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IMAGERY IN SPORT - INTRODUCTION

Hello everyone, welcome to module 4, where we are going to be talking about the use of imagery in sport. In the first session today, we will be looking at imagery, giving an insight, an introduction, a definition, what are the principles, the use of senses, we have an imagery exercise, how do we improve the effectiveness of imagery, the perspectives and also the theory and how we measure imagery. And finally, we also have a two dimensional model to explain how imagery works and also we do a quick recap. Imagery, what is imagery? Sports persons and athletes have to imagine themselves, if they imagine where they are, then they will definitely be there or they will definitely become. Many athletes have said they like to see it in the mind. So most important, what I tell most of my players and my athletes is to imagine themselves becoming and imagery is a very important cognitive technique that has been used by sports persons all over the world and is presently one of the most advised or the most recommended psychological tool to improve or better their performance. Imagery is also known as mental rehearsal, it is called visualisation. It is called covert practice because it is something that happens in the brain or happens in the mind and which is not visible to others.

So, I would like to give you an example of a legendary diver and swimmer who said that every time he dives to make a perfect dive, he sees himself making the dive and when he makes the dive, it makes him feel confident and if he wants to make any last minute changes to the dive, he makes the dive and then he perfects the dive. So, this is the power of imagery and how useful it is. And one of the things I normally tell my players and my athletes when they come to consult is, imagine themselves holding a cup, imagine themselves receiving a medal or the medal on their neck, imagine themselves winning the match with a pump fist, imagine themselves playing that winning shot or scoring that winning basket. So, this helps

them to be there or to already be there mentally even before the event has happened. Imagery is a very powerful tool and it has the power to create the reality in the mind and it is also practised around the globe by athletes.

Why is it a powerful tool? I'll give you another example of a state level discus thrower. He broke the record in discus which was held for almost 22 years. When speaking to him, this is what he revealed. He says a week before the state meet, he did not lift or throw any of the discus. He only adopted the visualisation technique and he visualised making the winning throw.

So, every night he would visualise himself making the winning throw and when he went there to the state meet, in the very first throw, he made a great throw which broke the 22 year old state meet record. And after the event, he met his old or previous coach who asked him whether he had done visualisation. To this the discus thrower said, yes, I use the visualisation technique and to that the coach replied, yes, the great athletes do that. So, this is a powerful tool, the power of imagery or visualisation as it is called because you are seeing the event happening in your mind when you are actually not there. So, just let us take a few moments to look at this beautiful picture or the beautiful scene.

I would like you to observe it for a minute. You can see the water, you can see the waves, the blue colour, you can see the sand. So, in this slide, I want you all to observe this beautiful scenery in front of you. You can see the blue waters, the waves as they lash against the sand, you can see the brown sand, you can see the sun on the horizon. I want you to observe the scene for a few minutes.

How is imagery defined? It is defined as using all the senses to create or an experience in your mind. So, using all the senses to recreate or create an experience in the mind. Like I just gave an example of how the discus thrower was able to create an experience in the mind, it also uses all the senses to recreate. So, it is like a digital TV with a surround system, like you can hear somewhere in the background, the sound, you can feel it, the effects when you see a movie or you see something on TV. So, how does imagery happen? Imagery happens in the absence of any stimuli.

So, you are actually only imagining it. So, there is nothing really in front of you. It is not

happening, it is not like playing a game or seeing the game, you are seeing it in your mind. It involves all the senses. So, in order to experience something, in order to see something, it has to be as real as possible to the actual activity.

So, it involves all the senses that we as human beings have and the image is created from stored memory. So, we can image or we can visualise things that we know, things that we have seen and things that we are aware of. So, that is why whatever is stored in our memory can be brought out as images in our mind. Let us look at all the senses that are in play when imagery happens. So, for effective imagery, all the senses that normally operate, we have the auditory sense, we have the olfactory, we have the kinesthetic, we have the tactile, we have the visual and most important the emotion that is attached to that particular imagery.

So, auditory is the sound that we hear, olfactory is the smell that we get, kinesthetic is basically the movement patterns, tactile is the touch, can be touched and you have the visual which we can see and the emotion is expression of happiness, sadness, anxiety, nervousness, etc. that we face. Now, let us look at what each of these emotions are because these senses that we experience when we do imagery play a great importance and a great part in the imagery process. So, auditory ability to hear, olfactory ability to sense smell, kinesthetic is a sense of movement patterns. So, when we look at movement patterns like if you are a tennis player, you should be able to sense the transfer of your weight from your left foot for the right foot or if you are a basketball player, you should be able to feel the movement when you crouch and when you leap up to collect the rebound.

