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RESEARCH PAPER

Comparative Analysis of Academic Achievements between the Male Participants and Female Participants Skills of Youth Physical Education

Mehwish Manzoor*[1] Muhammad Ismail Wasan[2]
Mustahsan Shahab[3]

1. PhD scholar, Center of Physical Education Health & Sports Science, University of Sindh Jamshoro, Sindh, Pakistan
2. PhD Scholar, Department of Statistics, University of Sindh Jamshoro, Sindh, Pakistan
3. Visiting Lecturer, Department of Physical Education Islamia University Rahim Yar Khan Campus, Punjab, Pakistan

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***Corresponding Author**

Mehwishmanzoor233@yahoo.com

ABSTRACT

The main aim of this research study was to find out the Comparative analysis of academic achievements between the participants male and female skills of youth physical education. This case study was undertaken in the region of northern Punjab the response of youth of degree college. The statement, comparative study of academic achievement, self-developed Likert type scale was used for the data collection which cover all aspect of the sports, validity and reliability was done accordingly. The collected data was then put into SPSS to tabulate and arrange the data, which aim to get the desire result. There were 210 male participants and similarly 290 female participants respectively. Description research approach was used to get the desire results.There was a significant positive link between physical activity participation and academic performance. Higher physical fitness, physical capacity and physical activity were associated with higher rating of scholastic ability. Students who reported a great level of exercise spent more time in sport and achieved higher grade point averages.Further revealed that the physical activity played a partial role between sports, participant skills among youth of physical education. However, physical activity was tested positive and significant in relationship with academic and participants skills.

Introduction

The purpose of the research study was Comparative analysis of academic achievements between the participants skills of youth physical education academic performance stems from a complex interaction between intellect and contextual variables, health is a vital moderating factor in a child's ability to learn. The idea that healthy children learn better is empirically supported and well accepted and multiple studies have confirmed that health benefits are associated with physical activity, including cardiovascular and muscular fitness and bone health.

The Study suggest that physical activity in children could be associated with better school performance, which may have implications for sports having positive health benefits in both childhood and adulthood. And the prevalence of sports outside of regular school classes among primary and secondary school students. The secondary aim was to study the correlation of physical activity, students' socioeconomic status and parents' level of education with students' educational outcomes.Vučić A, Bilić-Kirin V (2020)

There was a significant positive link between physical activity participation and academic performance (Lidner, 2002).

Higher physical fitness, physical capacity and physical activity were associated with higher rating of scholastic ability (Dwyer et al., 2001).Students who reported a great level of exercise spent more time in sport and achieved higher grade point averages (Field, 2001).

Positive significant relationship between physical activity and academic performance indicating that academic performance is improved with increasing physical activity. Physical exercise to be effective in improving inter-neuronal connections and increasing attentiveness.Symons, C.W.; Cinelli, B.; James, T.C.; Groff, (2005). Prior exercise may be beneficial for participants function in both the morning and the afternoon as studies have shown an improvement in adolescents‟ performance on visual search and attention tests in the morning and on children's performance in mathematics after an afternoon walk.Further research is needed to establish the optimal intensity and duration for participants stimulation in young people.

Literature Review

Education is the process of enfoldment of what is already unfilled in the human being. The better education especial physical education plays a very crucial role for human enlightenment and empowerment for living quality of life. Parents, Teachers and Administrators try to seek new and innovative ways and trends to uplift students' performance keeping in mind the satisfaction of their individual needs as well. Advances have been made in several areas including physical education, physical activities, exercise and recreation.

According to Han (2018)This study can be used to develop more effective physical education curricula. In addition, the data can also be applied to recreation and sport programs for other populations (e.g., children and adult) as well as existing national physical fitness data in various countries. In the sport research field, previous studies have examined the positive effects of physical activity on intelligence and brain development using various intelligence measurements such as MRI (Magnetic Resonance Imaging), memory test, con-centration test, and cognition test.

