IMPACT OF ATTITUDE TOWARDS PHYSICAL ACTIVITY AND EXERCISE ON ACADEMIC PERFORMANCE OF SCHOOL STUDENTS

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ABSTRACT

This research aims to measure the impact of attitude towards physical activity (PA) and exercise on academic performance of school students. The cross sectional and correlational research method were employed. The population of this research was school students of District Sargodha. The total of 307 (154 Male and 153 Female) school students were selected using convenient sampling technique for gathered the data. The attitude towards physical activities questionnaire using to measure the students' attitude towards PA and exercise; and academic performance was measured through last year academic result of student. The data of this research was analyzed by SPSS (24.0). The results of bivariate correlation revealed positive significant correlation between PA and exercise with academic performance among school students. Students who maximum participate in PA and exercise, they secure better academic marks in their annual exams. Further, the results of linear regression found that PA and exercise significantly impact on academic performance of students. In gender, boys and girls are same in PA and exercise but girls are significantly better than boys in academic performance. This research would be helpful for teachers, physical and sports teachers, psychologist, parents and government agencies for policy making.

Keywords: *Attitude towards physical activity and exercise, academic performance, school students.*

Introduction

Physical education is a major area of learning in school education (Martins, Marques, Rodrigues, Sarmento, Onofre, & Carreiro da Costa, 2018). The several academic disciplines of learning has formulated since last decades of the century and one of the core function of this filed is to identify the role of academic and cognitive benefits of indulging oneself into regular physical activity (PA) (Chaddock, Pontifex, Hillman, & Kramer, 2011; Lubans et al., 2016). The concept of PA lies into the academic and cognitive performance and the ability to improve education and health spheres of life especially in the school going individuals (Donnelly et al., 2016;

Pontifex, Saliba, Raine, Picchietti, & Hillman, 2013). PA is a process that triggers changes not only in the brain but also enhances oxygenation as well as the blood flow by increasing metabolism, in the end it leads to the better neurological health (Khan & Hillman, 2014; Whiteman et al., 2014).

Physical activity (PA) is a behavior relies on many related factors such as four levels of work: ecological, physiological, sociocultural and psychological (Hills, King, & Armstrong, 2007). According to Janssen and LeBlanc (2010) PA is a positive activity and positively effects on the cognitive, physical, social and psychological health on the school going individuals and adults. Moreover, Gunter, Almstedt and Janz (2012) also highlighted that to protect oneself from getting obese the role of PA cannot be overlooked: enhances metabolic systems (Janssen & LeBlanc, 2010), improved physical structure (Gunter et al., 2012) and improve cardiovascular systems (Fernhall & Agiovlasitis, 2008). Biddle and Asate (2011) identified that apart from getting benefits from the PA it also effects on the physical body and improved medical conditions it is also contributing in the reduction of stress, depression and anxiety and it leads to the better self-esteem and self-confidence level. Research studies are expounding now how associations between PA and cognition interact to show the best way to promote cognitive, neurological, and academic benefits for school students. Most of the researches identified that there is positive relationship between PA and cognition because both guides and direct an individual to promote academic, neurological and cognitive benefits for children. A meta-analysis has been done of 44 studies which identifies an optimistic association among PA and academic performance and role in played in the cognitive capabilities (Biddle & Asare, 2011; Howie & Pate, 2012; Verburgh, Königs, Scherder, & Oosterlaan, 2014). Chaddock et al. (2010) identified those children who are more involved in aerobic exercises showed higher behavioral and cognitive abilities.

The aim of current study is to investigate the impact of PA, exercise on academic performance of school students. The role of PA cannot be overlooked beca-

use ultimately its strengths muscles and increases stamina in one's body. The role of PA is also very significant in and ponderous for schools' students to indulge students in the PA. Moreover, with the sport activity and support of teachers' students can improve their physical activity. Additionally, PA is also directly linked with the not only in PA improvement as well as healthier output in the psychological well-being among students (Whitehead & Biddle, 2008).

Hypotheses

- There would a positive relationship of PA and exercise with academic performance among school students.
- There would be a significant impact of PA and exercise on academic performance of school students.
- There would be a gender (male & female) differences in PA and exercise and academic performance.

Method

Participants

The cross sectional and correlational research method were employed. The population of this research was school students of District Sargodha. The total of 307 (154 Male and 153 Female) school students were selected using convenient sampling technique. The data was collected from different public and private schools and their age ranging from 7 to 16 years.

The attitude towards physical activities questionnaire:

Developed by Khan, Abbass, Khan, & Din; (2012) based on 32 items Likerts scale measuring attitude towards physical activities. This scale is based on 32 questions such as self-selected and responded answers which is latter on selected by comparing different student's answers within the same class. The questionnnaire is reliable and valid and has shown good value of Cronbach alpha was obtained as .90 (Khan, Abbass, Khan, & Din, 2012).

