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Effect of three weeks individualized psychological skills training on archery performance of national level players of Chandigarh India

Ravinder Kumar and Sumit Saroha

Abstract
Research scholar's has selected the topic with the purpose to find out effects of three weeks individualized psychology skill training on archery performance of National level archery players. Psychological skill training is required by the player to endure in the game and sports. The PST is done to improve its function and enhance sports performance. For the purpose of present experiment study the purposive sampling method was used to select the archers as the subject. With the help of normal probability curve seven subjects were selected those who lies below the normal distribution. Keeping in view the purpose of the study, 07 National level archery players of Chandigarh were randomly selected, the age of subjects between 15-30 years old and the training age was above then two years. All subjects participated in state, national (school, junior, senior), All India Inter University level Competition. All archers belong to Archery academy named "Guru ki Mehar" which is located in sector 39, Chandigarh. Psychological skill training for three weeks was adopted to enhance sports performance of the players. Pre-test and Post-test were conducted. Standardized Psychological skills assessment scale was developed and standardized by Sharma and Sharma (2012) to test psychological skills among archers. Psychological skills assessment scale (PSAS), test the Arousal regulation, goal setting, Imagery, Attention, Motivation, Self-Awareness, Self-Confidence of the Archers. The results showed that in there are significant changes in arousal, goal setting, imagery and self-awareness when whole group is descriptive analysis (*p>0.05). There was no significant difference found in attention, motivation and self-confidence as we compare them in group, but there was change in percentage of variables. It was concluded that three week psychological skills training programme did increase the arousal, goal setting, imagery and self-awareness of the archers significantly. But in case of attention, motivation and self-confidence three weeks conditioning programme does not work significantly.

Keywords: psychological skills training programme, arousal regulation, goal setting, imagery, attention, motivation, self-awareness and self-confidence

1. Introduction
Psychology touches almost every aspect of our lives. Psychology has assumed an increasingly important role in solving human problems. Knowledge of Psychology is helpful events to people who do not plan to pursue it as a carrier. Studying Psychology provides insight into why people behave as they do. It also helps us better understanding our own thoughts, feelings behavior and attitudes and hopefully, it can strengthen our appreciation of and tolerance for the wide differences diverse and fascinating field-one that delves into virtually every aspects of the human behavior.

Psychology is a science that systematically studies the observable human behavior and its relation with the unseen mental process which go on inside the organism as well as external events in the environment. The primary aim of psychology it is to find the laws which relate Behavior to situation, conditions and other behaviors.

1.1 Sports psychology
The word psychology refers to the study of human behavior and the sports psychology that deals with behavior of the athletes and teams engaged in competitive sports.

Sports psychology is that branch of psychology which is intimately connect with human behavior on the play field both under practice and competitive situations, with a view to bring

about quality improvement in performance and maintain the same even during the stress of competition. It is the study of human behavior in sports settings with an emphasis on the mental aspects of behavior.

"Sports Psychology is the application of psychological principles to sports and physical activity at all level of skills improvement" (Browne and Mahoney) "sports psychology encompasses various branches of psychology as they are related to our ability to understand athlete performance, how to make it better and how to improve exercise programs." (Singer, 1991).

In simple terms sports psychology is the study of the effects of the psychological and emotional factors on sports performance and the effect of sports involvement on psychological and emotional factors. These psychological and emotional factor can fine turned and learned which can have a positive effect on athlete's performance in sports and his overall psychological and emotional makeup. Cox, H. Richard. (2002).

Sports psychology, in words of Singer, "encompasses research counselling/clinical, education, and practical/programmatic activities associated with understanding, explaining and influencing selected behavior of individual and group involved in high level activities". Sports psychology is striving hard to investigate athletic performance, to stability it, and to seeking on appropriate balance between psychological and psychological dimensions of performance.

1.2 Archery at the Olympics

Archery was first included in the Olympic Games in 1900. It was also Featured an the programmed in 1904, 1908 and 1920 before a 52 year hiatus until 1972 when it returned. Has remained an Olympic Programmed even since, with competition in men's and women's Individual & Team, reserve Archery.

1.3 Psychological skills training

PST is an individually designed combination of methods selected to attain psychological skills needs (Gill, 2000). There is no single idyllic PST package; each program must be individualized based on psychological state of the individual and the sports. To assemble a successful PST Program, it is important to distinguish PST Skills and PST methods.

2. Materials and Method

2.1 Participants

For the purpose of present experiment study the convenient sampling method was used to select the archers as the subject. With the help of normal probability curve seven subjects were selected those who lies below the normal distribution. The age of subject between 15-30 years old and the training age was above then two years. All subjects participated in state, national (school, junior, senior), All India Inter University level Competition. All archers belong to Archery academy named "Guru ki Mehar" which is located in sector 39, Chandigarh.