According to Basch, (2010), although academic performance stems from a complex interaction between intellect and contextual variables, health is a vital moderating factor in a child's ability to learn. The idea that healthy children learn better is empirically supported and well accepted and multiple studies have

confirmed that health benefits are associated with physical activity, including cardiovascular and muscular fitness and bone health.

However, one of the most effective areas of increased student motivation lies not in the schools at all, but in the homes of the students. Parental involvement continues to be, "the most influential factor in student achievement and motivation. The parents' and teachers' approach are important factors that influence students in their school performance. For instance, the way parents take care of their children and the way teachers deal with the students have an influence on the students' behavior in school. The way parents relate with their child and teachers handle their students also help explain a student's academic performance in school". Despite attempts to improve learning and achievement of students, there are still issues regarding the outcome of the students' performance (Ahmed, et.al. 2015).

Bartholomew (2005) Physical activity is an interesting research subject affecting both physical and psychological wellbeing, including forming a positive body image, relieving depression, and increasing life satisfaction. There is evidence that physical activity promotes intelligence and brain development. Intelligence can be defined as "the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment". Intelligence has been examined in numerous studies and in a wide range of research areas.

According to Pellegrini and Bohn, (2005) State-mandated academic achievement testing has had the unintended consequence of reducing opportunities for children to be physically active during the school day and beyond. In addition to a general shifting of time in school away from physical education to allow for more time on academic subjects, some children are withheld from physical education classes or recess to participate in remedial or enriched learning experiences designed to increase academic performance.

According to Martin (2010) A recent thorough review examining the literature relating to „physical activity, fitness and academic achievement" provided the following points:

The large majority of university-based, internationally published research in this field has found a positive association between children"s physical activity participation and academic achievement.

A two-year physical activity intervention led to significant improvements in children"smaths scores (Hollar et al., 2010)

Academic achievement of children in a case study group (who received extra physical education) was significantly higher than children who were in a control group (who did not receive extra physical education) in a second year follow-up (Shephard et al., 1994).

Greater vigorous physical activity out of school resulted in higher test scores (Coe et al., 2006).

Physical activity was a significant positive predictor of academic achievement. Body mass index, diet and physical activity explained up to 24% of the

variance in academic achievement after controlling for gender, parental education, family structure and absenteeism (Sigfusdottir et al., 2006).

There was a significant positive link between physical activity participation and academic performance (Lidner, 2002).

Higher physical fitness, physical capacity and physical activity were associated with higher rating of scholastic ability (Dwyer et al., 2001).

Students who reported a great level of exercise spent more time in sport and achieved higher grade point averages (Field, 2001).

Children can spend less time in academic learning and more time being physically active during the school day without affecting academic success or progress (Coe et al., 2006; Ahamed et al., 2007).

Some intervention research indicates that increased participation in physical activity leads to enhanced leaning and better grades (Hollar et al., 2010).

A threshold amount of physical activity may be necessary to acquire learning benefits (Davis et al., 2007).

Participation in vigorous physical activity may enhance learning (Coe et al., 2006). Some studies have failed to find a relationship between physical activity and learning and one study has identified the relationship only for girls (Carlson et al. 2008).

There is an extensive literature concerning the effect of single bouts of physical activity on participants function in young people and some studies examining the longitudinal (or chronic) impact of undertaking extra physical activity over or example a few months on participants function. It is important to include such information in this review as each physical education lesson or sport activity represents a bout of physical activity which might impact on learning on that day and indeed over a period of time. Participants function is often examined using computer tests and may include tests of memory, attention, perceptual skills and occasionally in longitudinal, studies IQ tests. Three meta-analyses (statistical analysis of several earlier studies) have previously been conducted on physical activity and its influence on participants processes in youth.

