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IMPLEMENTATION OF SEGMENT SPECIFIC TRAINING MODULES, A PART OF SPORT SCIENCE TECHNOLOGY WITH YO-YO TEST AS A BENCHMARK

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ABSTRACT

The purpose of the discovery was to assess the progress and performance of Fitness during the national camp for cricketers under nineteen years of age. For this purpose. the strength specific training modules with Yo Yo terst were implemented as a benchmark for cricketers belong to National cricket academy, Banglore. NCA camp was conducted for 3 weeks at the National Cricket Academy in the month of April-May 2019, During this camp 25 athletes underwent YoYo Test at the beginning of the camp and during the end of the camp. Segment Specific Training was implemented and the results were recorded to assess the progress and performance of Fitness during the camp. The results of the study indicated the good improvement among cricketers in Yo Yo test and overall strength levels .

Keywords: Strength, Conditioning, Training, Sport,, Rhythm, Lifting, LTP and MTP

1. INTRODUCTION

The following system of training is on U-19 NCA cricketers who have first taken up their Assessments and Tests to identify their current fitness levels. Based on their current level of fitness and their workload of Skill ie Batting, Bowling and Fielding the training programs were made.

Strength and Conditioning Programs and the Skill sessions were split into 3 Strength and Conditioning Sessions along with 3 Skill Sessions with 1 day Rest. The idea behind this format was that the players can give their best effort even in training and also in their skill session as it was an U-19 National Camp.

This method of training works best for Sports in Specific as the Workload of the players in Cricket or Football or Tennis is not fixed, What we mean to say is in a test match a bowler does not know how many overs he/she is going to bowl, A batsmen does not know whether he will get a double century or get out for a duck. A tennis player does not exactly know for how long their rally will take place. A football player does not know how many metres he/she is going to cover in a 90 minute Football game.

Structural Lifting for Sport involves selective Multi Joint Exercises where the Lower Extremities are fixed and the Spine is loaded while performing the Full range of motion. Performing the activity is always under the supervision of a Qualified Strength and Conditioning Specialist until the athlete has learnt and mastered these movements.

The mechanism of Jumping in a controlled environment is known as Plyometrics. This involves the Stretch Shortening Cycle of the working muscle and whole body is in motion during this activity.

A form of exercise which involves rapid contraction of the muscles designed to improve Strength, Speed and Athleticism of the players. This sort of action is common in all Sporting activities.

Conditioning or Outdoor Running with a Specified Distance to improve the rhythm. The benefits of rhythm runs are - 1..An increase in work capacity (bowler would be able to bowl the extra over or too in a spell in his usual speed. 2. Reduces the risk of stiffness related injuries amongst athletes.3. More work with less energy spent (Learn how this is done during SST or I-7 workshops). 4.An increase in speed endurance with reduced GRF (ground reaction force). 5. Strength meets Speed Rhythm meets Speed Endurance (How and Why can be cleared in SST Workshops)

2. METHODOLOGY

2.1 Sample

The respondents were divided into 3 batches for training, based on their skill i. e. Batsman, Spinners and All rounder and Fast bowlers. The duration of the session was around 60 minutes inclusive of Strength + Conditioning sessions. , During this camp 25 athletes underwent YoYo Test at the beginning of the camp and during the end of the camp

2.2 Training Session

The timing of Strength and Conditioning Sessions were either held in the morning or in the evening. Players were given a break of 5 minutes after completion of a Strength segment and then were followed by Conditioning.. The intensity and the Workload was decided based on the recovery and readiness to train for athletes.. Segment Specific Training is the key for designing a proper Program Design which is flexible and specific.

Activity	Strength+ Conditioning
Activity	Strength+ Conditioning
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2.3 Equipments Used

The Olympic Barbells , Bumper Plates , Kettlebells , Medicine Ball , Sports Training Platform and Plyo Boxes were taken fot the purpose of study.

2 4 Training Protocol

Segment Specific Training takes all these into consideration and Strength and Conditioning Programs are prepared to suit the needs of the athletes. The Players were divided into 3 Batches and First few sessions were spent on Coaching the right technique of Lifting and Running as these were relatively unfamiliar to them but the players did pick up the methods at a good pace.