2.2 Selection of Variables

To assess the significant contribution of PST towards Archery Performance, by means of various mental skills preparation Methods providing training in Relaxation, Imagery, concentration, and Goal setting are the important factor. (Bennett and Pravitz, 1982) (Gauress, 1984) and (Unestahl, 1983) In the Present Study the following Psychological Skills-Relaxation, Imagery, Attention, Self-Confident, Self-talk and goal setting were used for the purpose of the study. Program includes the considerations, such as educational session, skill Development, Application and Evaluation. Performance, skill Acquisition and Psychological well-being are importance variable of the study as a these parameters the score of 6 round (36 arrow) before PST and after PST have been evaluated to assess the effect of individualized PST on the Archery performance. The valuables were as follow:

- Arousal Regulation
- Goal Setting
- Imagery
- Attention
- Motivation
- Self-Awareness
- Self-Confidence

2.3 Criterion Measures

Psychological skills assessment scale was developed and standardized by Sharma and Sharma (2012) to test psychological skills among archers. Psychological skills assessment scale (PSAS), test the Arousal regulation, goal setting, Imagery, Attention, Motivation, Self-Awareness, Self-Confidence of the Archers (Appendix-A).

2.4 Development of Training Program

An experimental Psychological Skills Training Program for ten days was developed for developing selected psychological skills such as Arousal regulation, Imagery, self-Confidence, Goal setting, Self-talk, Motivation, and self-Awareness for the Archers. Before developing the training program the relevant literature was studied and different methods for developing the selected mental skills were studied. On the basis of their advantages over the other methods, were incorporated in the training. Scholar also considered the best suitable mental exercises for Archery while preparing the training schedule and placed in the training program. Since, training program was developed for each selected psychological skills each variable had its own training program including various exercises to have an impact on the archer's performance. Since, the training was carried for three weeks and the level of performance of the subjects was ranging from the state to the National level. Scholar has incorporated more than one technique so to break the monotonous factor as well as to ensure that the subjects would show interest in learning new things to enhance their psychological skills. The following exercises were incorporated in the training under various heads.

2.4.1 Relaxation Training

Scholar incorporated relaxation training program every day before and after each training session daily relaxation log from each subject was recorded (appended in subject's logbook). Different techniques such as progressive muscles relaxation, breathing exercises, autogenic training and mantra meditation were integrated.

Progressive Muscle Relaxation (Mind to Muscle Relaxation) It is the procedure for first recognizing and then releasing tension in muscles.

Procedure

- Loosen your clothing, take off your shoes, and get comfortable.
- Take a few minutes to relax, breathing in and out in slow,

deep breaths.

- When you're relaxed and ready to start, shift your attention to your right foot. Take a moment to focus on the way it feels.
- Slowly tense the muscles in your right foot, squeezing as tightly as you can Hold for a count of 10.
- Relax your right foot. Focus on the tension flowing away and the way your foot feels as it becomes limp and loose.
- Stay in this relaxed state for a moment, breathing deeply and slowly.
- When you're ready, shift your attention to your left foot. Follow the same! Sequence of muscle tension and release.
- Move slowly up through your body, contracting and relaxing the muscle Groups as you go.
- It may take some practice at first, but try not to tense muscles other than those intended.

Progressive muscle relaxation sequence: Right foot, Left foot, Right calf, Left calf, Right thigh, Left thigh, Hips and buttocks, Stomach, Chest, Back, Right arm and hand, Left arm and hand, Neck and shoulders and then Face.

Script

1. "To begin, take three deep abdominal breaths, exhaling slowly each time, As you exhale, imagine that tension throughout your body begins to flow away".
2. "Clench your fists. Hold for 7-10 seconds and then release for 15-20 second Use these same time intervals for all other muscle groups.
3. "Tighten your biceps by drawing your forearms up toward your shoulders and "making a muscle" with both arms. Hold... and then relax".
4. "Tighten your triceps—the muscles on the undersides of your upper arms—by extending your arms out straight and locking your elbows. Hold... and then relax".
5. "Tense the muscles in your forehead by raising your eyebrows as far as you can. Hold... and then relax. Imagine your forehead muscles becoming smooth and limp as they relax".
6. "Tense the muscles around your eyes by clenching your eyelids tightly shut. Hold and then relax. Imagine sensations of deep relaxation spreading all around them".
7. "Tighten your jaws by opening your mouth so widely that you stretch the muscles around the hinges of your jaw. Hold... and then relax. Let your lips part and allow your j aw to hang loose".
8. "Tighten the muscles in the back of your neck by pulling your head way back, as if you were going to touch your head to your back (be gentle to avoid injury)". Focus only on tensing the muscles in your neck. Hold... and then relax. Since this area is often especially tight, it's good to do the tense-relax cycle twice.
9. Take a few deep breaths and tune in to the weight of your head sinking into whatever surface it is resting on.
10. Tighten your shoulders by raising them up as if you were going to touch your ears. Hold... and then relax.

