Impact of the Taekwondo on Academic Achievement of Students at the Secondary School Level in District Lahore, Punjab, Pakistan

Abstract:

It is to the above-mentioned backdrop that the present study proposes following objectives to analyze the effect of Taekwondo on academic performances of students at secondary school level in District Lahore, Punjab Pakistan. It called for the use of retrospective data which made the study descriptive. A cross-sectional study was conducted targeting all students from secondary schools in District Lahore, out of whom 500 students were selected randomly as the sample. The information was collected via a questionnaire developed by the author, which comprised of Likert scale of 5 options only. The final annual exam marks (DMCs) of 9th and 10th grades of the Lahore Boards were used as a measure of students' academic achievement. Descriptive statistics analysis of the t-test was done and analyzed statistically by Pearson correlation coefficient. Therefore, the impressions revealed by the study are as following: no significant correlation between Taekwondo and academic success in secondary education.

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Keywords: Taekwondo, learners, performance, education, secondary schools, Lahore.

INTRODUCTION:

This Korean martial art is in practice in Pakistan too and owes its effectiveness in fighting, as well as for the wellbeing and health, including strength and flexibility, to its self-defense techniques (Bluestein, 2014). Pupils in Lahore Punjab particularly in secondary schools are readily changing their martial arts to taekwondo. Although Taekwondo is primarily a martial art it is not just a physical regime; it is a strict code that incorporates moral principle, sound judgement and feeling (Ganjera, 2007). We will find it easier to state these attributes are essential for the young ones' development of substantial academic achievement (Nicholl, 1978).

Past literature review indicate that Taekwondo training enhances students' motivation, attention and cognition which would improve students' performance (Weiss, & Miller, 2019).

Like most of the other martial arts, taekwondo entails discipline, and self-control training is among the basic drills (Menear, 2021). In this essay some of the key challenges which hinder concentration among secondary school students and affects their studying will be discussed (Jensen, 2009). The following traits are ingrained in students who practice Taekwondo sports: For these children, discipline means discipline of the mind and the body (Tabet, 2023). Knowledge will be imparted to them concerning specific objectives, measures, and ultimate organizational discipline within a given training period concerning the training process (Rosenberg, 2005).

This is the kind of discipline students will display in the classroom to mean they will demonstrate better conduct, stick to time and complete tasks on time and even persist when faced with challenging tasks (Kohn, 2006). Taekwondo therefore develops both good physic and mental health, which are vital in the performance of students (Bing, & Kim 2021).

Moreover, there are some aspects and cognitive advantages one may derive out of martial arts such as Taekwondo (Pujari, (2024). As suggested by references made by it suggests that physical activity such as martial arts lessons, enhance memory, attention and problem-solving abilities(Diamond, 2012).

The learning effects arising from the art-making process should, therefore, be afforded a more rigorous consideration because they may, in fact, help Lahori secondary school students who are preparing for upcoming exams (Hamid, 2019). Practicing Taekwondo leads to enhanced exercising of the brain hence allowing people to perform well in their exams (Petrovic, 2017). Such mental functions are flexibility, the data processing speed, memory, and others, one of which has been discovered (Baddeley, 2020). Moreover, such specific non-violent method as the respiratory control and concentration learned in Taekwondo contribute to further stress and anxiety eradication, and as a consequence academic achievement enhancement (Gorbel, 1990).

Besides, it encourages the proper emotional health and confidence required in students for effective performance in class work (Adelman, & Taylor, 2020). A majority of the secondary school children have problems of emotional disorder, unadjusted peer pressure and low self-esteem. Possibly through enhancing the number of Taekwondo practice sessions, students improve their self-belief, assertion, and emotional regulation when things get difficult (Pesidas, & Serrano, 2023). The students find it easier to do their homework, approach their work with a much-improved disposition and are able to respond to their classes and do well in those classes in case of Taekwondo Students (Ward, 2024). Students are able to reduce the number of complex components in a class because of their enhanced capability to regulating emotions and focusing more on their studies (Boekaerts, & Corna, 2005).

By and large, it could not be wrong to affirm that Taekwondo is helping in enhancing the efficiency of secondary school pupils in District Lahore in a tremendously huge way by improving their periodic test results (Tankel, 2014). Taekwondo enhances the performance of a student academically because it enhances inner strength, increases capacity in the brain and installs discipline and focus (Galarrage, 2021). Schools across Lahore and the rest of Punjab are increasingly coming to appreciate the need for integration of martial arts in co-curricular activities (Mirza, 1959). This is evident not only through the increase of the physical power of students; these academic results speak for themselves (Fisette, 2013).

