significant in girl students. Metaanalyses of studies reported positive effects of physical activities and mental health of children. Larun, Nordheim, Ekeland, Hagen, and Heian (2006) investigated the effects of vigorous exercise on prevention or reduction of anxiety or depression in students. They attempted 16 randomized trials and found favorable results of exercise in alleviation of negative symptoms of mental health. After review of 73 studies, Ahn and Fedewa (2011) concluded that physical activities have small, yet positive, effects on mental health outcomes

in children. They also reported that participation in physical activities and sport improved mood and positively effect self-esteem of students. Enjoyment in physical activities led toward self-esteem and enhanced motivation for increased participation. If students do not enjoy physical activities, then they badly affect relative to motivation and self-esteem.

Research Methodology

The main purpose of this investigation was to examine the status of physical education in secondary schools of a district in Pakistan. The design was descriptive, and a survey was used to collect data. Students and teachers at a selected school served as the population included. This sample was selected by a stratified random technique. Respondents were physical education educators, normally known as Physical Training Instructors (PTIs) (n=50), and students (n=150). Both boys and girls were equal in distribution. In the first step, 25 boys' and 25 girls' schools were selected based upon their performance in sport activities. In each group were 8 good performing schools in sport, 8 better performing schools and 7 normal performing schools, after consulting with district offices record. Similarly, students were selected randomly from

those who were participating in sport activities. Using similar criteria (good player, better player and normal player), three students from each of the selected schools were used and, from 50 schools, a total of 150 students were selected.

A questionnaire was used for data collection from teachers and students. It was developed on five-point scale, ranging from always – usually – some-times – rarely – never. In the questionnaire, responses included student sport activities, role of schools, role of physical education teachers, role of school heads, level of competition, guidance during sport activities, and level of encouragement and motivation from teachers. Data were collected after seeking permission from relevant district offices and school heads and teachers. Personal visits to the schools, teachers, and students were conducted. After collection of data, a chi-square test was applied to male teachers and students and female teachers and students separately.

Results and conclusion

Data were presented in tabular form. A Chi-square test was applied which yielded percentages of responses and their calculated chi-square and p-values, at 0.05 level of significance.

Table-1
Responses of Male teachers and Male students

Statements	Respondents	Never	Rarely	Sometime	Usually	Always	Chi-sq/P-v
Physical classes are taken regularly	Male teacher	5 (20%)	5 (20%)	4 (16%)	5 (20%)	6 (24%)	11.61/0.02
	Male student	32 (42.7%)	22 (29.3%)	10 (13.3%)	7 (9.3%)	4 (5.3%)	
Sports activities are arranged	Male teacher	0%	0%	8 (40%)	9 (47.4%)	8 (57.1%)	30.85/0.00
	Male student	26 (34.7%)	21 (28%)	12 (16%)	10 (13.3%)	6 (8%)	
Physical exercises are planned	Male teacher	3 (12%)	3 (12%)	5 (20%)	8 (32%)	6 (24%)	27.52/0.00
	Male student	32 (42.7%)	23 (30.7%)	13 (17.3%)	3 (4%)	4 (5%)	
Rules of sports are taught	Male teacher	0%	0%	6 (24%)	10 (40%)	9 (36%)	22.25/0.00
	Male student	25 (33.3%)	11 (14.7%)	17 (22.7%)	10 (13.3%)	12 (16%)	
Physical Instructor supervise activities	Male teacher	0%	0%	5 (20%)	10 (40%)	10 (40%)	31.80/0.00
	Male student	27 (36%)	20 (26.7%)	9 (12%)	12 (16%)	7 (9.3%)	
Physical Instructor is trained	Male teacher	0%	0%	7 (28%)	10 (40%)	8 (32%)	33.74/0.00
	Male student	25 (33.3%)	23 (30.7%)	13 (17.3%)	8 (10.7%)	6 (8%)	
Instructor take interest in wellbeing of students	Male teacher	0%	0%	8 (32%)	9 (36%)	9 (32%)	30.85/0.00
	Male student	27 (36%)	20 (26.7%)	12 (16%)	10 (13.3%)	6 (8%)	
School prepare for different sports	Male teacher	0%	0%	5 (20%)	10 (40%)	10 (40%)	31.80/0.00
	Male student	27(36%)	20 (26.7%)	9 (12%)	12 (16%)	7 (9.3%)	
Competitions held at local level	Male teacher	3 (12%)	7 (28%)	3 (12%)	6 (24%)	6 (24%)	14.44/0.006
	Male student	28 (37.3%)	26 (34.7%)	11 (14.7%)	5 (6.7%)	5 (6.7%)	
Time table reflect importance of PE	Male teacher	0%	0%	8 (40%)	9 (47.4%)	8 (57.1%)	31.85/0.00
	Male student	25 (33.3%)	22 (29.3%)	12 (16%)	10 (13.3%)	6 (8%)	
Teachers encourage for sports activities	Male teacher	1 (4%)	1 (4%)	7 (28%)	10 (40%)	6 (24%)	24.28/0.00)
	Male student	26 (34.7%)	22 (29.3%)	11 (14.7%)	10 (13.3%)	6 (8%)	
Heads motivates for sports activities	Male teacher	0%	3 (12%)	5 (20%)	8 (32%)	9 (36%)	26.22/0.00
	Male student	25 (33.3%)	22 (29.3%)	10 (13.3%)	14 (18.7%)	4 (5.3%)	

