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AWARENESS OF KNOWLEDGE, ATTITUDE, PRACTICE OF SPORTS SPECIFIC PHYSICAL THERAPY TRAINING AND MENTAL MOTOR IMAGERY TECHNIQUE IN TENNIS PLAYERS OF AGE GROUP 13-25 YEARS.

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Abstract: This study has been undertaken to find out awareness of knowledge, attitude and practice of sports specific physical therapy training and mental motor imagery technique in tennis players of age 13-25 years. To reduce the risk of injuries and to increase the strength and flexibility sport specific physical therapy training can be helpful. Also, athlete requires mental calmness along with physical fitness. Mental motor imagery technique may reduce the amount of physical practice time needed to improve sport performance. In this study we asses 150 tennis players. Out of total, 77% were Male and 23% were Female. The study showed that only 14% tennis players are aware of Sport specific Physical Therapy and only 09% players are aware of Mental Motor Imagery Training.

Key words: Sport Specific Physical Therapy, Mental Motor Imagery Technique, Tennis players

Introduction:

Tennis is one of the most popular sport with participating in more than 200 countries without being restricted by age, gender and some other background. The tennis players require combination of technical, tactical, and physical variables and psychological determinants. In this manner, performance requires highly developed motor skills like strength, power, agility, reaction speed, co-ordination. [1,2] Therefore, tennis is classified as intermittent high intensity sport. Integration and coordination of different skills is required for changes of direction, movements, and reaction time to move when the tennis match is analysed. [1] Tennis requires high aerobic and anaerobic demand, with repetitive stresses through a variety of strokes and movements. As a result, they are more likely to injuries which includes chronic overuse conditions and acute traumatic injuries [3]

Agility is one of the most important key in tennis players where player speed-up, slow down and constantly change the direction-all the while maintaining balance and control. Reaction time is important to playing at higher level, where the ball tends to travel much faster. This means that players have to make decisions and react to the ever-changing directions of the ball within a second. Having quick reactions may mean that they have more time to make better decisions regarding next move, balance themselves better before striking the ball, performing strokes more effectively. In tennis, for hitting the ball, hand-eye coordination is required. Also, eye coordination gives the ability to hit the tennis ball in a precise position on the tennis racket. Players need to develop the power to apply their skills, and strength to maintain high levels of application throughout the entire match. [4] Strength and stamina are two important factors for the correct execution of different tennis strokes. The athletes in all sport category do some resistance training in order to increase or at least maintain their general strength. [2] These days training with resistance band to increase strength is very popular. By proper training program design, strength training can be helpful and effective for players growth as long as it is supervised and performed carefully, and it will not cause any injury. [5] Studies have shown that, training with resistance under supervision, increases the strength in athletes, improves athletic performance, flexibility and reduces the risk of overuse injury. To reduce the risk of injuries and to increase the strength and flexibility sport specific physical therapy can be helpful.

Unlike other sports, tennis matches do not have time limit. Therefore, athlete needs mental calmness and different strategies along with strength to win the game. And mental motor imagery helps to keep the mind calm and think of different strategies. Basically, imagery is recreating images in one's mind that mimic skills, experiences, situations that might not actually be present. The purpose of mental imagery is to produce the athletic experience so accurately that players feel as if they are actually performing the sport. [6] Mental imagery can be used before, during and after both practices and competitions. Before competitions it can be used to preview the strategies and past successes, during competition it can be used for skill execution and after competition it is used to see the good and bad aspect of performance. Imagery has 2 types-External and Internal. External visualisation is helpful when performing tasks

like learning a movement, and when body coordination is important, as the imagery is presented with a view of how the movement should be performed. In this athlete visualise third person playing the sport and observing that how he is playing. Internal imagery is useful for open skills when timing is important. In this athlete visualise themselves playing the sport and experiencing those sensations. Recent studies have said that incorporation of motor imagery training program in to athletes regular training program could help to enhance athletic performance, for example of free throws and serves [7,8] Both the training together might help to increase strength, enhance the performance and achieve the goals. As a part of sports medicine team, aim of the physiotherapist is to reduce the chances of injuries and enhance athlete's physical performance outcomes. We aimed to answer 2 questions: First, are athletes aware about sports specific physical therapy and are they practicing it? Second, do they know about mental motor imagery technique and are they practicing it?

Methodology and Procedure:
No. of Participants – 150
Inclusion criteria: -
Age: - 13 yr. to 25 yr.
Both the genders
Players having experience more than 2 years
Exclusion criteria:
Tennis experience: - less than 2 years

Outcome Measures: Self-designed Questionnaire: which has 3 units; knowledge, attitude and practice.