Note: Sequence should takes 20-30 minutes the first time, may decrease the tir 15-20 minutes, (http://www.hypnos.co.uk/hypnomag/jacobson.htm).

2.4.2 Breathe Regulation Techniques

Exercise 1: Stimulating Breath Inhale and exhale rapidly through your ne keeping your mouth closed but relaxed. Your breaths in and out should be equal duration, but as short as possible. This is a noisy breathing exercise.

Try for three in-and-out breath cycles per second. This produces a quick movement of the diaphragm, suggesting a bellows. Breathe normally after each cycle. Do not do more than 15 seconds on your first try. Each time you practice the Stimulating Br you can increase your time by five seconds or so, until you reach a full min| (http://www.drweil.eom/drw/u/ART00521/three-breathing-exercises.html)

Exercise 2: Breath Counting Inhale & Exhale at the rate of 2:4, 4:8 & 5:10 begin the exercise, count "one" to yourself as you exhale. The next time you ex count "two," and so on up to "five." Then begin a new cycle, counting "one" on| next exhalation.)

Attention Training

Exercise 1: Mindfulness: "Close your eyes, take a deep breath, and relax your attention on one word related to your sport. Repeat it over and over again, and try to keep your mind focused on that one word only. If distracting thoughts come into your head, just let them float out again, and redirect your mind to your word. Once you are able to do this for five minutes, start practicing with distractions present, such as having a television or radio on".

Exercise 2: Grid exercise: the exercise requires a block grid containing two digit numbers ranging from 00 to 99. The object is to scan the grid within a set period of time(usually 1 or 2 minutes) and make a slash mark through as many sequential numbers as possible (00,01,02,03, etc.). People, who concentrate intensely, scan, and store relevant cues reportedly score in the upper 20s and into the 30s (in terms of how many numbers they find within 1 minute).

This exercise helps you learn to focus your attention and scan the environment for relevant cues and you can modify it for different situations. The person will be better able to block out distractions and focus exclusively on the task. (Harris, D. V, & Harris, B. L. (1984) [9].

Attention Grid

15	**32**	**83**	**43**	**27**	**36**	**46**	**93**	**02**	**33**
23	53	55	11	62	05	97	50	16	41
39	10	09	14	89	25	73	81	76	61
07	30	01	60	22	96	03	70	28	85
86	71	19	56	00	18	34	04	78	20
42	51	67	92	63	52	79	49	45	88
58	82	75	35	99	38	59	80	65	72
47	95	48	87	69	90	77	08	74	13
26	66	54	44	64	98	84	68	24	91
06	31	21	17	29	37	12	57	94	40

Exercise 3: search for relevant cues

Exercise 4: shifting attention refers to altering both the width and direction of attention over time. Steps are:

1. Concentrate on what you hear: "Pay attention to what you hear. Identify sound separately and label it. Next, broaden your focus and simultaneously listen to all the sounds together without 151 abeling them".

2. Concentrate on your body: "Pay attention to your bodily sensations, such as way you feel against the chair. Label each sensation as you notice it. Next, experience all the physical sensations together without 151abeling any particular

3. Concentrate on your mind: "Pay attention to your thoughts and feelings. Let each thought and feeling appear by itself. Next try to empty your mind, let go of thoughts and feelings, and relax".

4. Unassisted Zooming: "Open your eyes and take an object across the room in of you. While looking ahead, try to take in as many objects in your peripheral vision as you can. Now narrow your attention to this single object in front of you. Expand your attention gradually, as if you were zooming out a telephoto lens. Practice zooming in and out, narrowing and broadening your attention".

2.4.3 Self- Talk Training
Step (1): Notice Negative Thinking: Notice when you are thinking negative, stress inducing thoughts.
Step (2): Thought stopping: It involves concentrating on the undesired through.| Briefly and then using a cue or trigger to stop the thought and clear your mind. The trigger can be a simple word like "stop" or a trigger like hitting hand against initially its best to restrict thought stopping to practice situation. Whenever you thinking a negative thought, just say "stop" and clear your head.

Step (3): Changing negative self-talk to positive self-talk: e.g.: "I will never from this injury" to "healing takes time, just continue to exercise every day attention to what you speak)

Positive Self Talk (leads to positive emotions and controlled emotions helps in good concentration) "I will perform my routine with full efficiency" "I will keep my legs together" "Beam: I will keep my eyes forward"

Goal Setting Training
Step 1' SMART- Specific, Measurable, Action oriented, realistic, Timely and Self-determined
Step 2: Write the plans and keep a check over them (areas in which goal can be set-individual skills, fitness, playing time, enjoyment and psychological skills)

Example
Outcome goals: "I will improve my performance" "I will win that particular event" "Iwillchampion".

