

# **DEFINING PROPER EXERCISE MODELS TO INCREASE MENTAL TOUGHNESS OF ATHLETES**

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## **Abstract**

Physical factors including physical fitness, strength, endurance, flexibility and coordination should be owned by athletes to attain good performance. This can be achieved through quality, regular, systematic and planned practice, so that they can attain good physical condition that makes them ready to compete. In addition, the athletes must also master the proper, effective, and efficient techniques in order to attain. However, only with the two factors, the athletes could not achieve quality performance yet. Psychological factors also determine the success of the athletes in a competition. Therefore, to be able to attain goals in sports games, the athletes should have balanced factors of physical condition, skills, and technique as well as psychological factors.

Appearance of an athlete in a game is heavily influenced by various psychological factors, such as motivation, concentration, tension, anxiety, and mental toughness. These psychological factors will have significant impacts on the performance of the athlete. The positive impacts involve better effect on the performance of the athlete so that they could achieve optimal performance. On the other hand, the negative impacts of psychological factors are to worsen the appearance during the competition which could result in failure in the achievement. Athletes who have good psychological factors will show remarkable tenacity in difficult circumstances.

In addition to the physical condition, skills, techniques, and tactics, psychologically an athlete must also have the mental toughness. A mentally tough athlete can be said so if the athlete is able to control emotions to remain in stable condition so that he could finish the game well though he is playing under

heavy pressure and difficult situation. Generally, it can be said that psychological factors, especially mental toughness play the important roles and provide great influences on the performance of athletes on the pitch. This can be shown if an athlete already has a high motivation, good thought control, emotional stability, high concentration, positive attitude, and good mental control, he will be able to dominate opponents easily. Therefore, the athletes need a proper exercise model to train their mental toughness through verbal and practical exercises combined with technique elements of simulations.

**Keywords: Exercise Models, Toughness, Mental**

## **INTRODUCTION**

The development of the sport world is currently experiencing a significant increase. One of the indicators is the number of complex championships that are increasing in accordance with their respective sports, both team and individual ones. It is also indicated by the increase of the number of athletes who are interested in cultivating a particular sport. Therefore, it requires the selection of pupil athletes according to their ability to be trained intensively in order to improve their performance in sports.

Physical factors which include physical fitness, strength, endurance, flexibility, and coordination should be owned by an athlete to be able to achieve good performance. This can be achieved through good, ordered, systematic, and planned practice, so that it can form good physical condition that could make the athletes ready to compete. In addition, an athlete should master the correct, effective, and efficient techniques in order to perform well. However, the mastering of two factors above is not able to bring an athlete into a champion yet. Psychological factors could also be the determinant of the success in a match. Therefore, to be able to perform in sport games, the athletes need balanced factors of physical condition, skill and technique as well as their psychological factors.

Athletes' appearance in a game is heavily influenced by various psychological factors, such as motivation, concentration, tension, anxiety, and mental toughness. These psychological factors will have great impacts on the performance of the athletes. The positive impacts involve better effect on the performance of the athlete so that they could achieve optimal performance. On the other hand, the negative impacts of psychological factors are to worsen the appearance during the competition which could result in failure in the achievement.

The psychological factors may have direct influence such as excessive emotional tension that may affect on the entire performance. Another condition is anxiety of the athletes which will greatly affect their performance during a match. The best solution for an athlete to ward off tension and anxiety is to provide encouragement and motivation to remain in a tough situation during the game.

In a match, the result can be unsatisfactory (lost) or vice versa, is satisfactory (win). One of the factors that can affect the outcome of the game is mental factors, specifically, mental toughness factors of the athletes. An athlete can show such a great mental strength which is shown by the characteristics of not giving up and trying to get out of difficult situation and put the primary objective to win the match. Thus, mentally strong athlete will show remarkable persistence in difficult situations.

## **DISCUSSION**

### **A. Definition**

According to Loehr (1993: 17) toughness is flexibility, responsiveness, strength, and resiliency under stress. Toughness is the state where a person's emotions are always flexible, responsive, strong, and resilient even when he is under pressure. Meanwhile, according Gunarsa (2004: 116), toughness is the ability to empower emotions consistently throughout the game or match. So the toughness or rigidity is an ability to control emotions to keep in stable condition, so that the athlete can finish the game well though he is playing under heavy and difficult pressure.