Tactile is the ability to sense touch. So, you should feel the grip of your tennis racket, you should feel the ball, you should be able to sense it, if it is a basketball or if it is a tennis ball, if it is a badminton racket, you should be able to grip, you should be able to feel the shuttle. Visual is your ability to see, right? How can you recreate those images in your mind? And finally you have the emotions, that is, the positive emotions and I will just go back to the olfactory, that is the ability to smell. So, when you are recreating an image in your mind, you should be able to get the smell that emanates from the real environment like it could be if you are playing cricket, it could be the smell of the pitch and the smell of the grass and if you are like swimming, you should be able to smell the water, right? The chlorine and the water smell that comes. So, whatever sport you are in, the ability to visualise and get the smell part is very important.

So, these are the 6 senses that play a very important role in the imagery process. Okay, so let us quickly do an exercise which will help us understand how the imagery process actually happens. I would like you all to close your eyes and sit comfortably. You can take your eyes off the screen because I am going to be explaining what you need to do. I want you to image the picture of the ocean in your mind.

You just saw the picture a few minutes back. So, close your eyes, sit comfortably, imagine the picture of the ocean in your mind. Imagine the blue waters and the waves lashing against the sand. Imagine that you are walking on the sand and feel the sand below your feet. Imagine hearing the sound of the waves and the sound of children playing on the beach.

Imagine the smell of the water or the wet sand. Imagine feeling happy and positive. I want you to image this picture for a few seconds. Keep it in your mind. The blue waters, you are walking on the sand, you can hear the sound of the waves and the sound of children.

You can get the smell of water or the wet sand and you are feeling happy and positive. You can slowly open your eyes. So, let us test your senses. If you want to know whether you have the ability to utilise all your senses in your imagery process, let us look at their senses. Were you able to see the picture? Yes, no, somewhat.

That is your visual capability. Were you able to feel the sand below your feet? Yes, no, somewhat, your tactile, the touch part. Were you able to hear the sound of the waves or children playing? That is your auditory sense. Were you able to smell the wet sand or smell of water? That is your olfactory. Were you able to feel the movement of your feet and the sand? That is your kinesthetic because you can feel your senses moving.

Were you feeling happy and relaxed? Yes, no, somewhat, these are the emotions. So, if you have answered no to all of these questions, then you can repeat this exercise. If you have answered yes, you have the ability to image a particular scene using your senses. For some of them, it is a yes and if it is a somewhat, that means you also need to practise. So, it is not possible for everyone to, you know, recall an image and recall the image with the different senses at the very first instance, but through practice, we can definitely be able to image using all your senses and also to image the picture.

So, what does all this tell us? It tells us that we have in our mind the power to recreate an image and we also have in our mind or in our capacity to train our brain. Now you know the brain cannot differentiate between what is real and what is not real. So, to give you an example, if you see a suspense movie or a movie with action which is thrilling, you tend to get scared, you tend to get, you know, excited, why is this happening? This is happening because of all the senses that are in place, okay. So, I will take you back to this slide which will tell us that watching an exciting or a suspense movie activates all the senses. That is why you feel excited, you feel tense, you are scared, etc.

So, if we are able to create a real life movie in our brain, okay, this will lead to the activation of all these senses and it will be as if you are actually playing a particular match or you know doing a particular skill. So, this is the power of imagery. By doing this exercise, you were able to sit in front of your computer or in front of your TV screen or in front of your phone from wherever you are viewing this module, you were able to imagine a picture of an ocean somewhere very, very far away. So, that is the power, that is why it said that imagery is a very powerful tool. How do you know that your imagery is good? We know that the imagery is good, if there are two components that are fulfilled, one is vividness and the other one is controllability.

What is vividness and what is controllability? Vividness is the ability to create sharp and detailed images. If you want to image or visualise a particular skill, okay, suppose it is a smash in badminton, you have to be able to clearly see that image with all the details, you have to be able to see the net, you have to see the court dimensions, you have to see the opponent at the other end, you should be able to see probably the crowd if they are sitting close by to you as detailed as possible like how your footwork is, how you are jumping up, where is the position of your racket, where is the shuttle, everything the detailed image will give you is something called as vividness. The other criteria that is important is called controllability, ability to manipulate the image that is created. So, when you image a particular skill in your mind as a person or as a player, you should be able to control that image, you should be able to control the image in such a way that you see yourself perfecting the skill. Suppose, you are serving a lot of double faults in tennis, you should see yourself serving an ace, that is called controllability, you should be able to manipulate the image.

