

THE STUDENT-ATHLETES COPING STRATEGY AND SOURCES OF STRESS

M.S. Omar-Fauzee*

Yahya Don*

Norinda Samad**

Nagoor Meera Abdullah***

Vincent Parnabas***

Mohd Nizam Nazaruddin****

Soh Kim Geok*****

Abstract

The purpose of this study was to examine the sources of stress and coping strategies among university athletes. Fifteen athletes from a selected university Rugby Sport of Excellence Program in Malaysia aged between 18 to 23 years old agreed to participate in this study. Starting from the top level, only 7% of the players have the experience playing at national level, a majority of 60% of them have the experience playing at the state level, 20% at the district level while 13% of the players only play at school level. Qualitative methodology was utilized in this investigation and the interview transcript was analyzed inductively. The results show four sources of stress: feeling nervous before the game, injuries, disruption from the audience and personal problems. Whereas, there are five coping strategies: social support, positive self-talk, mind set, remembering previous success and physical preparation. Recommendations were also suggested in the paper.

Key words: Stress, coping strategies, rugby players, university student-athletes

* Universiti Utara Malaysia

** Ministry of Education Malaysia

*** Universiti Teknologi MARA

**** Universiti Malaysia Sabah

***** Universiti Putra Malaysia

Introduction

Participation in sport requires both mental and physical endurance to accept and handle the pressure during training. These are also needed when athletes are in a situation where they feel unprepared especially during a competition thus making them depressed and nervous (Dominikus, Omar-Fauzee, Chong, Meesin & Choosakul, 2009). Athletes equipped with mental strength are more likely to socialize, mingle easily, always calm and relaxed and these athletes are associated to having a high level of self confidence and strong beliefs (Omar-Fauzee et al., 2009). According to Clough, Earle, and Sewell (2000), mental strength enables athletes to compete in a variety of situations and these athletes have relatively low level of anxiety than athletes who do not have mental strength. Besides having mental strength, physical endurance is also important in determining the success of the athletes. Physical endurance is generally defined as the quality that allows an individual to exercise for a long period of time with a minimal amount of fatigue. (Brown, Miller, & Eason, 2006).

Similarly, rugby requires high physical endurance. The risk for injury to occur in a rugby game is higher than other sports (McCrary, Turner, & McIntosh, 2009). Thus, it is not surprising when many do not want to get involved in rugby for fear they cannot survive the training, afraid to compete and getting injured. Not only that, disapproval from parents who restrict their children to participate in this particular sport is also one of the main reasons. This is because parents assume that their children's participation in rugby is not important compared to other activities (Bjornstal, Lavoie, & Omli, 2009).

However, despite all the reasons, there are many athletes who are interested in playing rugby. There should not be a restraint to those who are interested in the sport because if restrictions are made, this can cause social problems and hyper activeness in school. On the other hand, athletes who are involved in sport have to cope up with situations such as training and preparing themselves for the competition (Hanton, Neil, & Evans, 2013; Park, 2000). Team sport such as football, hockey, rugby and handball require coping strategies to ensure the athletes' performance is at an optimum level (Omar-Fauzee, Wan Daud, Abdullah & Abd Rashid, 2009). According to Nicholls and

Polman (2007), competing in elite sport is often assumed as a heavy task by the athletes because the competition makes them feel stressful. The definition of stress in a competition includes the fear of making mistake, criticized by the coach, injuries, intimidated by a stronger opponent, interrupted by the audience and anxiety before the game (Nicholls et.al, 2007).

Coping has been defined as constantly changing cognitive and behavioral efforts to handle specific demand, externals and internal conflicts. (Lazarus, 2000). The specific demand depends on how the athletes handle it. For example, some athletes feel that a role assigned by their coach is a specific demand for them, and conflict within themselves occur when they could not cope with the situation. Transactional Model of Lazarus and Folkman (1984) is used in practicing coping strategies. Transactional Model entirely depends on an individual's perception of a situation that has a potential to threaten him or her. Individual self-assessment looks at a specific situation as something that can either be handled or threatening. It can be concluded as how individuals perceive the situation they are facing and determine what to do to cope with the situation.