Table 1 revealed that most of the PTIs reported they took physical education classes on a regular basis, while almost half of the students reported that classes of physical education were not taken on a regular basis in schools. Chi-square value, 11.61, with a p-value of 0.002 at 0.05 level of significance reflected that results were significant and differences in the opinions of both respondents were opposit. It was easy to conclude that classes of physical education were not taken on a regular basis and in some schools

these classes have little importance.

Data also revealed that most of the PTIs reported that sport activities were properly arranged in schools, while most of the students negated the teachers' points of view. Chi-square value 30.85 with p-value of 0.00 at 0.05 level of significance reflected that results were significant and differences in opinions of both respondents held opposed. It was easy to conclude that sport activities were not properly arranged in secondary schools.

Data showed that most of the PTIs reported that physical exercises for the wellbeing of students were regularly planned in schools, while most students negated the teachers' points of view. Chi-square value 27.52 with p-value of 0.00 at 0.05 level of significance reflected that results were significant and difference in opinions of both sets of respondents held opposed. It was easy to conclude that exercises of physical activities for the purpose of wellbeing of students were not planned in schools.

Data reflected that most of the PTIs reported that they taught the basic rules of different sports to the students while more the fifty percent of the students did not agree with teachers' point of views. Chi-square value 22.25 with p-value of 0.00 at 0.05 level of significance reflected that results were significant and differences observed in both respondents' views. It was easy to conclude that basic rules of different sports are not being taught in the schools only few schools have competent or dedicated PTIs who did this.

Difference in opinion between teachers and students found in terms of proper supervision of physical activities in schools by instructors, revealed availability of well-trained instructors and interest of instructors in physical wellbeing of students. It was easy to

conclude that the schools were lacking in availability of professional physical instructors and due to which physical education purposes were hard to achieve. Similarly, difference in opinions of teachers and students were also observed with reference to preparation of students in different sport in schools, participation of schools in local sport competition, sufficient space for physical education classes in timetables or school academic calendars, and encouragement of teachers and school heads for students to excel in sport. It can be concluded that in all above-mentioned areas, rolls of schools, teachers, and heads of schools were missing.