The more we are able to see positive images of ourselves, the easier it becomes to utilize

imagery in the practice as well as in the competition. Of course, there are times when you do not always image success, right? There are sometimes where you, you know, image errors, but that is a very advanced level of imagery. In the beginning steps, it is very important to see yourself being positive and yourself being successful in completing a particular routine or in completing a particular skill. The effectiveness of imagery also depends on 3 important aspects. It's the skill level, the mental ability and the timing of practice.

What are these concepts, skill level. So, imagery works for people who have learned the skill to a very large extent, they may be in the advanced level or they are the sub elite or in the elite. Imagery will not be effective for somebody who is a beginner, who is an amateur, because they have not learned the skill completely. So when they image, they will not be imaging the perfect skill that is supposed to be. So, the skill level is very important, it works more for people who have learned the skill to a larger extent, then it depends upon the mental ability, okay?

What is this? Mental ability talks about the cognitive component in the skill. So when we are in sports or you know in any particular sports discipline, some components involve a lot of planning, a lot of action etc. They involve a lot of thinking that is called a cognitive aspect. Some sports do not require a lot of cognitive aspects or a lot of mental thinking. They are more simple skills and you need more motivation to lift, to do that. So to give you an example to understand this concept, suppose in tennis you have to do a serve, there are a lot of actions involved in that and it involves some amount of, you know, mental component in that because, you know, it has to be calculated, you know, the toss has to be right and then the point of contact has to be right, your follow through has to be right.

This versus say maybe a weightlifter having to do some half squats etc. So in this the cognitive ability is not too much or there is not much planning etc. to be involved. So does not mean that imagery is not useful to a weightlifter, it is useful, but the cognitive element is what is coming into play. So if there is a lot of planning involved, then imagery is more effective, if then because from a cognitive specific angle that is from a thinking angle.

Then comes the timing of practice. Most people think that just like physical skills, you need to put in a lot of effort to, you know, perfect a particular skill. When you do it, when you are working on psychological skills, you do not need that much time. Every day you devote a

little fraction of time is important for you to develop a particular skill. So more is not better, that is what I could, you know, put it in a better way. That is, so if you are a player who wants to practise imagery, you should first practise imagery and then do the skill, not the reverse, not do the skill and then practice imagery.

So if you are going into a competition, the timing of practice is important. So before your competition, you do the imagery so that when you go to the competition, you have already practiced it in your mind and you know how to execute it. So that is what is called by the timing of practice. Now, no subject matter goes without understanding the theories. There are a lot of theories to explain imagery.

I will be covering only 2 theories. We have the psychoneuro muscular theory and we have the symbolic learning theory. So what is this psychoneuro muscular theory? So psycho - psychological, neuro and muscular. So there are 3 components involved in it. So according to the psychoneuro muscular theory, imagery facilitates the learning of motor skills. So, when we vividly, that is very clearly or detailedly imagine events, they activate the muscles similar to the physical practice.

So what does this mean? Like I said, the brain cannot differentiate between what is real and what is not real. If I ask you to image yourself as a basketball player taking a free throw shot, what are you doing? You stand in front of the free throw line, you probably bounce the ball in your mind a few times. You take your position, you bend your knees, you position the ball, your hand at a right angle and then you give the flight and you release the ball. Now when you do all this as a part in your mind, you are activating the motor skills.

So you are activating the muscles. So the mind will do exactly what you will be doing physically in the court. So in imagery of any particular skill, it activates the neuromuscular system. So that is the nervous system as well as the muscles. So when you image a particular skill, you are actually activating the muscles in your body and you are creating an image. So the brain also thinks that it is a real image that is being created.

So this is what the psychoneuro muscular theory says. The next theory, symbolic learning theory. The symbolic learning theory says that as players and as athletes, we use symbols or we use certain cues which help us to do the imaging process. So the theory says that images

play an important part in receiving and processing information. That is why players plan action in advance and once the players know exactly what they need to do, it helps them to learn the movement patterns.

So let us take a game of tennis, a doubles match in tennis for example. If you know exactly where your partner will move, then it is very easy for you to image where you will be moving. So suppose you think that you are serving and your player is you know crouching at the net and you see that you know if it is a good serve, the return will be poor. So your partner will probably smash it for a winner.

So you know exactly how you are going to move. So the theory says that imaging by knowing what to do in sequences in a particular game, by doing imagery, it will help your movement patterns. You will know exactly where you need to move and how you need to go about it. So these are the 2 theories, the psychoneuro muscular theory and the symbolic learning theory. When we look at imagery, it is a covert practice. It is something that happens in the mind, it happens in the brain, you know there is absence of any stimuli.