Procedure:
Permission was taken from the concerned ethical committee of Tilak Maharashtra Vidyapeeth and various Tennis clubs was approached across Pune. The aim and objectives were explained to the participants. Consent form and Questionnaire was given to the participants. Data analysis was done after the collection of the samples.

Results and Discussion:
The data was collected and statistical analysis was done.

Sport Specific Physical Therapy:

A) Knowledge: Table No. 1: Awareness of Sport Specific Physical Therapy

Awareness of Sport Specific Physical Therapy	No. of players	Percentage
Yes, I heard and I have knowledge of what it is	06	04%
Yes, I heard but don't know what exactly it is	15	10%
No, I don't know about it	129	86%

Interpretation: - Out of total, only 4% of players have knowledge of sport specific physical therapy, 10% of players have heard about sport specific physical therapy but don't know what exactly it is and 86% of players don't know about sports specific physical therapy.

B) Attitude: Table No. 2: Attitude about sport specific physical training

Attitude about sport specific physical training	Yes	No	Sometimes
Whether sport specific physical therapy will increase strength	146 (97%)	00 (00%)	04 (03%)
Whether sport specific physical therapy helpful for practicing Ten strokes / serves more accurately/ precisely	107 (71%)	00 (00%)	43 (29%)
Whether sport specific physical therapy should practice daily	137 (91%)	00 (00%)	13 (09%)
Knowledge about different Sport specific physical therapy practiced	24 (16%)	117 (78%)	9 (06%)

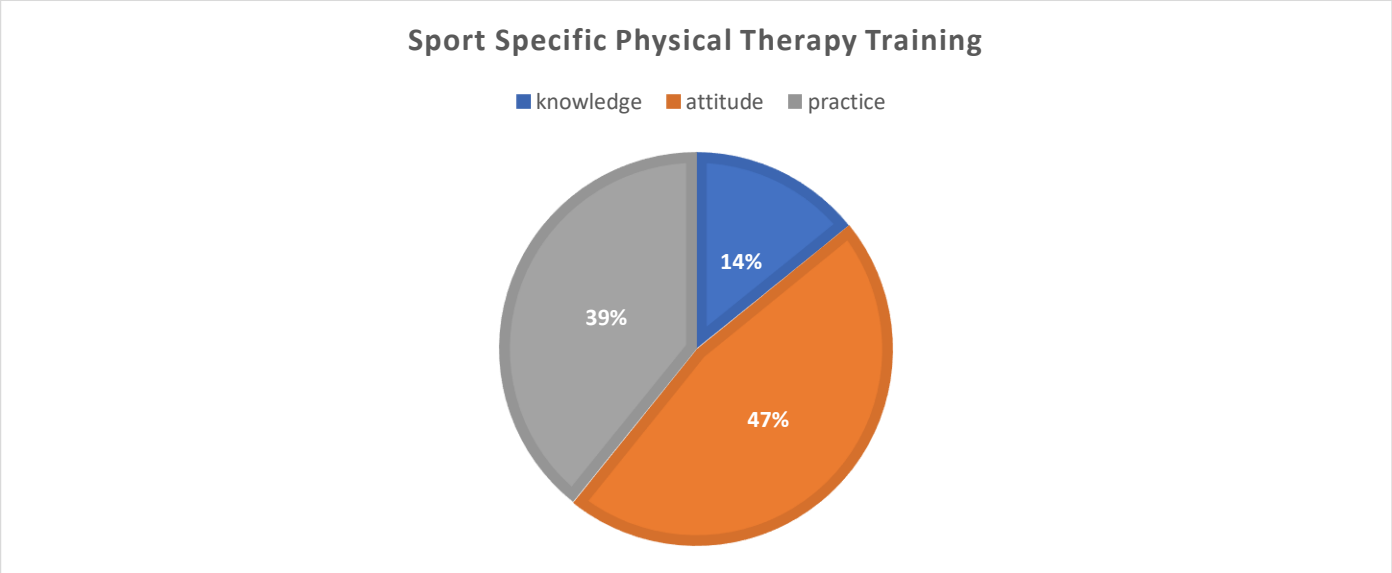
Interpretation: In table 3, 97% players think sport specific physical therapy will increase Strength, 71% think this training is helpful for practicing strokes more precisely, 91% players think sport specific physical therapy should be practice daily. and on the other hand, 03% are not sure about increasing strength, 29% are not sure about accuracy in strokes and 09% players think sport specific physical therapy should be practice sometimes. also, only 16% players know about different sport specific physical therapy which are practiced, 78% don't know anything and 06% players have heard of different sport specific physical therapy which are practiced.

