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Eight Weeks Training Effect on the Physical Fitness of Club Cricketers of Bahawalpur

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Abstract *The purpose of this study was to investigate the effect of strength training on the physical fitness of club cricketers. Data were obtained from the experimental group (n = 15) and control group (n = 15). The selected variables were speed, agility, flexibility, endurance, and standing broad jump. An eight-week exercise program was planned for the experimental group, and the control group usually continued routine exercise. Data were collected before the start and after the training program. Univariate analysis worked to determine the effect of training on the physical fitness measures. Results showed that the experimental group was significantly better in post-analysis in standing broad jump, endurance, agility, and flexibility. On the other hand, the control group was found uniform in the physical fitness test before and after data analysis. It was concluded that the physical fitness of club cricketers is associated with strength training.*

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Introduction

Fast bowling is seen by the speed and accuracy of the ball (Duffield, Carney, & Karppinen, 2009; Ferdinands, Marshall, & Kersting, 2010). It has been concluded that physical and technical skills and strength training improve the physical fitness and performance of cricket bowlers (Subramanya & Pasodi, 2011). In addition to cricket, strength training includes beginner shot putters (Zaras, Spengos, Methenitis, Papadopoulos, Karampatsos, Georgiadis, & Terzis, 2013), bowling throws (Zaras et al., 2016), and baseball (Freeston, & Rooney, 2014). Through training, athletes learn proper movements of faster body segments and speed up the ball (Escamilla et al., 2000; Feros, Young, & O'Brien, (2019) pull. A very positive correlation between ups is reported. Replication pole (1RM) intensity and bowling rate reported by club fast bowler. Meanwhile, researchers have reported that the suspension of certain muscles improves the performance of high-speed bowlers in cricket (Shorter, Smith, Lauder, & Khoury, 2010).

The role of strength training is to improve the strength of the upper body and increase the speed of fast bowlers. In addition to high training intensity, aerobic capacity also plays an important role in cricket bowling performance (Johnstone, Mitchell, Hughes, Watson, Ford, & Garrett, 2014). For example, the combination of frequent sprints and the shortest recovery time from birth to birth required higher endurance (Maunder, Kilding, & Cairns, 2017). Therefore, high-speed cricket bowlers require proper training to improve physical performance, such as strength, strength, and bowling efficiency (Johnstone, Mitchell, Hughes, Watson, Ford, & Garrett, 2014). Strength training emerges as a major contributor to the performance of cricket fast bowling. On the other hand, aerobic capacity has a significant influence on the bowling performance of the cricket fast bowlers. Although various studies are descriptive, it was recommended in the existing literature that strength training is essential for cricket fast

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bowling (Mukandi et al., 2014; Stronach et al., 2014) to improve the elite performance (Weldon et al., 2020), as well as to increase their physical capacity and express higher force at the time of ball release (Suchomel et al., 2016).

Most studies of fast cricket bowling explain where only the facts are disclosed (Lloyd, Alderson, & Elliott, 2000; Portus, Sinclair, BurkeMoore, & Farhart, 2000; Devlin, Fraser, Barras, & Hawley., 2001; Glazier, & Wheat, 2014; McNamara, Gabbett, Chapman, Naughton & Farhart, 2015; King, Worthington & Ranson, 2016). Much of the research on high-speed bowling of cricket was a cross-sectional, correlation, or multiple regression analysis between ball release velocities and biomechanical variables (Ferdinands, Marshall, & Kersting, 2010; Glazier et al., 2000; Loram, McKinon, Wormgoor, Rogers, Nowak, & Harden, 2005). There is a lack of experimental research to investigate the effect of strength training on the performance of high-speed cricket bowlers. Therefore, this study was designed to examine the effect of strength training on bowling speed and accuracy performance. This study helps physical education teachers and coaches learn how quickly bowler performance can be improved through training.

Methods and Material

The cricketers were deliberately selected from the city of Bahawalpur. These selected participants were the experimental group (n = 15) and the control group (n = 15). Pre-data was collected before the start of the training session, and post-data was collected at the end of the training session. The test was conducted at the Sand Cricket Pitch at Dring Stadium Bahawalpur in the Sir Sadiq Gymkhana Cricket Club. All participants were informed in detail about the process and purpose of data collection. The declaration of motivation was obtained from all participants by naming their voluntary cooperation. Before the start of the preliminary data, five meetings were held with selected participants to understand the procedure. It helped them show their extreme performance quality without the risk of injury. The experimental group was treated with strength training, and the control group started existing traditional cricket speed bowler training such as jogging for warming up and batting. Participants can withdraw their consent if they feel uncomfortable through their investment in the research process.