So you may wonder whether imagery can actually be measured. So yes, imagery can be measured. The most popular questionnaire is the Sports Imagery Questionnaire or the SIQ. It measures your visual sense, your auditory sense, your kinesthetic and also your mood. Then you have the Sports Imagery Ability Questionnaire, SIAQ.

It is a 15 item questionnaire where the athletes have to image each item and it also measures 5 abilities, skill, strategy, goal, effect and mastery ability, but also gives you a global score which tells you about your general sports imagery ability. Paivio during his research work helped explain that there is a 2 dimensional aspect to imagery. The first aspect is called the cognitive function and the second aspect is the motivation function. What are these cognitive functions and the motivation function? So the cognitive function like I said got to do a lot of thinking and got to do with using the mind and planning. So it is more useful in specific sports skills and the motivation function basically when you do imagery, it helps you to in attaining your goal, it helps you to reach your goal and also it helps you in coping mechanisms, okay, when you feel that you are not doing well and finally it also helps you to manage your anxiety level, it helps you to manage your tension and nervousness.

Like I gave the example of the, you know, weightlifter. So in that aspect imagery is more helpful, it serves more as a motivational function rather than as a cognitive function. Now the cognitive function and the motivation function serve two purposes. One is the imagery can be situation specific or it can help in a very general function. So the table that we are going to see next will help us understand what the 2 dimensional model talks about and the 2 dimensional model gives rise to 5 different types of imagery. What are these 5 types of imagery? You have the motivational specific which is also called MS, you have the motivational general mastery that is MG-M.

So what is motivational specific? Athletes imagine themselves in a specific setting which highly motivates them. So it can be like, you know, imagining that you are serving the winning shot, imagining that you are hitting the winning runs, imagining that you are crossing the ribbon in a 100 metres race, that is motivational specific. Motivational general imagining general sport situations, going for the practice, going for the competition, arriving at the practice, these are general sport situations. Motivational general arousal, imagery will help you to deal with the anxiety that one can face, so you know, you can feel relaxed, you can feel calm. The cognitive general type of imagery basically helps in imaging defensive strategies or you know imaging offensive strategies and cognitive specific talks about executing the correct skill when competing.

So in a competitive situation, you can image the correct action taking a free throw, you can image a correct action taking a penalty kick, you can image a correct action doing a serve. So the cognitive specific is very related to a very specific skill. So these 5 types of imagery play a very important role in when using imagery. Let us quickly see an example of imagery being used in sport. So in this picture that you see here, you have a young man who is in his practice session is about to take a penalty kick and you see his coach there and you also see the goalkeeper at the goal post.

So, you know, this example helps us understand how imagery can be used in sport. So in this exercise, you see the young man trying to score and the goalkeeper saves and he is unable to score. So you have the coach motivating him, explaining to him what tactic he could do or what tactic he could use. You see the player taking a fraction of a second to image what the coach has told him to do and then you see him taking the shot and making it a perfect goal.

So this is how imagery can be used in sport. We have a small exercise just to help you recall what we have discussed now in this session. So there are 5 statements which you have to basically explain or state whether it is true or false. Imagery happens in the absence of any stimuli.

Skill level affects imagery. Vivid images improve imagery. Motivational general involves imagery of sport specific situations. Imagery cannot be measured. So the answers will be: imagery happens in the absence of any stimuli, it is true. You do not need anything, it is from the memory.

Skill level affects imagery. If you are a novice or if you are a beginner, imagery will not be effective. It is more useful when you are more at an advanced level. Vivid images improve imagery. More detailed the imagery, the more detailed the picture that you create in your mind with all minute details, the more specific you can be. Motivational general involves imagery of sport specific situations that is false because it involves general sport situations.

Imagery cannot be measured, that is false. Imagery can be measured. So you can test how many you got right and how many you got wrong. So you also have the answers in this slide. So we will now before we end this session, we will do a quick recap. We learnt about the definition of imagery. We learnt the regular definition and also we learnt that it is a covert practice and you know it happens in the mind.

We learnt that if imagery has to be effective, we have to use all the senses visual, auditory, olfactory, tactile and kinesthetic. We learnt the two theories of imagery, psychoneuro muscular theory and the symbolic learning theory. We learnt the perspectives and we also learnt the types of imagery. As per the thing it serves as a cognitive function and it also serves as a motivational function and that is in turn divided or explained by when imagery can be motivational specific, when it can be motivational general, when it can be cognitive specific and when it can be cognitive general.

So this brings us to the end of session 1. I will be meeting you in session 2 and we will be learning more about the PETTLEP program and the benefits and the uses of imagery. Thank you.