According to Karitini Kartono (1989: 3), the word *mental* is derived from a Latin word *mens, mentis*, which means soul and spirit. Mental is also often called *psycho* or *psyche* which comes from the Greek word *psuche* which means breath, principle of life, life, soul, or spirit. In addition, according to Moeljono Notosudirdjo (2001: 7) psychic or mental is non-material part of human, which is known only from the symptoms, or the so-called psychic phenomena such as drive, motivation, willingness, cognition, personality, and feeling. So mental can be said as a human psychological condition that can be known from psychological symptoms.

Mental toughness is the ability of athletes to remain thinking in a positive, realistic, calm, and clear, even when they are under stress (Loehr, 1993: 182). According Sukadiyanto (2008: 11) mentally tough athletes have self and emotional control, ability to quickly change negative emotions into positive ones and overcome the mistakes and failures without emotion. In addition, they can also act and get out of the crisis quickly. Thus, the athletes' mental toughness is a psychological condition when the athletes are able to control emotions calmly to keep the situation stable so that they can finish the game well though they are playing under pressure and difficult situation.

#### B. The Characteristics of Mental Toughness

Mental toughness includes the characteristics and personality characteristics in order to be able to survive in difficult situation. Similarly, in sport world, it also requires the mental toughness to face the difficult circumstances during the games. According Gritsch cited by Sukadiyanto (2008: 11), the characteristics of mentally tough athletes are relaxed looking, calm, energetic, low anxiety, optimistic, calm, always trying, automatic movement, concentration, confident, passionate, and controlled.

In order to develop the traits and characteristics there are some things to do and be owned by an athlete, namely (1) a high commitment to achieve maximum results, (2) the purposes of the exercise, (3) ability to overcome the anxiety and frustration, (4) practice appropriately, (5) ability to control emotions, (6) readiness and optimistic feeling for the challenges, (7) ability to think rationally to solve existing problems, (8) ability to accept loss, and (9) belief in their own capabilities.

### C. Training

Training is usually defined as a systematic process of repetitive, progressive exercises, having the ultimate goal of Improving athletic performance (Bompa, 1999: 1). According to Sukadiyanto (2002: 7), training is a process of improving sport capacity containing materials and practice theories, using methods and rules which implement scientific approaches, using the principle of planned and regular education, so that training objectives can be achieved on time. From the above opinion, it can be said that training is a systematic, planned, programmed, measured and orderly process that has certain purposes which involve enhancing the capabilities, skills, and physical performance in sports.

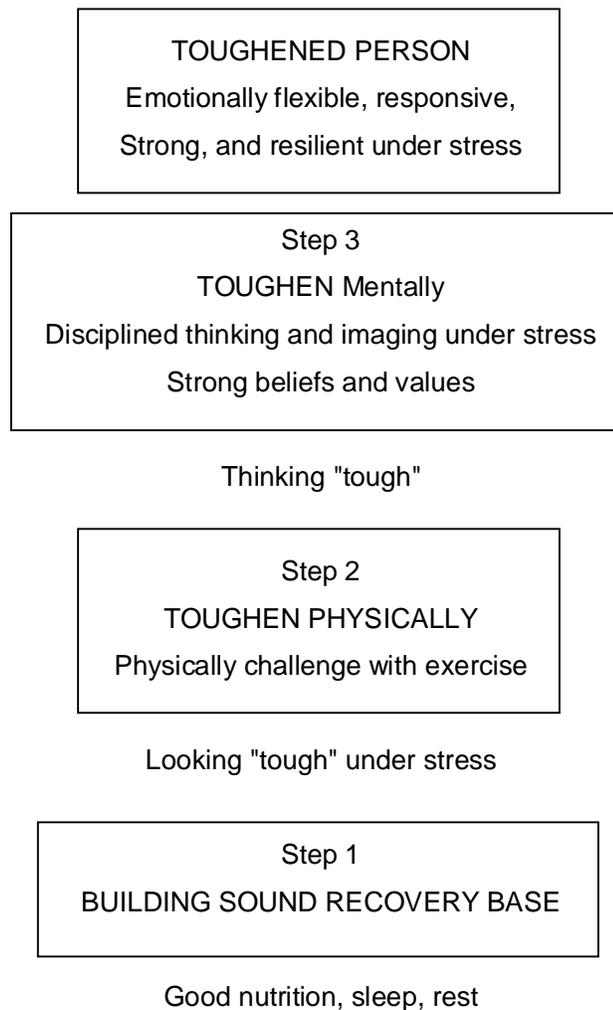
The dosage of training consists of intensity, frequency, duration, and models of practice (Siswantoyo, 2008: 127). The following describe each element of the training dosage. 1) The training intensity is a quality that indicates the tension of the training. The amount of intensity depends on the type and purposes of the training. For example, the training intensity to improve cardiorespiratory endurance is between 75% - 85% DJM. 2) The training duration is a measurement that indicates the length of training process in each meeting. The proper training is expected to give a good effect on improving the cardiorespiratory system. The training duration to increase cardiorespiratory capacity is 20-60 minutes for each training session. 3) The training frequency is related to how much time the athletes perform the training, for example to improve fitness, the athletes require 3-5 times per week training (Djoko, 2000: 13). 4) Kinds of training activities involve the whole body exercise which can improve cardiorespiratory capability.