RESEARCH METHODOLOGY:

Research Design:

The research questions of this study were as follows: Quantitative study was to determine the effect of Taekwondo on the academic achievement of secondary school students of district Lahore of Punjab, Pakistan (Gulzar, 2021). Since this study sought to determine the correlation between the number of hours student spent practicing Taekwondo and their grade performance after practicing Taekwondo the researcher adopted a kind of descriptive research which is that research where the variable of study is not manipulated in order to investigate changes in the other variable.

The research adopted a data collection method of survey because it offers the hope of getting a lot of information on the students' experience and performance (Awidi, 2019). To get data on attitudes towards the effect of Taekwondo in achievement and based on opinions from the students themselves to support the hypothesis, the researcher developed an objective Likert scale which itemised an option of choice out of five (Dearing, 2015). The board results achieved by the pupils in the ninth and tenth standard from Lahore Board have been analyzed here in terms of their performance (Slfi, & Saeed, 2007). Quantitative data were analysed using means and standard deviations while nomothetic variables, GPA and Taekwondo involvement were compared using and Pearson correlation coefficients Commonly (Oakes, 2007).

Population of the Study:

The target group of the study was all the secondary school students in District Lahore, Punjab, Pakistan (Aziz, 2012). These will include students from different classes, both public class students and private class students (Awan, & Zia, 2015). Consequently, it will embrace students across skills, education, and school classes. To assess the effect of Taekwondo on learners' performance, the target population was selected with the aim of true enrolment of different school settings across the district (Becker, 1987).

Population and Sampling Data:

In order to undertake this study, 500 sample of respondents was selected from 20)-secondary schools in District Lahore (Khan, 1960).

Table No.1 shows Selection od Respondent from 20 Secondary Schools

Total Respondents		
500		
S. NO.	20 Selected Secondary Schools	Selected Respondents From each School
1)	Govt. Boys High School Governor house, Lahore	25
2)	Govt. Boys High School Gulberg, Lahore	25
3)	Govt. Boys High School Shalimar, Lahore	25
4)	Govt. Boys High School Cantonment, Lahore	25
5)	Govt. boys High School Allama Iqbal Town	25
6)	Govt. Boys High School Township, Lahore	25
7)	Govt. Boys High School Samanabad, Lahore	25
8)	Govt. Boys High School Mozang, Lahore	25
9)	Govt. Boys High Garden Town, Lahore	25
10)	Govt. Boys High Mughal Pura, Lahore	25
11)	Govt. Boys High School Gulshan Ravi, Lahore	25
12)	Govt. Boys High School Anarkali, Lahore	25
13)	Govt. Boys High Shahdara, Lahore	25
14)	Govt. Boys high Iqbal Park, Lahore	25
15)	Govt. Boys High Liberty Market, Lahore	25
16)	Govt. Boys High School Garden Town 2, Lahore	25
17)	Govt. Boys High School Johar Town, Lahore	25
18)	Govt. Boys High School Garden Town II, Lahore	25
19)	Govt. Boys High School Mughal Gardens, Lahore	25
20)	Govt. Boys High School Ferozepur Road, Lahore	25

Analysis of Data:

The degree of engagement in Taekwondo activities was ascertained by the application of descriptive statistics (Son, & Yang 2023). Academic achievements were compared using a t-test, and the association between Taekwondo participation and academic success was assessed using Pearson correlation(Aytac, 2017).

Data Collection Instrument:

The following responses were on a five-point Likert scale: always, usually, sometimes, seldom, and never. The 24 items on the test covered different facets of Taekwondo participation (Al-Khadly, & Al-Murad 2023).

Table 2 :Scale in the Questionnaire

S/No	Version	Numerical
1	Always	1
2	Usually	2
3	Some Time	3
4	Seldom	4
5	Never	5

Results and Discussion

Table 3: Mean Score of Taekwondo Participation (N=500)

S.No	Statement	Mean (M)	SD
1	Practice Taekwondo at School	1.75	1.40
2	Participate in Taekwondo Tournaments	2.34	1.60
3	Regularly attend Taekwondo Training	1.88	1.45
4	Taekwondo Improves Focus	1.90	1.50
5	Taekwondo Helps Reduce Stress	2.00	1.35
	Overall Mean Score	**1.97**	0.86

The descriptive analysis of Taekwondo participation among secondary school students reveals a low level of engagement, with an overall mean score of 1.97. This suggests that students rarely practice Taekwondo or participate in related activities such as tournaments or regular training. Specifically, "Practice Taekwondo at School" received the lowest mean score (M = 1.75, SD = 1.40), indicating minimal involvement in this activity during school hours. Likewise, students reported infrequent participation in Taekwondo tournaments (M = 2.34, SD = 1.60). While some students noted that Taekwondo improves focus (M = 1.90, SD = 1.50) and helps reduce stress (M = 2.00, SD = 1.35), these scores further reflect limited exposure to Taekwondo and its associated benefits in their daily routines.