C) Practice: Table No. 3: Practice of Sport Specific Physical Training

	Yes	Sometimes	No
Participation in normal training due to injury	24 (16%)	48 (32%)	78 (52%)
Participation in in competition due to injury	76 (51%)	33 (22%)	41 (27%)
Sport specific physical therapy as a part of daily training	131 (87%)	19 (13%)	00 (00%)
Practicing the technique	118 (79%)	32 (21%)	00 (00%)

Interpretation: Above table shows, among all the players 16% players can participate in normal training without any injury,32% players can participate but with minor injury and 52% players cannot participate because of injury. 51% players can participate in competition without any injury, 22% can participate with minor injury and 27% cannot participate because of injury. 87% players like

sport specific physical therapy as a part of daily training. 79% players would like to practice sport specific physical therapy and 21% are not sure of practicing.



Mental Motor Imagery Technique:

A) Knowledge: Table No. 4: Knowledge of mental motor imagery technique

	Yes	Sometimes	No
Awareness of mental motor imagery training	08 (05%)	06 (04%)	136 (91%)
Is mental fitness as important as physical fitness	148 (99%)	02 (01%)	00 (00%)

Interpretation: out of all, only 05% players are aware of mental motor imagery training, 04% players have heard of the training and 91% players don't know of this training. 99% players think mental fitness is as important as physical fitness and only 1% player think it is not that much important.

B) Attitude: Table No. 5: Attitude about mental motor imagery technique

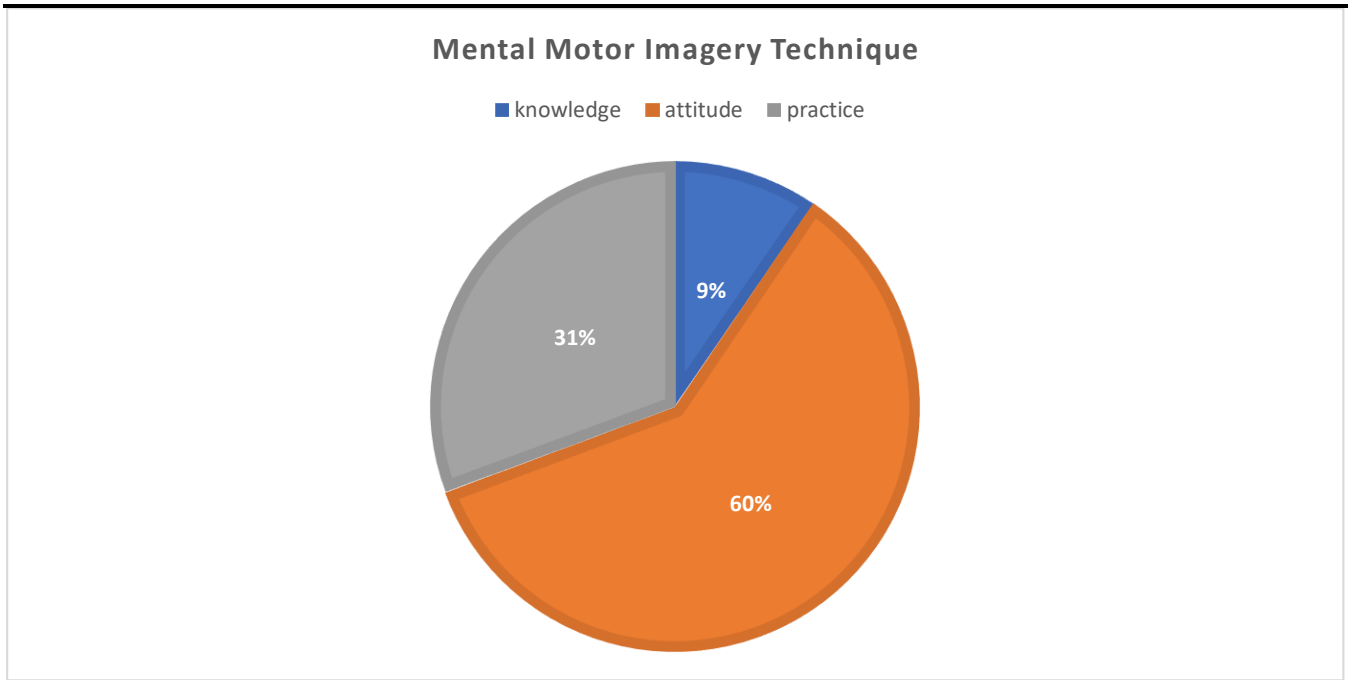
	Yes	Can't say	No
Whether mental motor imagery training develop skills	145 (97%)	05 (03%)	00 (00%)
Whether mental motor imagery training motivate you	89 (59%)	58 (39%)	03 (02%)
Whether mental motor imagery training helps to achieve your goal	146 (97%)	04 (03%)	00 (00%)
Whether mental motor imagery training keep mind calm	145 (97%)	05 (03%)	00 (00%)
Whether mental motor imagery training helps in making new strategies	147 (95%)	07 (05%)	00 (00%)