The proper training should apply the basic principles of training which are 1) the principle of overload, Suharjana (2007: 88) states that the principle of overload is basically emphasizing on the burden of work undertaken which must exceed capabilities, because it exercises should reach the threshold stimuli. 2) The principle of specificity, a good exercise program should be specifically chosen in accordance with the needs of sports and games that will be done. 3) The individual principle, it is that every individual has different abilities, so that in determining the training load, the training should be

adjusted to the ability of each individual. 4) The principle of progressive load training, it is that in the process of training should be increased and continuous to the previous training. 5) The reversible principle, it can be said that adaptations which occur as the result of the training will gradually decrease and even disappear when the training is not conducted regularly according to the proper dosage.

D. Mental toughness training phase

Mental toughness of an athlete can be obtained after performing several stages. The mental toughness training stages according to Loehr (1993: 149) are:



From the mental toughness training stages mentioned above, it can be explained that in order to get the mental toughness, an athlete must go through four stages.

1. Phase I is building a base or foundation in the healing process by regulating diet and resting.
2. Phase II is strengthening physical condition by preparing for the challenges of an opponent with intensive training and developing emotional rigidity even when the athlete is under pressure.
3. Phase III is strengthening the mental with thinking and imagination in a positive way with confident and calm in order to remain strong, even when the athlete is under pressure.
4. Stage IV, one can be said as a tough person if he can control emotions, be responsive to a problem, mentally strong, and remain resilient even when he is under pressure.

The success of an athlete in fostering mental toughness through stages over the closely is related to his success to overcome the panic situation during a match. Match atmosphere is full of tension, anxiety, and fear, as well as often panic feeling which are difficult to control. The feeling of panic will cause a decline in mental toughness. It is therefore necessary to manage this feeling. According to Orlick cited by Gunarsa (2004: 118-119), to overcome a state of panic, an athlete needs to consider the following points:

1. Observe and identify the obstacles to become accustomed to it.
2. Plan appropriate strategies.
3. Plan a backup strategy if problems arise.
4. Play the plan in mind.
5. Entering the arena and play.
6. Remain ready and alert, eyes wide open and the body reacts.
7. Do not stare too long at one obstacle, or the athlete will be weak towards the next obstacle.
8. Perceive barriers or obstacles, but do not let the thought stopped him.
9. Continue to move on, use dynamic barriers or tactics.

#### E. Mental toughness training model

The object of mental exercise is our mind. Mental exercise should be given at the time a child or an athlete begins to think. For an athlete, 90-95% of mental factors influence the competition, therefore the athlete needs to be trained on his mental toughness since the beginning of the training because training the mental toughness of an athlete is not easy. Besides through several stages of mental toughness training, the athlete also needs the proper training model for mental toughness. According Sukadiyanto (2008: 14) there are two forms of mental toughness training, which is verbal (recommended) or theory and practical forms. The verbal form or advice is training without combination with technical elements. On the other hand, the practice form is always combined with elements in the form of simulation techniques.

According to Loehr cited by Sukadiyanto (2008: 14), the training in the verbal form can be conveyed by the coach to athletes through eye contacts, habit (Rituals), rhythm (winning pace), breathing, high intensity in a positive, relaxed and calm feeling, reducing error (mistake management), self confidence, avoiding negative words themselves, be positive, fighting spirit, and good body language. The following are the details.

1. The eye contact. It means the eyes of a match should still be well controlled because eyes can reflect the circumstances that happen to athletes. Therefore, eyes should not show sadness or irritability when experiencing loss. Eyes should focus on the game by looking at the eyes of your opponent, notice opponent's movements, observe the situation on the ground, stay focus, and prepare to attack.
2. Habit (Ritual). It is a common form of movement that is usually performed by the athletes because it is considered to bring good luck. For example: blowing the ball before doing the service in a tennis match.
3. Rhythm (winning pace). Rhythm of a game which has many benefits should be conducted in a match. If the opponent has been able to overcome, then immediately change the rhythm used in the game.
4. Breathing. Regulate breath properly is needed while playing. This is performed so that the supply of oxygen to the blood is still maintained so that the athletes will remain relax and their heart rate is still under control.