Table-2
Responses of Female teachers and Female students

Statements	Respondents	Never	Rarely	Sometime	Usually	Always	Chi-sq/P-v
Physical classes are taken regularly	Female teacher	4(16%)	6 (24%)	7 (28%)	4 (16%)	4(16%)	20.89/0.00
	Female student	42 (56%)	22 (29.3%)	6 (8%)	3 (4%)	2 (2.7%)	
Sports activities are arranged	Female teacher	2 (8%)	6 (24%)	6 (24%)	6 (24%)	5 (20%)	20.82/0.00
	Female student	42 (56%)	15 (20%)	8 (10.7%)	6 (8%)	4 (5.3%)	
Physical exercises are planned	Female teacher	0 (0%)	5 (20%)	8 (32%)	7 (28%)	5 (20%)	37.21/0.00
	Female student	38 (50.7%)	23 (30.7%)	9 (12%)	2 (2.7%)	3 (4%)	
Rules of sports are taught	Female teacher	3 (12%)	2 (8%)	9 (36%)	6(24%)	5(20%)	15.45/0.004
	Female student	35 (46.7%)	13 (17.3%)	15 (20%)	7 (9.3%)	5 (6.7%)	
Physical Instructor supervise activities	Female teacher	2 (8%)	3(12%)	2 (8%)	8(32%)	10 (40%)	33.86/0.00
	Female student	38 (50.7%)	15 (20%)	12(16%)	6 (8%)	4 (5.3%)	
Physical Instructor is trained	Female teacher	2 (8%)	3 (12%)	1 (4%)	10 (40%)	9 (36%)	47.16/0.00
	Female student	40 (53.3%)	20 (26.7%)	9 (12%)	4 (5.3%)	2 (2.7%)	
Instructor take interest in well being of students	Female teacher	1(4%)	3(12%)	7 (28%)	9 (36%)	5 (20%)	32.78/0.00
	Female student	42 (56%)	17 (22.7%)	5 (6.7%)	7 (9.3%)	4 (5.3%)	
School prepare for different sports	Female teacher	1 (4%)	2 (8%)	4 (16%)	10 (40%)	8 (32%)	34.28/0.00
	Female student	43(57.3%)	14 (18.7%)	6 (8%)	7 (9.3%)	5 (6.7%)	
Competitions held at local level	Female teacher	0 (0%)	3 (12%)	3 (12%)	14 (56%)	5 (20%)	23.84/0.006
	Female student	23 (30.7%)	20 (26.7%)	10 (13.3%)	10 (13.3%)	12 (16%)	
Time table reflect importance of PE	Female teacher	1(4%)	0 (0%)	5 (20%)	11 (44%)	8 (32%)	42.21/0.00
	Female student	37 (49.3%)	20 (26.7%)	7 (9.3%)	7 (9.3%)	4 (5.3%)	
Teachers encourage for sports activities	Female teacher	0 (0%)	2 (8%)	4 (16%)	13 (52%)	6 (24%)	46.15/0.00)
	Female student	39 (52%)	20 (26.7%)	8 (10.7%)	5 (6.7%)	3 (4%)	
Heads motivates for sports activities	Female teacher	1 (4%)	1 (4%)	3 (12%)	8 (32%)	12 (48%)	48.56/0.00
	Female student	37 (49.3%)	22 (29.3%)	6 (8%)	8 (10.7%)	2 (2.7%)	

Table 2 revealed that most of the PTIs reported they did not take physical education classes on a regular basis; similar opinions were also given by students. Chi-square value 20.89 with p-value of 0.000 at 0.05 level of significance reflected significant results, and there was no difference in the opinions of both respondents. It was easy to conclude that physical education classes were not taken on a regular basis.

Data also revealed that most of the PTIs reported that sport activities were properly arranged in schools, while half of the students negated the teachers' points of view. Chi-square value 20.82 with p-value of 0.00 at 0.05 level of significance reflected results that were significant, and difference in opinions of both respondents were found. It was easy to conclude that sport activities were not properly arranged in secondary schools by the PTIs.

Data showed that most of the PTIs reported that physical exercises for wellbeing of students were regularly planned in schools, while most students negated the teachers' points of view. Chi-square value 37.21 with p-value of 0.00 at 0.05 level of significance reflected results that were significant; there was a difference in opinions of both of groups of respondents. It was easy to conclude that physical activities for wellbeing in students were not planned by PTIs in girls' schools.

Data reflected most of the PTIs taught basic rules in different sport to students, while a majority of students did not agree with teachers' responses. Chi-square value 15.45 with p-value of 0.004 at 0.05 level of significance reflected that results were significant; a significant difference was observed in both teacher and student points of view. It was easy to conclude that basic rules of different sports are not being taught in schools. It was practiced in few schools only.

Difference in opinions of female teachers (PTIs) and students found in terms of appropriate supervision of physical activities in schools by instructors, availability of well-trained instructors and interest of instructors in

physical wellbeing of students was determined. It can be concluded that schools lacked availability of professional physical instructors. Similarly, difference in opinions of teachers and students were also observed with reference to pre-preparation of students for different sport in schools, participation of schools in local sport competition, sufficient space for physical education classes in timetables or school academic calendars, encouragement of teachers and school heads for students to excel in sport. It can be concluded that in all of the above mentioned areas, role of schools, teachers, and heads of schools were missing.

Recommendations:

The following recommendations were made relative to the findings and conclusion of this study:

1. Strict merit can be followed in the appointment of Physical Training Instructors (PTIs) in schools and their performances monitored.
2. A complete calendar of physical activities in the form of exercise and sport events can be planned and arranged and displayed on notice boards.
3. A sense of competition can be developed among students in

sport activities. PTIs need to take keen interest in physical wellbeing of students in close collaboration with parents.

4. Importance of physical fitness must be made clear to students.
5. Teachers of other subjects and heads of schools need to encourage and motivate students in taking active part in physical activity and sport.
6. Keeping in mind the effect of student physical well-being in adulthood, physical education of students must be ensured.
7. To avoid obesity, cardiovascular disease in early age, depression, anxiety, and other related diseases which are non communicative, generally caused due to physical inactivity, proper and well-planned physical activities need to be undertaken in schools.

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