In 2003, Sibley and Etnier published a further meta-analysis on the relationship between physical activity and cognition in children, due to a resurgence of study and interest in the area. The authors reviewed 44 studies, and found an overall effect size of 0.32. The largest relationship between physical activity and cognition was found in middle- school and young elementary children (effect size=0.40). The authors concluded that there was a significant, positive relationship between physical activity and cognition. The positive effects were task dependent, with the largest effect sizes found on perceptual skills (effect size=0.49) and IQ (effect size=0.34). No difference was found between acute or chronic interventions. Of particular interest, the study claimed that unpublished studies had a larger effect size than published work, indicating that no bias had occurred against the publication of non-significant results. However, only 9 of the studies used were reported in

peerreviewed journals and many used questionable methodology (Tomporowski et al, 2008).

Tomporowski et al. (2008) was conducted regarding exercise and cognition in youth, finding that systematic exercise programs may enhance the development of specific types of mental processing which are considered important for both academic achievement and for participants function across an individual's entire lifespan.

Despite such large scale reviews, few intervention studies have been conducted where a physical activity programme is integrated into the school day, and its effect on cognition is monitored. As highlighted by Trudeau & Shephard (2010), a common assumption made in review papers is that different physical activity forms provide similar stimuli for the learning process, though realistically this seems unlikely. Key studies in the area of physical activity and behavior for learning are therefore individually reviewed below.

Budde et al. (2008) This study showed that attention and concentration are enhanced following acute bouts of either coordinative exercise or normal sport lessons provided in physical education class in adolescent children. A total of 115 pupils aged 13– 16 years of an elite performance school were randomly assigned to an experimental and a control group and were tested for attention and concentration. Both groups performed the attention and concentration test after a regular school lesson (pre-test) and then after either 10 minutes of coordinative exercise (experimental group), or following a normal sport lesson (control group). Concentration and attention task scores were higher following either coordinative exercise or a normal sport lesson, in comparison to following a regular school lesson. Larger test score improvements were observed in the coordinative exercise group in comparison to the normal sport lesson group, though heart rate was similar in both groups. The authors suggested that the coordinative component of the exercise may explain the significant performance differences. Coordinative exercise may activate parts of the brain responsible for attention and concentration.

Hillman et al. (2009) This study examined the impact of 20 minutes of treadmill walking at 60% maximum heart rate, followed by participants testing, on 20 preadolescent children. The results showed an improvement in response accuracy and academic achievement on the exercise trial relative to a resting control trial. The findings indicated that single, acute bouts of moderately-intense aerobic exercise (i.e., walking) may improve the participants control of attention in preadolescent children, and further supports the use of moderate acute exercise as a contributing factor for increasing attention and academic performance. However, there was no increase in arithmetic performance following exercise.

Cooper et al. (2010) A total of 45 British adolescent school children performed visual search and attention tests before and after 10 min of jogging/walking exercise at an average heart rate of 172 beats.min-1. At 60 minutes after the exercise intervention the response times were faster after the exercise intervention, but the effect on accuracy was equivocal. The mechanism by which exercise may improve participants function is possibly increased blood flow to, and greater arousal of, the brain. The brain may also benefit indirectly from physical activity due to time away

from study, providing boredom relief and consequentially higher attention levels when returning to classroom instruction. As a review on exercise and child cognition by Tomporowski et al (2008) highlights, several experiments provide evidence to suggest that physical activity induces specific, not global, effects on children‟s participants function. Not all areas of participants processing experience improvement with physical activity, but the literature certainly indicates that physical activity can positively impact on both specific participants processes (perceptual skills, concentration, response time) and general learning behaviour (fidgeting, disruptive behaviour). There is no evidence to suggest any negative effects on learning behaviour from conducting physical activity beforehand. However, further research is needed to establish the optimal intensity and duration for participants stimulation in young people.

- A positive relationship exists between physical activity and cognition with primary and middle-school age children gaining the most benefit in terms of enhanced participants function.

- Perceptual skills, attention and concentration are all improved by a bout of physical activity, but perceptual skills seem to benefit the most from prior exercise.