TABLE 1
DESCRIPTION OF EXERCISES AND TIME PERIOD FOR WARMING UP, STRENGTH SESSION, CONDITIONING SESSION AND COOL DOWN FOR FIRST BATCH

Type of Session	Exercises	Duration
Warm Up	Warm up and Dynamic Stretching	12 minutes
Strength Session	Strength, Structural Strength Session, LTP	25-30 minutes
Conditioning Session	Rhythm Runs	15 minutes
Cool Down	Jog	5 minutes

TABLE 2
DESCRIPTION OF EXERCISES AND TIME PERIOD FOR WARMING UP, STRENGTH SESSION, CONDITIONING SESSION AND COOL DOWN FOR SECOND BATCH

Type of Session	Exercises	Duration
Warm Up	Warm up and Dynamic Stretching	12 minutes
Strength Session	Strength, Structural Strength, MTP	25-30 minutes
Conditioning Session	Rhythm Runs	15 minutes
Cool Down	Jog	5 minutes

TABLE 3
DESCRIPTION OF EXERCISES AND TIME PERIOD FOR WARMING UP, STRENGTH SESSION, CONDITIONING SESSION AND COOL DOWN FOR THIRD BATCH

Type of Session	Exercises	Duration
Warm Up	Warm up and Dynamic Stretching	12 minutes
Strength Session	Strength, Structural Strength, MTP	25-30 minutes
Conditioning Session	Rhythm Runs	15 minutes
Cool Down	Jog	5 minutes

2 4 Administration of Instrument

Complete readiness to train like an athlete/cricketer. The boys played 10 matches with a break of just one day, The players have trained and recovered well to play the matches in full swing.. YoYo scores of the players have improved as shown in the statistical analysis. Overall ability to execute the Strength and Conditioning of the players have improved . Execution and Understanding of the players about their own bodies have improved. Players who were not keeping well or had a niggle on that day of the test were being made to rest. The Yo Yo test was administered by a Qualified Strength and Conditioning Coach.

2 5 Statistical Analysis

Observational analysis was performed on the basis of secured score during the period of 21 days. Yo Yo scores were counted on 20/4/2019 and 11/5/2019 of all the selected athletes for the purpose of present investigation.

3. RESULTS

TABLE 4

SCORE INDICATION OF UNDER 19 YEARS OF AGE GROUP DURING TWENTY ONE DAYS CAMP OF FOURTH BATH ANNCA BATCH 4 ATHLETES AT BANGLORE KARNATAKA, INDIA

SL No	Name	20/4/19 YoYo Score	11/5/19 YoYo Score
1	Karan lal	16.1	16.5
2	Vatsal Sharma	16.1	16.6
3	Ayush Pandey	16.1	16.7
4	Prabhat Maurya (Recovered from Back Injury)	17.1	17.2
5	Taken	16.5	15.8
6	Aman Mokhade	17.6	17.8
7	Mandar Mahale	16.5	17.2
8	Swastik Samal	16.3	16.8
9	Rajvardhan Hangarekar	16.1	16.1
10	Sameer Rizvi	16.4	Fever
11	Pankaj Yadav	17.4	18.5
12	Rajath Chaudhary	16.1	17.3
13	Vamsi Krishna	16.2	16.8
14	Amit Shukla	16.2	16.3
15	Shivam Sharma	16.4	18.1
16	Anirudh Chaudhary	16.1	17.5
17	Sarukh Hossain	16.5	17.3
18	Salil	16.8	16.8
19	Nidish R	16.2	17.3
20	Jaymeet Patel	15.5	16.6
21	Priyesh Patel (Shoulder)	15.5	16.4
22	Suved Parkar	15.1	Ankle Injury
23	Pragnesh Khanpillewar (Recovered from his hamstring Injury)	15.1	16.1
24	Atharva Ankolekar (Recovered from Plantar Fasciitis)	15,2	16.1
25	Yuvraj	15.5	16.3

Table 4 reveals that segment specific training modules with yo yo test shown excellent improvement in strength and conditioning. Among cricketers of Serial . Number - 16, 17, 23, 24, 25, 19. But the serial number 4, 10 and 22 athletes were suffering with back injury, fever and ankle injury respectively, did not exhibited improvement. Rest of athletes did not exhibited good improvement in their strength and conditioning

4. DISCUSSION

From the results of analysis of data, it was noticed that each and every athlete had shown good improvement in Yo Yo test and overall strength levels except injured and ill athletes, .

5.CONCLUSION

Segment Specific Training, a part of Sports Science Technology has worked well on the players as the players have followed and learnt the right way to train and stay fit. The Players have played 10 matches of 50 overs each with a break of just one day between matches following the skill and fitness camp. The Segment Specific Training Programs were well learnt, followed by the players and have the matches in full swing.

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Courtesy: ***Sports Science Technology, Developed by Prashant Pujar, Indian Strength and conditioning expert, Banglore***