5. High positive intensity. In a game there are times when athletes feel tired and negative feelings arise. To cope with these feelings, the athletes need to plan an appropriate strategy, then play these plans in mind. For example if an athlete is exhausted, he must use the right techniques and strategies to defeat his opponent without much exertion.
6. Relax and calm feelings. An athlete must stay relax and calm to overcome the tension of a match so that the athlete can control his emotions.
7. Mistake management. In a game, do not let an athlete makes mistakes repeatedly since this will cause anxiety that can hurt himself. Athletes should try to ward off the possibilities of doing mistakes, and try to solve problems quickly and accurately.
8. Confidence. An athlete must believe that with his own abilities, he will be able to defeat the opponent. Give resistance to the maximum extent possible, show enthusiasm and excitement in play despite the depressed state.
9. Avoiding negative words. Negative words directed at someone during the game will be able to reduce self-confidence, thus affecting the appearance in the game.
10. Positive thinking. During the game an athlete must always think positively and he must believe that he can finish the game properly so as to obtain victory. Do not think of losing before the game even starts since this will affect athletic performance during the game.
11. Fighting spirit. It is the spirit of an athlete in a fight to get the maximum result. It is necessary because it can affect morale and motivation of the athlete to compete.
12. Good body language. An athlete should show good body language even in difficult situations. Trying to stay strong, controllable view, and show readiness to compete and keep confident.

A mental toughness training form is performed in conjunction with field training. The following are the elements of mental toughness training combined with elements of the game simulation techniques: (1) motivation training, goal setting and maximum efforts, (2) mind control, (3) emotion control, ( 4) control on attention, (5) behavioral control, and (6) mental control

(Sukadiyanto, 2008: 15-16). The following are mental toughness trainings, combined with elements of the game in simulation techniques.

1. Motivation training, goal setting and maximum effort, (a) at rest, an athlete must always tell the coach about the best techniques to score, (b) during the game, the athletes should search and attack opponents' weaknesses and opponents' strengths, and (c) the coach should use reward and punishment and use compliments when the athletes use proper techniques and give a penalty when they make mistakes while training.
2. Mind control, (a) during the games, an athlete must be able to control his mind using *self talk* to break the opponents and score, (b) when an athlete makes mistakes, he should not issue negative words directed himself, (c) keep smiling and spirit.
3. Emotional control, (a) emotion control training requires the athletes to only defend (no attacks), (b) athletes may only play with one technique, (c) starting the game with scores left behind so that the athlete can catch up, (d) without being recognized by the athletes or coaches, referees say things that are not true such as in balls are said to be out or vice versa so that athletes are able to control emotions when this happens during the actual game, and (d) when performing attacks, athletes are asked to exhale for shouting and are not restraining emotions so that they can compete in a calm and relaxed state.
4. Control on attention, (a) before entering the game arena, athletes have to say about the attack techniques that will be performed to score to the coach, (b) Athletes must not attack and should only defend, (c) at the time of attack, the athletes shout and mention the targets to be aimed.
5. Behavioral control, (a) during the game, athletes must perform tricks for bullying or motion which can break the opponents' mental, (b) show good body language when the opponent attacks and score well.
6. Mental control, (a) when will athletes should plan to attack the right techniques to get the value, (b) if the athlete fails to carry out attacks,

he should introspect himself by imagining techniques that should be done, (c) the athlete should do the technique with shadow movements if he fails.

The field technique training is conducted for the purpose of mental preparation prior to the actual game because in the actual game is not always the same as what is expected by the athletes. Mistakes or errors are not unexpected either performed by our athletes, opponents, referees, spectators, and even coaches and they often occur in a game. Therefore, method training undertaken in conjunction with field practical training is required to train athletes' mental toughness.

## **CONCLUSION**

Overview on mental toughness above can provide a deeper understanding about the role of psychological factors on sport performance. In addition to the physical condition, skills, techniques, and tactics, psychologically an athlete also must have the mental toughness. A mentally tough athlete can be said if an athlete is able to control emotions to keep in stable condition, so that he can finish the game well though playing under the pressure of and difficult situation.

Generally, we can say that psychological factors, especially the mental toughness give a role and an enormous influence on the performance of athletes during the games. This can be shown if an athlete already has a high motivation, good thought control, emotional stability, high concentration, positive attitude and good mental control, then the athlete will be able easily to dominate opponents. Hence the athletes need training to acquire the mental toughness which can be performed through verbal and practical training combined with elements of technique in simulations.

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