- There are no differences between the acute and chronic effects of physical activity on cognition so it is unclear if there are any additional benefits of whether children simply benefit from each bout of exercise undertaken.

Hypotheses

H_0: There is no significant difference between the academic achievement of participants male and female physical education students.

H_A: There is significant difference between the academic achievement of participants male and female physical education students.

Material and Methods

In the existing research study, the researcher used quantitative method which aimed to examine“ Comparative analysis of academic achievements between the participants skills of youth physical education” in the present study, the researcher used the method of case study. It refers to the appropriate design in which the researcher desire to get contextual, conclusion and in-depth information and knowledge about any research work it may allow the research to explore the basic feature, implication and meaning of the case. Data was collected from degree college northern Panjab through random sampling technique. Questionnaire was the simple way and method for the data collection. In the present study the researcher used questionnaire for the data collection. According to the statement, physical activity and academic achievement, self-developed likert scale was used for the data collection, which cover all aspect of the sports, validity and reliability was done accordingly. The collected data was then put into SPSS to tabulate and arrange the data, which aim to get the desire result.

Population maybe defined as the, those objects, things and individuals having same characteristics at college level. All male and female physical education students at college level at northern Panjab were the population of the current study. There were 210 male participants and similarly, 290 female participants respectively. Description research approach was used to get the desire result

Results and Discussions

Table 1
A Physically Sound Student Can Excel In Academic too
of Respondents

Option	Male Participants		Female Participants	
	f	%	f	%
Strongly Disagree	18	8.571	3	1.034
Disagree	10	4.761	7	2.413
Neutral	29	13.809	35	12.068
Agree	83	39.523	102	35.172
Strongly Agree	70	33.333	143	49.310
Total	210	100.0	290	100.0

Table 1 Shows that 8.571% of Male Participants physically sound was Strongly Disagree, 4.761% of Male Participants physically sound was Disagree, 13.809% of Male Participants physically sound was Neutral, 39.523% of Male Participants and 20.0% physically sound was Agree, 33.333% of Male Participants physically sound was Strongly Agree, 1.034% of Female Participants physically sound was Strongly Disagree, 2.413% of Female Participants physically sound was Disagree, 12.068% of Female Participants physically sound was Neutral, 35.172% of Female Participants physically sound was Agree, 49.310% of Female physically sound was Strongly Agree.

Table 2
Sound Mind Rest in Sound Body Which Contribute a Lot in Academic.
of Respondents

Option	Male Participants		Female Participants	
	f	%	f	%
Strongly Disagree	14	6.666	18	6.206
Disagree	9	4.285	27	9.310
Neutral	33	15.714	29	10.0
Agree	67	31.904	52	17.931
Strongly Agree	87	41.428	164	56.551
Total	210	100.0	290	100.0

Table 2 Shows that 6.666% of Male Participants 4.285% of Male Participants and 15.714% of Male Participants mind rest was Neutral, 31.904% of Male Participants mind rest was Agree, 41.428% of Male Participants mind rest was Strongly Agree, 6.206% of Female Participants mind rest was Strongly Disagree, 9.310% of Female Participants mind rest was Disagree, 10.0% of Female Participants mind rest was

Neutral, 17.931% of Female Participants mind rest was Agree, 56.661% of Female Participants

Table 3
Hygienic & Constructive Activities Improve Academic Achievement of Respondents

Option	Male Participants		Female Participants	
	F	%	F	%
Strongly Disagree	14	6.666	4	1.379
Disagree	16	7.619	8	2.758
Neutral	34	16.190	26	8.965
Agree	52	24.761	130	44.827
Strongly Agree	94	44.761	122	42.068
Total	210	100.0	290	100.0

Table 3: Shows that 6.666% of Male Participants activities was Strongly Disagree, 7.619% of Male Participants constructive activities was Disagree, 16.190% of Male Participants constructive activities was Neutral, 24.761% of Male Participants constructive activities was Agree, 44.761% of Male Participants constructive activities was Strongly Agree, 1.379% of Female Participants constructive activities was Strongly Disagree, 2.758% of Female Participants constructive activities was Disagree, 8.965% of Female Participants constructive activities was Neutral, 44.827% of Female Participants constructive activities was Agree, 42.068% of Female Participants constructive activities was Strongly Agree.