Performance goals: (on the basis of comparisons with one's own previous performances), "improve on execution part" "Reducing empty/pump/intermediate swings" "learning a new skill" "perfection in a learned skill"

Process goal: (Actions an individual must engage in during performance to execute or perform well.) "keeping toes stretched" "legs together" "push on vault" "maintaining correct position: tuck, pike, stretched ". Worksheet for the goal setting has been incorporated in subjects training log book.

Techniques of Imagery
1. Internal imagery and External imagery
2. Video tapes
3. Visualizing specific element with perfection
4. Visualize good performances given by the gymnasts
5. Visualization of Performing in competitive situations

2.4.4 Confidence Training
Exercise 1: confident situation and doubtful situations: To accomplish a noteworthy feeling of soundness in certainty, it is important to know precisely makes it vacillate. Isolating a page into two segments, first segment 'High-certainty circumstances' and the second 'Low-certainty circumstances'. In the first segment, list the greater part of the circumstances or circumstances in game in which you feel totally certain. In the second section, list the circumstance circumstances that occasionally cause your certainty to reduce. Unmistakably distinguishing the circumstances that make you feel uneasy is the initial move towards building more noteworthy fearlessness. It just serves to expand consciousness, Territories that can be made strides.

Exercise 2: Goal mapping: using goal setting worksheet, the self-evaluation will help the Archer to boost their confidence.

Exercise 3: Success Log: each subject was asked to write his/her success log of the day. Worksheet has been given in subjects logbooks

Day	Statements
Monday	1. I went for practice on time! 2. I was able to maintain good form through all practice session. 3. I scored good in evaluation etc.

Exercise 4: Using the power of sound
Music has unique properties, among which is its ability to inspire, motivate and i one's confidence. There are many tunes with inspirational lyrics or strong musical associations that you can use to increase your confidence before competition. One may like to try playing some tracks on then-mp3 player as part of a pre-event routine. If want to feel confident and keep physiological arousal low, select with a slow tempo (i.e. below 110bpm). Conversely, if want to psych-up, go for a higher tempo (i.e. over 110bpm), and build-up a tempo of over 130 bpm just before competing.

3. Administration of Training program
The research scholar after making an approach to the various training Centre, choose to conduct her research program at "Guru Ki Mehar" Sector 39, Chandigarh, as the owner of the Centre agreed to cooperate for training and had a sufficient number of gymnasts with participation at various levels from district to national level. The research scholar stayed at Chandigarh for 25 days to apply the three weeks PST program on archers, developed by the scholar. The developed training program was implemented in the following four stages:

Stage I: Rapport Development: The purpose of the initial meeting with the coaches and the gymnasts was to allow them to get acquainted with research scholar and to provide valuable and unique insights of the mental skills to the archers and coaches. Such small conversation helped scholar to create a rapport with players and coaches and ensured the friendly relation for an effective application of PST program.
Stage II: Pre PST evaluation: The next stage involved determining the mental strengths and weaknesses of each gymnast. This was accomplished through a 30-40 minute meeting with the gymnasts. During this meeting, they were asked to complete the PSAS questionnaires.

Stage III: Psychological Skills Training: In the third stage, the scholar provided archers with ten days psychological skills training. The PST session conducted continuous to develop areas / factors limiting the athlete's present

performance potential. The sessions lasted between 30 and 60 minutes. For each a separate handbook was prepared, which included a worksheet for all the activities were executing during PST sessions, all the responses and actions by the archer filed in handbook. The PST session included an exercise from each variable every day, which followed the sequence to start with relaxation followed by goal-setting, se imagery, attention and finally self-confidence exercises.

Stage IV: Application and Evaluation: PST program was applied on archers training for ten days and the archers developed an awareness of the Psychological Skills and began to practice the techniques or application of strategy under the of the scholar and or the coach. Evaluation of the gymnasts performance was done two edges, first in the beginning before starting the PST Program and other completion of PST Program so that the assessment of the effect of Program on archers performance could be done and their score evaluated.

3.1 Training Program

Education/Awareness

- Coaches
- Athletes

Assessment

- Observation Analysis
- Performance Analysis

Psychological Skills Training

- Arousal Regulation
- Goal-Setting
- Imagery
- Attention
- Motivation
- Self-Awareness
- Self-Confidence

Implementation of the Program

Awareness Implementation of PST & Intervention
Monitoring/Assessment
Leads to Enhanced Performance (Adaptation to Training)

3.2 Collection of Data

In the present study data was collected as per the schedule in three phases from the regular trainee Archers, selected as the subjects for the purpose of the study, from "GURU KI MEHAR" Academy Sector - 39, Chandigarh, India. Scores of pre-test and post-test were collected to evaluate the effect of Psychological Skills Training program on the performance.