Academic Performance:

Academic performance was measured through last year academic result of student.

Procedure

Before the data is being collected it was asked the authors of the scales for written

permission to use their instruments in this study. Respective institutions were also asked for their permission as well for the purpose of data collection from their institutes. They granted their permission in the form of written documentation. Research subjects were also told about the true nature and the purpose of the study before they get involved into the study. It was ensured that all their personal information is to be kept confidential during this research work.

In first, the information sheet was handover to the respondents in order to get knowledge about their gender, age, residence, and education. They were accredited for their contribution and collaboration in the research.

Results

The results of table 1 indicate that overall attitude of students regarding PA and exercise ($r = .57$, $p < .01$) with all sub-scales ($r = .33$ to $.64$, $p < .01$) is significantly positively correlated with academic performance.

Table-1
Correlation of Attitude towards PA and Exercise with Academic Performance

	1	2	3	4	5	6	7
1. Physical Activities as a Social Experience	-	.64**	.46**	.51**	.60**	.63**	.42**
2. PA for Health and Fitness		-	.49**	.39**	.45**	.59**	.38**
3. PA as the search for excitement			-	.47**	.39**	.48**	.64**
4. PA as an Aesthetic Experience				-	.31**	.59**	.36**
5. PA as a Catharsis					-	.66**	.33**
6. The Overall Attitude of Students Regarding Physical Activities						-	.57**
7.Academic Performance							

*** P < .01*

The result of table 2 shows that attitude towards PA and exercise is found significant predictor of academic performance and contribute 31% of variance ($R^2 = .31$). In other words, attitude towards PA and exercise is significantly impact on academic performance.

Table-2:
The Impact of Attitude towards PA and Exercise on Academic Performance of School Students

	Academic Performance	
Predictors	B	95% CI
Constant	2.79**	[2.51, 2.97]
Attitude towards Physical Activities and Exercise	.56**	[.36, .76]
R^2	.31	
F	29.35**	

**p <.01; B for Unstandardized regression coefficient; CI for Confidence interval

The table 3 shows that the gender found that boys and girls are same in PA and exercise but significant differences in academic performance. Female students are more in academic performance than male.

Table-3:
Comparison between Male and Female Sample through Independent Sample t-Test among all variables

Variable	**Male (n = 154)**		**Female (n = 153)**			
	M	SD	M	SD	t	p
Physical Activities as a Social Experience	3.81	1.02	3.65	.79	1.47	.08
PA for Health and Fitness	3.32	.80	3.09	.76	1.05	.59
PA as the search for excitement	3.87	.84	3.51	.56	1.36	.22
PA as an Aesthetic Experience	3.63	.96	3.27	.73	1.50	.08
PA as a Catharsis	3.36	.84	3.07	.83	1.26	.12
The Overall Attitude of Students Regarding Physical Activities	3.54	.97	3.40	.41	1.03	.60
Academic Performance	53.50	8.93	61.32	7.69	8.41	.00

Discussion

Present research aims to investigate the effect of attitude towards PA and exercise on academic performance of school students. The results of current research are showing in table 1 for H_1 that reveal overall attitude of students regarding physical activities and exercise is significantly positively correlated with academic performance. Most of the previous researches have investigated According to Janssen and LeBlanc (2010) PA is a positive activity and positively effects on the cognitive, physical, social and psychological health on the school going individuals and adults. Singh, Uijtdewilligen, Twisk, Van Mechelen, and Chinapaw (2012) reported that physical activities are associated with overall health. In school-aged children, programs of physical activities help children to improve physical and mental health, grow social skills, and decrease risk-taking behaviors.

While, the results are showing in table 2 for H_2 that found the result of table 2 shows that attitude towards PA and exercise is found significant predictor of academic performance. In other words, attitude towards PA and exercise is significantly impact on academic performance. Past studies revealed that PA contributes to promote academic performance, cognitive benefits and neurological (Verburgh et al., 2014). Most of the previous investigations highlight the Biddle and Asate (2011) identified that separately from getting benefits from the PA it also effects on the physical body and improved medical conditions it is also contributing in the reduction of stress, depression and anxiety and it leads to the better self-esteem and self-confidence level.

The results reveal that H_3 in table 3 that conclude the overall that the gender found significant differences in academic performance. Female students are more in academic performance than male students. In past study, Gender difference in school is also measured, whereas, female school students in basic and secondary education were reported more academic performance than male school students (Lai, 2010; Tansel, 2002).

Conclusion

It is concluded that PA and exercise is significantly associated with academic performance

among school students. Students who more engage in PA and exercise, they secure better academic marks in their annual exams. Further, the results found that PA and exercise significantly impact on academic performance of school students. In gender, boys and girls are same in PA and exercise but girls are significantly better than boys in academic performance. This study would be helpful for physical teacher, coaches, psychologist, parents, and government agencies for policy making.

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