Table 4
Teacher's Physical Health Effects the Student's Academic Achievement of Respondents.

Option	Male Participants		Female Participants	
	f	%	f	%
Strongly Disagree	22	10.476	13	4.482
Disagree	10	4.761	23	7.931
Neutral	31	14.761	24	8.275
Agree	61	29.047	120	41.379
Strongly Agree	76	36.190	110	37.931
Total	210	100.0	290	100.0

Table 4 Shows that 10.476% of Male physical health was Strongly Disagree, 4.761% of Male Participants physical health was Disagree, 14.761% of Male physical health was Neutral, 29.047% of Male Participants physical health was Agree, 36.190% of Male Participants physical health was Strongly Agree, 4.482% of Female Participants physical health was Strongly Disagree, 7.931% of Female Participants physical health was Disagree, 8.275% of Female Participants physical health was Neutral, 41.379% of Female Participants physical health was Agree, 37.931% of Female Participants.

Table 5
Sports Improve All System of Human Body So That They May Perform Well of Respondents

	Male	Female

Option	Participants		Participants	
	f	%	f	%
Strongly Disagree	23	10.952	9	3.103
Disagree	9	4.285	11	3.793
Neutral	19	9.047	20	6.896
Agree	48	22.857	66	22.758
Strongly Agree	112	53.333	184	63.448
Total	210	100.0	290	100.0

Table 5 Shows that 10.952% of Male Participants improve human body was Strongly Disagree, 4.285% of Male Participants improve human body was Disagree, 9.047% of Male improve human body was Neutral, 22.857% of Male Participants improve human body was Agree, 53.333% of Male Participants improve human body was Strongly Agree, 3.103% of Female Participants improve human body was Strongly Disagree, 3.793% of Female Participants improve human body was Disagree, 6.896% of Female Participants improve human body was Neutral, 22.758% of Female Participants improve human body was Agree, 63.448% of Female Participants.

Table 6
Sports Improve the Concentration of Student Towards Academic of Respondents.

Option	Male Participants		Female Participants	
	f	%	f	%
Strongly Disagree	18	8.571	12	4.137
Disagree	19	9.047	10	3.448
Neutral	30	14.285	22	7.586
Agree	88	41.904	116	40.0
Strongly Agree	55	26.190	130	44.827
Total	210	100.0	290	100.0

Table 6 Shows that 8.571% of Male Participants improve concentration was Strongly Disagree, 9.047% of Male Participants improve concentration was Disagree, 14.285% of Male Participants improve concentration was Neutral, 41.904% of Male Participants improve concentration was Agree, 26.190% of Male Participants improve concentration was Strongly Agree, 4.137% of Female Participants improve concentration was Strongly Disagree, 3.448% of Female improve concentration was Disagree, 7.586% of Female Participants improve concentration was Neutral, 40.0% of Female Participants improve concentration was Agree, 44.827% of Female Participants.

Table 7
Sports Strengthen immunity Power Which is Compulsory for Academically Concentration of Respondents.

Option	Male Participants		Female Participants	
	f	%	f	%
Strongly Disagree	18	8.571	14	4.827
Disagree	23	10.952	13	4.448
Neutral	38	18.095	22	7.586

Agree	62	29.523	137	47.241
Strongly Agree	76	36.190	104	35.862
Total	210	100.0	290	100.0

Table 7 Shows that 8.571% of Male Participants immunity power was Strongly Disagree, 10.952% of Male Participants immunity power was Disagree, 18.095% of Male Participants immunity power was Neutral, 29.523% of Male Participants immunity power was Agree, 36.190% of Male Participants immunity power was Strongly Agree, 4.827% of Female Participants immunity power was Strongly Disagree, 4.448% of Female Participants immunity power was Disagree, 7.586% of Female Participants immunity power was Neutral, 47.241% of Female Participants immunity power was Agree, 35.862% of Female Participants.