3.3 Statistical Techniques

Data is collected twice (pre and post), by the using of (PSAS), exploratory factors analysis was employed separately on each sub scale.

To analyze the effect of the PST on the psychological skills of the archer's descriptive statistics was employed with T-Test.

Percentage was computed to examine the change in score of the pre and post data.

The data was collected twice in total, one before giving the individualized psychological skills training (pretest), and the next data was collected after the implementation of three weeks intervention program which was given to the subjects. The analysis was done through descriptive statistics and t-test. Results of the statistical technique applied on each psychological variable are depicted in the following table1.

Table 1: Descriptive statistics of each psychological variable for the training group

S. No.	Variables		Mean	Std. Deviation	Std. Error Mean	't'	Sig. (2-tailed)
1.1	Arousal	Pre	16.000	3.2146	1.2150	3.501	.013
		Post	19.571	.9759	.3689		
1.2	Goal Setting	Pre	10.429	2.0702	.7825	3.361	.015
		Post	12.714	.7559	.2857		
1.3	Imagery	Pre	16.714	1.7995	.6801	3.333	.016
		Post	18.143	1.0690	.4041		
1.4	Attention	Pre	12.429	3.4572	1.3067	2.231	.067
		Post	15.286	.4880	.1844		
1.5	Motivation	Pre	17.429	1.2724	.4809	1.549	.172
		Post	18.000	1.1547	.4364		
1.6	Self – Awareness	Pre	19.286	2.0587	.7781	3.122	.021
		Post	21.143	.8997	.3401		
1.7	Self – Confidence	Pre	13.286	3.9881	1.5074	2.265	.064
		Post	18.143	1.0690	.4041		

Table 1, S.no.1.1, Indicates the descriptive statistics of pre and post-test of the group on Arousal. The Mean value of pre and post-test were 16.000 and 19.571, The SD was 3.2146 and 0.9759. It was evident from the table that there was significant difference found between pre and post-test data of the group on arousal as't' 3.501, $p>0.05$. It means the score of subjects on Arousal was differing significantly.

Table 1, S.no.1.2, Indicates the descriptive statistics of pre and post-test of the group on goal setting. The Mean value of pre and post-test were 10.429 and 12.714, The SD was 0.7825 and 0.2857. It was evident from the table that there was significant difference found between pre and post-test data of the group on arousal as't' 3.361, $p>0.05$. It means the score of subjects on goal setting was differing significantly.

Table 1, S.no.1.3, Indicates the descriptive statistics of pre and post-test of the group on imagery. The Mean value of pre and post-test were 16.714 and 18.142, The SD was 1.7995 and 1.0690. It was evident from the table that there was significant difference found between pre and post-test data of the group on arousal as 't' 3.333, $p>0.05$. It means the score of subjects on imagery was differing significantly.

Table 1, S.no.1.4, Indicates the descriptive statistics of pre and post-test of the group on Attention. The Mean value of pre and post-test were 12.429 and 18.143, The SD was 3.4572 and 0.4880. It was evident from the table that there was no significant difference found between pre and post-test data of the group on arousal as 't' 2.231, $p>0.05$. It means the score of subjects on Attention was not-significant.

Table 1, S.no.1.5, Indicates the descriptive statistics of pre and post-test of the group on motivation. The Mean value of

pre and post-test were 17.429 and 18.000, The SD was 1.2724 and 1.1547. It was evident from the table that there was no significant difference found between pre and post-test data of the group on arousal as 't' 1.549, $p<0.05$. It means the score of subjects on motivation was not-significant.

Table 1, S.no.1.6, Indicates the descriptive statistics of pre and post-test of the group on self-awareness. The Mean value of pre and post-test were 19.286 and 21.143, The SD was 2.0587 and o.8997. It was evident from the table that there was significant difference found between pre and post-test data of the group on arousal as 't' 3.122, $p<0.05$. It means the score of subjects on Arousal differ significantly.

Table 1, S.no.1.7, Indicates the descriptive statistics of pre and post-test of the group on self-confidence. The Mean value of pre and post-test were 13.286 and 18.143, The SD was 3.9881 and 1.0690. It was evident from the table that there was no significant difference found between pre and post-test data of the group on arousal as 't' 2.265, $p<0.05$. It means the score of subjects on self-confidence was not-significant.

Table 2: Indicates the pre and post score of the particular subjects on Arousal

No. of Subjects	Score		Percentage Change
	Pre	Post	
1	14	18	22.00
2	12	19	36.08
3	13	20	35.00
4	17	20	15.00
5	20	20	00.00
6	20	21	04.76
7	16	19	15.20

The intervention was given to subject no. 1, 2 and 3 with a percentage improvement of 22.00%, 36.08% and 35.00% respectively. This shows that the individualized PST was highly effective in improving the arousal of the particular subjects. Graphical representation of the data is presented in Figure 1.