This theory is to determine what is the stress or the threat faced by the athletes, and the effects of stress on them. It also seeks to find out the ways to handle the problems in coping strategies among the athletes. How far have the university athletes in various sports practiced coping strategies is still a question mark (Omar-Fauzee et al, 2009). There are several factors that contribute to coping strategies; the stress during training and competition, gender, age, experience and the type sport that the athletes are involved in (Nicholls & Polman, 2007). Most athletes who are involved in sports would be anxious, nervous, and worried when they face important tasks.

In addition, athletes need to know the suitable coping strategies that need to be applied in certain circumstances. These coping strategies involved cognitive and behavioral efforts changes in coping with stress. These coping strategies do not happen naturally, but require self-awareness for one to realize. David, Carlton, Anne and Jim (2008) believed that athletes who want to maintain their performance level when they are under stress must learn to cope to a variety of coping strategies. The inability to

cope with stress is a contributing factor of an athlete's failure to perform well (Lazarus, 2000). Parallel to that, Adegbesan (2007) asserted that coping strategies is a complex process in which individuals may use different strategies in different times to cope with different situations. Different sports require different demands and skills, and hence may require different coping strategies. Thus, the strategies used by athletes will also vary according to different circumstances.

However, the issue on how far have Malaysian athletes practiced coping strategies in sports has not been extensively investigated. Failure to do so may cause athletes to constantly fail in handling anxiety which in turn, would affect their performance in sport (Omar-Fauzee et al., 2009). In this case, the major problem often encountered by athletes is their inability to rise up after a failure. The absence of coping strategies in an athlete during a competition especially when the opponent is on the lead, usually causes the athlete to make a lot of mistakes, thus decreasing his or her performance in the game. Perhaps, the application of mental strength abilities including imagery, self-confidence and coping strategies will help to boost their confidence level to resilience back (Rattanakoses, et al., 2009).

Hence, to know the steps that the athletes can take in their coping strategies, university rugby players are specifically selected as samples in this study. In addition, how far has concept of psychological coping strategies grasped by the university athletes is still unknown. Therefore, this study indirectly investigated the source of stress and coping strategies among the university athletes.

Methodology

Subject

Fifteen athletes from the training squad of Rugby Sport of Excellence Program at one of the universities in Selangor were selected in this study. The participants age between 18 to 23 years old. Participants were selected from various positions; 2 props, 2 second row, 2 flanker, 2 hooker, 2 winger, 2 center, a fullback, a scrum half and a fly half. All the participants have the experience of playing rugby ranging from 2 to 8 years at national, state, district and school levels (national = 2 years, state = 3 to 5 years, district

= 1 to 3 years, school = 2 to 8 years). The highest level of achievement among the participants is one athlete who represented the country, followed by nine athletes who represented the state, three athletes represented at district level and the two athletes represented at school level.

Research instruments

Semi-structured interviews and open questions were used to determine the coping strategies of the athletes in this study.

The following are sample of questions:

1. During this interview, I am interested to know your experiences when you are stressed and how do you cope during training and competition?
2. I would like you to mention all the aspects that cause you stress during your training and competition? (When we have gone through all the causes, I will ask you specifically in how you cope up with each of the source of stress)

Stress Questions

1. Can you explain in detail all the aspects that cause you to feel stressed during your training and competition? (At this point, we will get a few lists of answers and will guide the athletes to give more examples of situations).
2. Can you recall your experience when you are under stress and describe the situation?

Coping strategies Questions

1. Can you specify the coping strategies that you employed when you are managing or trying to manage your stress?
2. When do you usually employ this coping strategy?
3. Do the coping strategies that you employ help you to handle the stress?

The interviews were recorded using a Sony Walkman tape recorder.

Procedure

This is a qualitative study that aims to find out in-depth information about the coping strategies used by athletes. According to Patton (2002), a qualitative study comprises

three ways: first, open in-depth interviews, second, observation and third, a document study. Interviews were used to ensure that the responses obtained achieve the objectives of the study. Interview is a powerful method to explore perceptions, including ideas, values and opinions (Patton, 2002).

Semi-structured interviews were selected in the interview session. Each participant was asked the same questions according to the order listed in the guidelines and the interviewer will respond freely, whereby the follow up questions are improvised according to the current needs of the situation. Permission from the committee of the research institutes has been obtained in this study. The list of participants was taken from the university rugby team manager. All participants were interviewed on coping strategies. They were informed of the purpose of the study, and researcher stressed that participation was voluntary and that all data would be kept confidential. Each participant who agreed to be interviewed would sign a letter of consent.