Data Collection Procedure

Physical fitness the speed of turning is strongly associated with the success of athletes (Keogh et al., 2003) based on previous studies (Ashraf, Ullah, Shah, Hussain, & Batool, 2019; Herridge, Turner, & Bishop, 2020; Elumalai, 2021). T-test was considered a successful test for examining athlete agility (Sporis, Juic, Milanovic, & Vucetic, 2010). Participants were lightly dressed in jogging shoes. The timekeeper was ready to record the run time of each competitor. A standing start was adopted to start a sprint run from Cone A. Athletes must walk 5 meters towards Cone B while the investigator is blowing the whistle. To reach point B, you need to change direction without stopping, perform a 5-meter dash towards cone C, and then turn with a 10-meter dash towards cone D. After reaching point D, the runner must return to cone B with a 5-meter run. To complete a 5-meter run, you need to change direction to Cone A and finish with a 5-meter run to reach the point on Cone B. Agility test at point A, which is also the starting point. When the player reached the finish point, the timer stopped, and he was unable to cross the cone while running or falling. The best effort from three effective trials was considered the final score recorded in seconds.

Flexibility tests the sit-and-reach test was introduced to investigate the recommended flexibility of high-speed bowlers (Johnstone & Ford, 2010; Singh & Singh, 2016). Warm-up time was given to all participants. Participants were instructed to take off their shoes, sit on a flat floor, spread their feet in front of their bodies, point the soles of their feet toward the base of the progression, and keep their toes and feet slightly apart. Bend your torso forward, spread your arms forward, measure the glider with your fingertips, slide the glider as far forward as possible without a jerk, find the ruler, and move it steadily forward at that point. It was held for 3 seconds, and the most successful effort of the last 3 trials was recorded as the final result. When separated from the hand is achieved, the score is recorded in centimeters. The long jump from a standing position shows the elasticity of the leg strength in a very short time. Commonly used to measure explosive leg strength (Krishnan et al., 2017). This test was performed according to the

guidelines (Pyne, Duthie, Saunders, Petersen, & Portus, 2006; Nazeer, Haq, & Habib, 2018). The test was directed to the long jump pit with a tape measure. The subject remains behind, taking disconnected with his feet a few inches away. Before jumping, participants lower their knees and swing their arms backward, then straighten their knees and swing their arms forward. Three heats were allowed, and measurements were taken from the nearest heel print to the jump point. A 30-yard dash test was introduced to diagnose the speed capability of high-speed bowlers as directed (Wickington, & Linthorne, 2017). Elite cricket matches are more complicated because faster parameter values are displayed by the player (Drozd, Krzysztofik, Nawrocka, Krawczyk, Kotuła, Langer & Maszczyk, 2017). Sport speed tests are usually controlled using a photocell or stopwatch for measurement (Earp, 2012). Fast bowlers run more than 20 yards to bowl the ball, so a 30-yard dash is considered. The performer was achieved with a 30 meter straight run at the standing start. Power was recorded in 0.01 seconds as a minimum.

The purpose of long-distance running is to test the stamina of a high-speed bowler. Endurance helps fast bowlers perform bowling spells at the same speed for longer periods (Primero et al., 1993). Then, using 600 meters, the endurance of high-speed bowlers was measured (Phillips, Davids, Renshaw, & Portus, 2014; Horridge, Turner, & Bishop, 2020). The motivation behind this test was to assess the cardiopulmonary endurance of the participants. The test targeted the ground with a 400-meter oval track. Athletes must complete 2.5 laps of 400 lanes. Durability values were recorded in seconds using a stopwatch with a minimum of 0.01. Daily lessons ranged from 60 to 90 minutes, including warm-up and internet bowling exercises. All subjects involved in this study were intentionally kept away from the wound throughout the preparation program.

Statistical Analysis

The random group design was the experimental design used in this study. Information on all selected variables was obtained at the end of the 8 weeks before and after training and all subjects were tested. Data collected from two groups on pre-and post-experiment velocity, agility, strength, endurance, bowling velocity, and bowling accuracy were statistically analyzed using univariate analysis. Two groups and seven separate test levels were compared, so whenever the resulting ratio value is related to a simple effect, apply the Scheffé test as a post-test, and if there is a mean difference between the pairs, that's it. In all cases, the significance level was set to .05. The normality of the data was tested using the Shapiro Wilk method, the reliability of all tests was examined using the intraclass correlation coefficient (ICC), and the statistical significance was limited to $P < 0.05$.