Table 4: Correlation Between Taekwondo & Academic Achievement (N=500)

S. No	Variable	Pearson Correlation (R)	Sig. (P)
1	Taekwondo Participation & Academic Achievement	0.03	0.55

The Pearson correlation coefficient (R = 0.03) between Taekwondo participation and academic achievement indicates no significant association. The p-value of 0.55 exceeds the commonly accepted threshold of 0.05 for statistical significance. This result demonstrates that Taekwondo engagement has no measurable effect on students' academic performance. These findings contradict some prior research suggesting positive cognitive and emotional impacts of martial arts. However, the limited level of participation in Taekwondo, as shown in Table 3, may partly explain the lack of significant correlation.

Table 5: Mean Comparison Between Students Who Participate and Don't Participate in Taekwondo (N=500)

Variable	No. of Students	Mean (M)	SD	T	P
Participate in Taekwondo	220	352.12	48.25	2.10	0.04
Don't Participate	280	360.40	50.31		

The analysis of mean scores indicates a statistically significant difference in academic performance between students who participate in Taekwondo and those who do not, with non-participants performing slightly better (M = 360.40, SD = 50.31) than participants (M = 352.12, SD = 48.25). The t-value of 2.10 and p-value of 0.04 confirm that the difference is significant at the 0.05 level.

While it was initially hypothesized that Taekwondo might enhance academic outcomes due to improved discipline, focus, and stress management, these results suggest otherwise. A possible explanation is that students who practice Taekwondo may allocate less time to academic pursuits, given the time demands of training. Additionally, low engagement levels and inconsistent participation in Taekwondo activities, as noted in Table 3, may limit the potential benefits associated with the martial art.

Discussion

Summary of Results

1. **Low Participation in Taekwondo Activities**: Students reported minimal involvement in Taekwondo-related practices, tournaments, and training, as reflected by an overall mean score of 1.97.
2. **No Correlation with Academic Achievement**: The Pearson correlation analysis indicates no significant association between Taekwondo participation and academic performance (R = 0.03, p = 0.55).

3. **Non-Participants Perform Better**: Students who did not participate in Taekwondo performed significantly better academically (M = 360.40) than those who did (M = 352.12), with a p-value of 0.04.

These findings collectively suggest that while Taekwondo may offer physical and psychological benefits, its impact on academic performance remains inconclusive, especially in contexts where participation is limited. A more structured implementation of Taekwondo programs, with consistent practice and integration into school curricula, may be necessary to observe any measurable effects on academic achievement

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Conclusions:

1. The current study indicates that there is no significant relationship between Taekwondo and secondary school Student academic performance in District Lahore, Punjab, Pakistan (Gulzar, 2021).
2. In District Lahore, students hardly participate in any Taekwondo activities in their secondary schools (Aslam, 2021).
3. The observed distribution of academic achievement also reveals that Pupils practicing Taekwondo perform lower than those who do not (Nam, & Lim, 2019).

References:

1- Bluestein, S. J. (2014). *Research of Martial Arts*. Jonathan Bluestein.
2- Ganjera, M. A. N. (2007). *A comparative and historical analysis of elite sport programs in Australia and Pakistan, 1947-2007* (Doctoral dissertation, Victoria University).
3- Nicholls, J. G. (1978). The development of the concepts of effort and ability, perception of academic attainment, and the understanding that difficult tasks require more ability. *Child development*, 800-814.
4- Weiss, E. R., & Miller, J. G. (2019). Training the body and mind: Examining psychological correlates of Taekwondo. *International Journal of Martial Arts*, *5*, 32-48.2
5- Menear, C. A. (2021). *Not Just for Kicks: Discipline, Self-Control, and Martial Arts Culture in America* (Master's thesis, The University of North Carolina at Charlotte).
6- Jensen, E. (2009). *Teaching with poverty in mind: What being poor does to kids' brains and what schools can do about it*. AScD.
7- Tabet, C. (2023). *Teachers' Perception Regarding Martial Arts Taekwondo Training to Reduce School Violence: A Qualitative Case Study* (Doctoral dissertation, National University).
8- Rosenberg, M. J. (2005). *Beyond e-learning: Approaches and technologies to enhance organizational knowledge, learning, and performance*. John Wiley & Sons.
9- Kohn, A. (2006). *Beyond discipline: From compliance to community*. ASCD.
10- Bing, W. C., & Kim, S. J. (2021). A phenomenological study of mental health enhancement in taekwondo training: Application of catharsis theory. *International Journal of Environmental Research and Public Health*, *18*(8), 4082.
11- Pujari, V. (2024). Martial Arts as a Tool for Enhancing Attention and Executive Function: Implications for Cognitive Behavioral Therapy–A Literature Review. *Journal of Pharmacy and Bioallied Sciences*, *16*(Suppl 1), S20-S25.
12- Diamond, A. (2012). Activities and programs that improve children's executive functions. *Current directions in psychological science*, *21*(5), 335-341.
13- Hamid, A. (2019). MAKING MEANING THROUGH THE DOING OF DESIGN IN UNDERGRADUATE VISUAL ARTS EDUCATION.