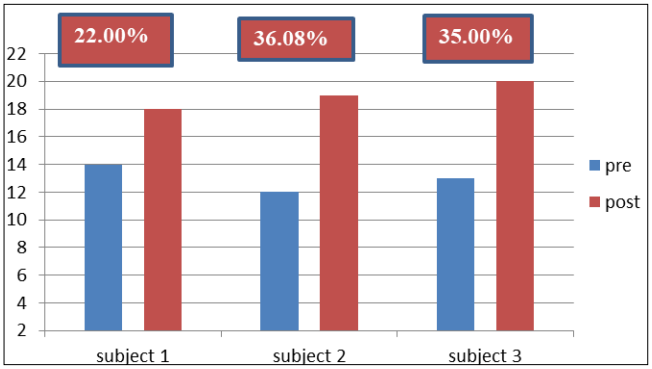

Fig 1: Percentage Change of Arousal

Table 3: Indicates the pre and post score of the particular subjects on Goal Setting

No. of Subjects	Score		Percentage Change
	Pre	Post	
1	14	18	22.00
2	12	19	36.08
3	13	20	35.00
4	17	20	15.00
5	20	20	00.00
6	20	21	04.76
7	16	19	15.20

The intervention was given to subject no.1and 3 with a percentage improvement of 33.30%, and 38.00% respectively. This shows that the individualized PST was highly effective in improving the Goal setting of the particular subjects. Graphical representation of the data is presented in Figure 2:

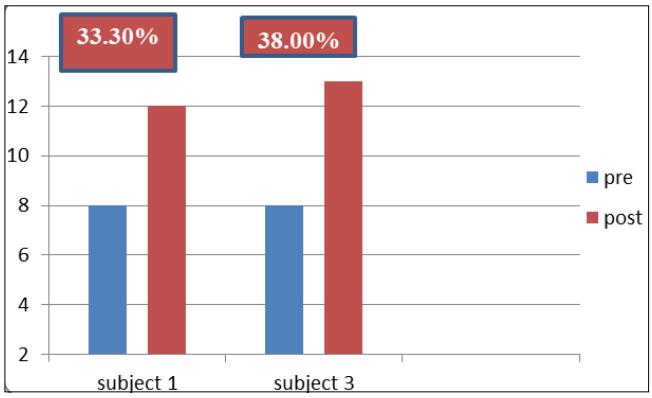

Fig 2: Percentage Change of Goal Setting

Table 4: Indicates the pre and post score of the particular subjects on Imagery

No. of Subjects	Score		Percentage Change
	Pre	Post	
1	16	18	11.11
2	17	19	10.50
3	19	20	05.00
4	18	19	05.00
5	18	18	00.00
6	14	17	17.60
7	15	17	11.70

The intervention was given to subjects' no. 6 and 7 with a percentage improvement of 17.60% and 11.70% respectively. This shows that the individualized PST was highly effective in improving the Imagery of the particular subjects. Graphical representation of the data is presented in Figure 3:

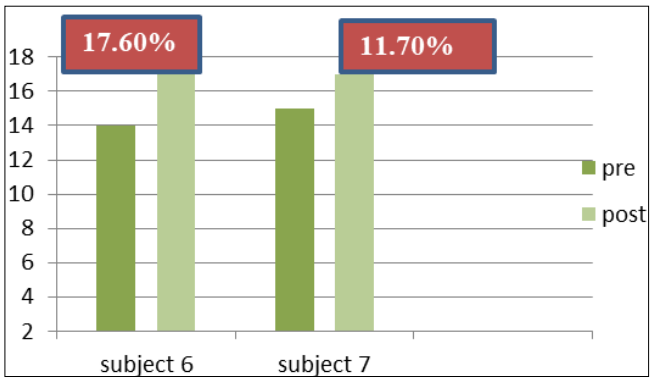

Fig 3: Percentage Change of Goal Setting

Table 5: Indicates the pre and post score of the particular subjects on Motivation

No. of Subjects	Score		Percentage Change
	Pre	Post	
1	05	15	66.66
2	12	16	25.00
3	14	15	06.60
4	13	17	23.50
5	13	15	13.30
6	15	15	00.00
7	15	16	06.25

The intervention was given to subject no.1 with a percentage improvement of 66.66% respectively. This shows that the individualized PST was highly effective in improving the Attention of the particular subject. Graphical representation of the data is presented in Figure 4:

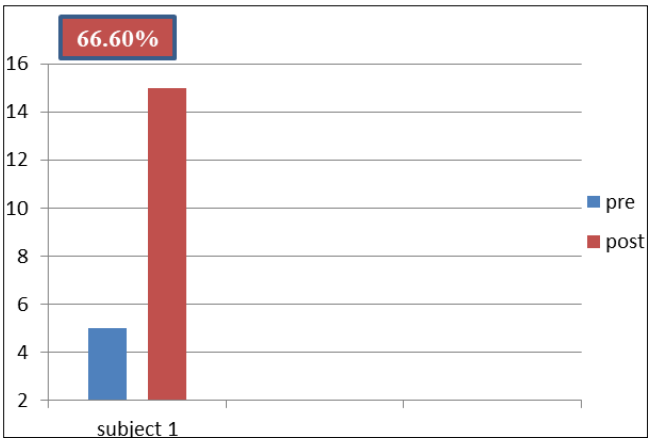

Fig 4: Percentage Change of Goal Setting

Table 6: Indicates the pre and post score of the particular subjects on Motivation

No. of Subjects	Score		Percentage Change
	Pre	Post	
1	20	20	00.00
2	16	18	11.11
3	17	19	10.50
4	17	18	05.50
5	17	17	00.00
6	18	18	00.00
7	17	17	00.00

The intervention was given to subject no. 2 with a percentage improvement of 11.11% respectively. This shows that the individualized PST was highly effective in improving the Motivation of the particular subjects. Graphical representation of the data is presented in Figure 5:

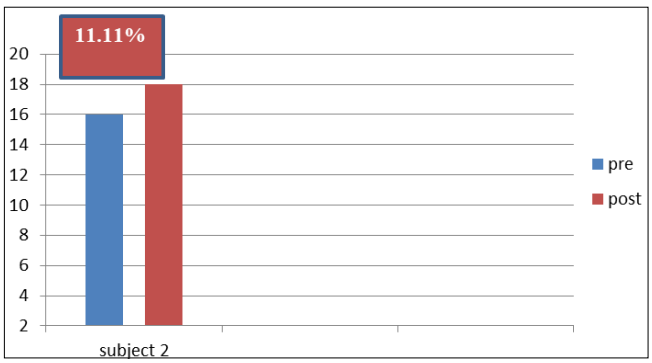

Fig 5: Percentage Change of Goal Setting

Table 7: Indicates the pre and post score of the particular subjects on Self – Awareness

No. of Subjects	Score		Percentage Change
	Pre	Post	
1	19	21	09.50
2	18	21	14.20
3	19	20	05.00
4	18	19	05.20
5	17	21	19.00
6	23	23	00.00
7	21	21	00.00

The intervention was given to subjects' no. 2, 4 and 5 with a percentage improvement of 14.20%, 05.20% and 19.00% respectively. This shows that the individualized PST was highly effective in improving the Self-awareness of the particular subjects. Graphical representation of the data is presented in Figure 6:

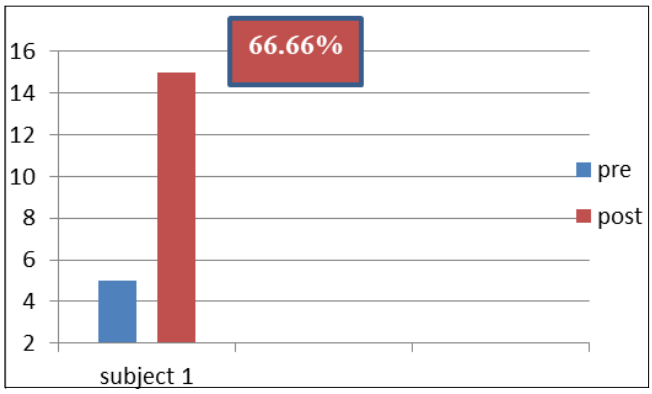

Fig 6: Percentage Change of Self-Awareness

Table 7: Indicates the pre and post score of the particular subjects on Self – Confidence

No. of Subjects	Score		Percentage Change
	Pre	Post	
1	05	15	66.60
2	12	16	25.00
3	14	15	06.60
4	14	16	12.50
5	15	16	06.25
6	17	18	05.50
7	16	17	05.88

The intervention was given to subject no. 1 with a percentage improvement 66.60% respectively. This shows that the individualized PST was highly effective in improving the Self-confidence of the particular subject. Graphical representation of the data is presented in Figure 7:

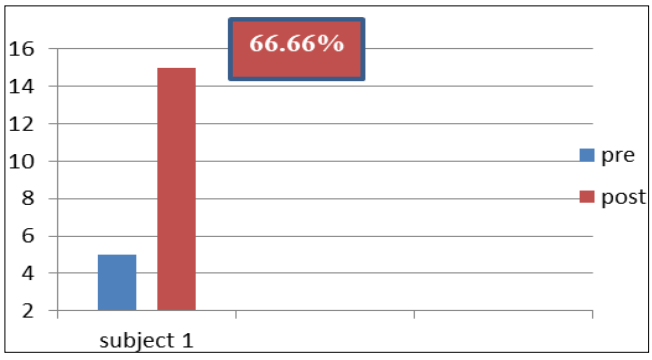

Fig 6: Percentage Change of Self – Confidence

4. Discussion and Findings

To determine the effect of Individualized PST among archers. The study involved providing psychological interventions of Arousal, Goal Setting, Imagery, Attention, Motivation, Self-Awareness and Self Confidence to selected individuals based on the pretest scores which reflected their psychological skills state. The intervention was given to those individuals who did not possess adequate level of these psychological variables. This was assessed using normal probability curve with the help of psychological skills assessment scale by Sharma and Sharma (2012) (PSAS). After the intervention program was implemented on the subjects the post test data. The required

statistical calculation was computed using the SPSS software. The data was collected and analyzed using descriptive statistics and 't' test as statistical techniques. The level of significance was set at 0.05. The 'p' value of group's arousal was 0.013 which was found significant at .05 level of confidence which indicates that there was a significant difference between pre and post-test. The pre-test mean and SD was 16.000 & 3.2146 respectively and post-test mean and SD was 19.571 & 0.9759 respectively.

The percentage improvement was recorded to be 22.00%, 36.08%, 35.00% indicating significant positive change in arousal regulation.

The 'p' value of group's Goal Setting was 0.015 which was found significant at .05 level of confidence which indicates that there was a significant difference between pre and post-test. The pre-test mean and SD was 10.429 & 2.0702 respectively and post-test mean and SD was 12.714 & 0.7559 respectively.

The percentage improvement was recorded to be 33.30%, 38.00% indicating significant positive change in Goal Setting.

The 'p' value of group's Imagery was 0.016 which was found significant at .05 level of confidence which indicates that there was a significant difference between pre and post-test. The pre-test mean and SD was 16.714 &1.7995 respectively and post-test mean and SD was 18.143 &1.0690 respectively.

The percentage improvement was recorded to be 17.60%, 11.70% indicating significant positive change in Imagery.

The 'p' value of group's attention was 0.067 which was found non-significant at .05 level of confidence which indicates that there was a significant difference between pre and post- test. The pre-test mean and SD was 12.429 & 3.4572 respectively and post-test mean and SD was 15.286& 0.4880 respectively.

The percentage change in individualized PST was recorded to be 66.66 % of the particular subject indicating a positive change in attention.

The 'p' value of group's motivation was 0.172 which was found non-significant at .05 level of confidence which indicates that there was a significant difference between pre and post-test. The pre-test mean and SD was 17.429& 1.2724 respectively and post-test mean and SD was 18.000& 1.1547respectively.

The percentage change in individualized PST was recorded to be 11.11% of the particular subjects indicating a positive change in motivation.

The 'p' value of group's Self-Awareness was 0.021 which was found significant at .05 level of confidence which indicates that there was a significant difference between pre and post-test. The pre-test mean and SD was 19.286 &2.0587 respectively and post-test mean and SD was 21.143 & 0.8997 respectively.

The percentage improvement was recorded to be14.00%, 05.20%, and 19.00% indicating significant positive change in Self Awareness.

The 'p' value of group's motivation was 0.064 which was found non-significant at 0.05 level of confidence which indicates that there was a significant difference between pre and post-test. The pre-test mean and SD was 13.286 & 3.9881 respectively and post-test mean and SD was18.143 &1.0690 respectively.

The percentage change in individualized PST was recorded to be 66.60 % of the particular subjects indicating a positive change in Self Confidence.

4.1 Discussion of Hypothesis

1. Earlier the investigator had formulated the hypothesis that Psychological skills training have significant effect on the performance of the Archers.
2. There will be significant Improvement in the arousal, goal setting, imagery and self-awareness of the subjects. But there is no significant difference in attention, motivation, self-confidence. So the hypothesis is partially accepted.

5. Conclusions

Within the delimiting and limiting of the study, following conclusion has been drawn:

1. The result of the current study suggest that archers who engaged in PST program (Performance enhance techniques) depicts an improvement in their performance.
2. The descriptive analysis and the graphical representation reveal that there was improvement in percentage of every variable.
3. There are significant changes in arousal, goal setting, imagery and self-awareness when whole group is descriptive analysis.
4. There was no significant difference found in attention, motivation and self-confidence as we compare them in group, but there was change in percentage of variables.

6. Recommendations

- PST can be used by the coaches and by the archers themselves for the enhancement of the archer's performance.
- Specific psychological skill of the archers can be improved by using various methods.
- Similar study maybe conducted on different sports.

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