Interpretation: Above graph represents, 97% players think mental motor imagery technique will develop skills,59% think mental motor imagery technique will motivate ,97% think mental motor imagery technique will help to achieve goal, 97% think mental motor imagery technique will keep mind calm and 95% think mental motor imagery technique will help in making new strategies. On the other hand, only 03% players are not sure for developing skills, 39% are not sure about motivate you and 03% players think this will motivate, 03% players

C) Practice: Table No. 6: Practice of mental motor imagery technique

	Yes	No	Sometimes
Use of mental motor imagery training in past	04 (03%)	146 (97%)	-
Practicing the training	140 (93%)	00 (00%)	10 (07%)

Interpretation: out of all, only 03% players have used mental motor imagery training in past and others have not used this technique. 93% players would like to practice this technique and 07% players are not sure for practicing mental motor imagery training.



Discussion:

The present study aims to find out awareness of Knowledge, Attitude and Practice of sports specific physical therapy training and mental motor imagery technique in tennis players of age group 13-25 years. 150 participants were selected depending upon the inclusion and the exclusion criteria, which included players between the age group of 13 to 25 years. All the subjects were given the questionnaires to fill and then the data was analysed by descriptive analysis.

Table No. 1 shows that, among 150 players, only 4% of players are having knowledge of sport specific physical therapy, 10% of players heard about sport specific physical therapy but don't know what exactly it is and 86% of players don't have knowledge about sports specific physical therapy.

One of the study reported that players should develop skills and the strength to keep high level of application throughout the match. They use a periodization where they introduce different training programs at regular time interval to gain strength, power as well as motor skills and minimize the risk of over training. [(4)] Our study collected data about attitude of players towards sport specific physical therapy. Where 97% players think that sport specific physical therapy will increase strength whereas 03% are not sure. 71% thinks that sport specific physical therapy is helpful for practicing strokes/serves more accurately/precisely and 29% players are not sure about it. 91% players accepted that sport specific physical therapy should be practice daily where 09% players are not sure about it, first they will use the sport specific physical therapy for some period of time. From all the players which are part of it, 24% players were had idea about sport specific physical therapy and 06% players only heard about it where as 78% players had no knowledge of sport specific physical therapy. Some of the common sport specific physical therapy which are known to are: Plyometric, Drills, etc (Table No. 2)

Table No. 3 shows that actual application of knowledge of sport specific physical therapy. Only 16% players had no injury and can participate in normal training, 32% players had minor injury but still they participated in the training, 52% players cannot participate because of injury. 51% players can participate in competition without injury, 22% players participated in competition but with minor injury, and 27% players cannot participate in competition due to injury. On asking the participants of the study whether sport specific physical therapy should be a part of their daily training, 87% participants responded Yes, it will be helpful and 13% participant responded twice or thrice a week. Also 79% players would like to practice and 21% players are not sure about it.

Many studies have said that incorporation of motor imagery training program with regular training programs, athletes could improve their physical performance. [(1)] In the current studies, only 05% players have knowledge of mental motor imagery training, 04% players heard of mental motor imagery training but don't have any knowledge and 91% players don't know about mental motor imagery training. On asking the players, if mental fitness is as important as physical fitness, 99% players think mental fitness is very important and only 01% player think it is not that much important. (Table No. 4)

Table No. 5 shows attitude of players towards mental motor imagery training. Seyed Ehsan Nezam et al in their studies have stated that, imagery will increase concentration, aid motivation and enhance the new skills [(6)] and consequently it will help in achieving their goals, keeping mind calm and thinking of different strategies in case their plan fails. In present studies, 97% players think mental motor imagery training will develop skills,59% think mental motor imagery training will motivate ,97% think mental motor imagery training will help to achieve goal, 97% think mental motor imagery training will keep mind calm and 95% think mental motor imagery training will help in making new strategies. On the other hand, only 03% players are not sure for developing skills, 39% are not sure about motivate you and 02% players think this will not motivate, 03% players are not sure for achieving goals with this, 03% players are not sure for keeping mind calm, and 05% think this technique might help in making new strategies.

Out of total, only 03% players have used mental motor imagery training in past to develop positive attitude and skills and others have not used this technique. Also, on asking the players, whether they would like to practice this technique, 93% players responded they would like to practice this technique and 07% players were not sure for practicing mental motor imagery training (Table No. 6)

Conclusion:

The study showed that only 14% tennis players are aware of Sport Specific Physical Therapy and 09% players are aware of Mental Motor Imagery Training.

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