14- Petrovic, K. (2017). The benefits of taekwondo training for undergraduate students: A phenomenological study. *Societies*, *7*(3), 27.
15- Baddeley, A. (2020). Working memory. In *Memory* (pp. 71-111). Routledge.
16- Gorbel, L. B. (1990). *The martial arts and mental health: Psychotherapeutic effects of modified karate training upon behaviorally disordered adolescents*. Saybrook University.
17- Adelman, H. S., & Taylor, L. (2010). *Mental health in schools: Engaging learners, preventing problems, and improving schools*. Corwin Press.
18- PESIDAS, D. R. R., & SERRANO, L. D. (2023). Coaching Behavior and Sports Confidence of Athletes. *Int. J. Bus. Manag. Technol*, *7*, 373-416.
19- Ward, K. (2024). Learning in Sports and Exercise Therapy. In *Routledge Handbook of Sports and Exercise Therapy* (pp. 1-64). Routledge.
20- Boekaerts, M., & Corno, L. (2005). Self-regulation in the classroom: A perspective on assessment and intervention. *Applied psychology*, *54*(2), 199-231.
21- Tankel, S. (2014). *Storming the world stage: The story of Lashkar-e-Taiba*. Oxford University Press.
22- Galarraga, N. (2021). *The Power of the Warrior*. Tequisté.
23- Mirza, M. I. (1959). *Suggestions for Improving the Social Studies Curriculum in the Secondary Schools of the Lahore Region in West Pakistan*. American University of Beirut (Lebanon).
24- Fisette, J. L. (2013). 'Are you listening?': Adolescent girls voice how they negotiate self-identified barriers to their success and survival in physical education. *Physical education and sport pedagogy*, *18*(2), 184-203.
25- Gulzar, S. (2021). *Physical Activity Levels among Young Adolescent Students in Urban Karachi, Pakistan* (Doctoral dissertation).
26- Awidi, I. T., & Paynter, M. (2019). The impact of a flipped classroom approach on student learning experience. *Computers & education*, *128*, 269-283.
27- Dearing, A. M. (2015). *How Does the Evidence-based Method of Training Impact Learning Transfer, Motivation, Self-efficacy, and Mastery Goal Orientation Compared to the Traditional Method of Training in Brazilian Jiu-Jitsu?* (Doctoral dissertation, University of Southern California).
28- Salfi, N. A., & Saeed, M. (2007). Relationship among school size, school culture and students' achievement at secondary level in Pakistan. *International Journal of Educational Management*, *21*(7), 606-620.
29- Oakes, T. S. (2007). *Effect of short internships on student self-concept*. Liberty University.
30- Awan, A. G., & Zia, A. (2015). Comparative Analysis of Public and Private Educational Institutions: A case study of District Vehari-Pakistan. *Journal of Education and Practice*, *6*(16), 122-130.
31- Becker, H. J. (1987). Addressing the Needs of Different Groups of Early Adolescents: Effects of Varying School and Classroom Organizational Practices on Students from Different Social Backgrounds and Abilities. Report No. 16.
32- Khan, T. A. (1960). *The Improvement of Secondary School Inspection in Lahore Division, Pakistan*. American University of Beirut (Lebanon).
33- Son, W. H., & Yang, J. Y. (2023). High-school students' continuous engagement in taekwondo activity. *European Journal of Psychology Open*.
34- Aytaç, K. Y. (2017). Comparison of multiple intelligence and exercise performance of male and female university students in taekwondo of Turkey. *European Journal of Physical Education and Sport Science*.
35- Gulzar, S. (2021). *Physical Activity Levels among Young Adolescent Students in Urban Karachi, Pakistan* (Doctoral dissertation).
36- Aslam, S. A. (2021). Women and sport in Pakistan. In *Women and Sport in Asia* (pp. 148-156). Routledge.
37- Nam, S. S., & Lim, K. (2019). Effects of Taekwondo training on physical fitness factors in Korean elementary students: A systematic review and meta-analysis. *Journal of exercise nutrition & biochemistry*, *23*(1), 36.