Interpretation of Results

This chapter described the detailed results of data analysis and research. This study was designed to find the effect of resistance training on the performance and fitness of fast bowlers in cricket under the age of 16.

Table 1. The Comparison of Physical Fitness in Pre-Post Analysis

	Experimental Groups		Control Group			
variables	Mean	Std. D	Mean	Std. D	F	Sig
S.B.J pre-test(feet)	6.79	0.39	6.56	0.37	13.28	0.00
S.B.J post-test (feet)	7.33	0.39	6.57	0.39		
speed pre-test	5.93	0.26	5.52	0.21	0.44	0.51
speed post-test	5.22	0.21	5.53	0.23		
Endurance Pre	4.33	0.14	4.31	0.10	4.95	0.03
Endurance post	4.07	0.28	4.31	0.06		
Agility pre	13.39	0.31	13.32	0.30	23.14	0.00
Agility post	12.27	0.39	13.28	0.27		
Flexibility pre	1.60	0.83	1.47	0.92	7.95	0.01
Flexibility post	3.20	1.01	1.60	0.83		

Significant values P<0.05

To this end, 30 men were randomly selected as subjects from 16 high-speed cricket bowlers from various cricket clubs in the Bahawalpur district, each with 15 experimental and control groups, or strength training. It was randomly divided into Group I and Group II. It acted as a control. Training time was limited to 8 weeks and 5 days a week. The reference variables selected for this study were speed, agility, strength, endurance, and flexibility. Selected physical and performance variables were evaluated before and after the 8-week resistance training period.

Discussion

Participation in recreation is a healthful exercise for dealing with ordinary activities. Since recreation calls for each victory and loss, it gives possibilities for people to come upon achievement and failure. And its miles assumed that the training from those interactions is unique and important. Sport varies from the relaxation of our lives in principle. One not often meets competitors in each day life. But in recreation, competitors are at once faced, ratings are frequently full, and while the video games are over, humans do now no longer doubt it. Actions in athletics have an ethical component this is normally most effective linked to a particular sports activities setting. And the outcomes of these acts, other than recreation, haven't any extreme importance to life. In phrases of 5 bodily health variables, organizations of u-sixteen cricket speedy bowlers of numerous cricket golf equipment of district Bahawalpur had been compared; leg strength is measured with the aid of using the status vast jump, persistence is measured with the aid of using six hundred m persistence take a look at, flexibility is measured with the aid of using sitting and attain take a look at, agility is measured with the aid of using T-take a look at and walking pace is measured with the aid of using 30 m dashes. The education software changed into predicted to take one consultation each day. The education agenda as offered withinside the bankruptcy on method changed into performed for the experimental organization. The experimental organization undertook its respective education software 5 days every week at some stage in the education period, further to its regular direction of observing software following its curriculum. Group-I underwent eight weeks of power education for five days every week and Group-II acted in manage. Data associated with this observation had been analyzed through the use of paired t-take a look at. According to (Thomas & Nelson, 1985), while the principal goal normally lies in interplay, the most effective dialogue of the interplay impact is appropriate, except there are any unique circumstances, hobby in trying out the principal outcomes is typically minimal. The result of the observation indicates that amongst under-sixteen cricket speedy bowlers in Bahawalpur district, the experimental organization, particularly power education accompanied with the aid of using cessation of bodily health and overall performance variables together with agility, pace, persistence, flexibility and bowling pace had considerable development of their overall performance. There changed into no important boom withinside the power education organization`s walking tempo and bowling tempo. In assessment to the manage organization, the benefit produced with the aid of using the power education organization changed into additionally determined to be extra in agility, flexibility, persistence, strength. The result indicated agility, flexibility, pace, and strength.

Conclusion

This study shows that there is no significant difference in velocity variables between the control and experimental groups. The results showed that high-speed bowler bowling speed was negatively predicted by five predictors of physical fitness and was not a significant predictor of high-speed bowler bowling speed. These results are inconsistent with research and several reasons affect their abilities, including physical health, malnutrition, family problems, mental health problems, and financial problems. In this study, strength training was performed to improve physical and performance variables. Therefore, coaches, coaches, and sports educators are encouraged to follow these insights to improve the physical and performance variables of the player. By selecting a biomechanical variable as the reference variable, the corresponding study can be performed. Similar studies can be attempted by selecting athletes or athletes as district or national level subjects. Similar studies can be performed on female subjects. Other games such as soccer and volleyball can be played with

similar analysis. Strength training is often suggested as a dependent variable such as bowling agility, flexibility, endurance, strength, and accuracy. Strength training is recommended for cricket coaches to improve the accuracy of bowling for fast bowlers.

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