Table 8
Summery of Statistics

Summary statistics	
Total number of respondents	500
Missing values	0
Mean	78.380
Variance	94.078
Standard deviation	9.699
Minimum	8.0
Maximum	92
Skewness	-1.167
Kurtosis	4.708

The summary statistics is indicating that data is normally distributed

Testing of Hypotheses

H_0: There is no significant difference between the academic achievement of participants male and female physical education students.

H_A: There is significant difference between the academic achievement of participants and male and female physical education students.

Table No 9: Group statistics of male & female of participants

Group Statistics				
	N	Means	Std. Deviation	Std. Error Mean
Male	210	77.4586	10.87593	.75051
Female	290	79.0483	8.70813	.51136

Total number of participants WERE 500.The mean score of male participants was 77.458 with standard deviation 10.8759, mean score of female participants was79.0.483 with standard deviation 8.708.

Table 10
t-independent test

	Levene's Test for Equality of Variance	T-test for equality of means	95% confidence interval of the difference

Equal Variances assumed	F	sig	t	Df	Sig (2-tailed)	Mean difference	Std. Error dif	Lower	Upper
	3.332	.069	-1.813	498	070	-1.58970	.87685	-3.31249	13308
Equal variances not assumed			-1.750	387.672	081	-1.58970	.90816	-3.37524	19583

It is evident that the t –test value is -1.589 which is significant at 0.05 level of significance with df equal 498. It reflects that means scores of male participants and female participants do not differ significantly. In this context the Null hypothesis "There is no significant difference between the academic achievement of male participants and female participants of physical education students. "do not rejected.

In this existing research study was focus on, Physical education & sports are representing a component of general education which arranges the rules, and forms of group and development for the and mental potential of the individual, in order to increase the quality of life, (Walker, M., &Fedeli, S. 2019).

In this research study focus on physical movement & mental health, which plays a sports role in-between the participants skills skills. The previous findings of Pakistan with respect to the said variables and compared these findings to the result SPSS version 24 of the present study to identify the value of support as a statistical analysis (Demirtas et al., 2015).

Basically, concluded on the basis of the results of the study that the physical activity has a positive effect on participants skills. It was indicated by the findings of the past existing research study regarding the predictor, mediating variable social support and criterion physical activity and sports. The post literature identified a variety of findings of the role of the physical activity and sports for health and participants skills. Inline and link, some other studies found that the said sports variable plays a physical activity role between the participants skills.

In the existing research study, the researcher used quantitative method which aimed to examine" Comparative analysis of academic achievements between the participants skills of youth physical education" in the present study, the researcher used the method of case study.

Conclusion

The result of the present study indicates that physical activity support plays a partial Comparative analysis of academic achievements between the participants skills of youth physical education students, as it was indicated that the statistical value became low while the connection between sports and participants skills performance remains significant after adopting the social support as a physical activity (96). Reliable with the past study, the result of the current study authenticates that the physical movement, which plays a sports role in-between the participants skills.

Total number of participants WERE 500.The mean score of male participants was 77.458 with standard deviation 10.8759, mean score of female participants was79.0.483 with standard deviation 8.708. It is evident that the t –test value is -1.589 which is significant at 0.05 level of significance with df equal 498. It reflects that means scores of male participants and female participants do not differ significantly.

In this context the Null hypothesis "There is no significant difference between the academic achievement of male participants and female participants of physical education students. "do not rejected.

They have concluded on the basis of the results of the study that the physical activity has a positive effect on participants skills. A human activity capable of achieving a result requiring physical application and/or physical skill, which, by its nature and organization, is competitive and is generally accepted as being a sport.

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