Researchers made the appointment with the participants through the telephone. A convenient time was set up for the interview at the training center or where the athletes were staying. The interviewers made every attempt to establish a relaxed atmosphere and a good rapport with the participants so that they feel comfortable and talked freely. Interviewers asked the athletes to fill in the demographic form that includes the information of their age, position in sport, playing experience, the highest level of participation in sports. Before the interview sessions started, the Interviewers asked permission from the participants for the interview to be recorded. The length of the interview session ranged from 25 minutes to 40 minutes, with the average of 30 minutes.

Data Analysis

The team of researchers listened to the entire recording to get the overall picture and transcribed the data. The researchers read the transcripts several times until they become completely familiar with all the lines in the interviews. The screening of the data was made based on Patton's (2002) concept of content analysis that was used to identify the same raw data and categorize them in similar themes. The themes were

placed in the same group, and would then be identified as major themes. As a result, the main theme is the overall outcome of the study.

Results and Discussion

Data analysis revealed four categories of sources of stress and five coping strategies. Table 1 shows the sources of stress experienced by athlete's rugby.

Table 1: Number of players reporting stressor

Source of stress	Total Players (15)
Nervous before the game	15
Injuries	12
Disruption from the audience	8
Personal problems	4

Source of stress

Nervous before the game

The situation in the competition normally causes the athletes to feel worried. They will feel very nervous and stressed when they are facing the competition. According to Dominikus et al., (2009), feeling anxious and nervous are normal in sports. However, if the condition is not controlled, the athlete's performance will decline. Thus, methods such as self-talk, imagery, self confidence, focus, and motivation should be given to the athletes. This study found that athletes try to avoid their anxiety by giving words of encouragement to themselves and try not to think about their negative feelings. Those words include:

"Every time during the competition, I would feel nervous, I tried to get rid of that feeling and lift up my spirit by talking to my friends and focused on the game."

"I feel nervous when I have to compete with a stronger team. I try not to think about it."

"My nervousness will fade when I start to play and hit the opponent"

Those statements show that the athletes' anxiety will disappear on its own immediately when they begin competing, by talking to friends and focus on the game.

Injuries

The second problem that was identified in this study was injury. Injury is a great concern among the athletes and also a source of stress to them every time they go to training or competition. The findings show that 30% of university rugby team athletes suffered permanent injury, 50% of athletes are still in the recovery process while only 20% of them never had any injury during the game. The types of Injuries that are often experienced by the athletes are knee, ankle and shoulder injuries. Sports that involve collision, body contact, projectiles and high speeds are associated with the risk of getting head and neck injury (McCroory et al, 2009). In this case, injuries are what make the athletes worry and thus causing them to feel stressed. They feel stress because they are afraid they will get injured again. This could be seen when one of the respondents said:

"I am most worried about injuries. I was injured in 2006 while I represented for SUKMA and because of that, I was unable to play rugby for a year. I felt very disappointed at that time. Right now, my injury has recovered, but I need to be careful so I will not get injured anymore."

Here, it clearly shows that the stress caused by fear of getting injured again is the reason why athletes did not succeed in sport. Other comments included:

"I had a surgery on my knee. During the training, I tried not to think about my injury. Sometimes when it hurt, I did not continue my training for fear that my injury will get worse."

"My injury bothered me sometimes. I cannot fully play because I am afraid of getting another injury."

According Pranabas and Omar-Fauzee (2002), athletes who are injured often show their anger, in denial, loss of identity, suffering anxiety, lack of confidence, could not fit in team and in anguish.

Disruption of the audience

Disruptions, especially by the audience give a lot of stress to the athletes especially during the competition. According to Robert (1992), when an athlete or a player commits an error, the majority of viewers will condemn, ridicule or scold the athletes. Thus, this will cause the athletes to make mistakes or errors that they are not supposed to make. If the athletes do not know how to control themselves in this situation, this could affect their performance and ruin the game. The disruptions from the crowd are

often expressed by athletes as a problems that could affect both their performance and focus. The following words are expressed by one of the respondents:

“Everytime when I compete, I do not like to be bothered by the audience. When I first I got myself involved in this sport, I did not know how to control the situation. There was a time I was disturbed by the audience and I felt very angry and wanted to throw the ball at the audience. But after being so long in this field, I know how to control it now.”

Based on this statement, it shows that the athletes must be taught to cope up with failures and to be in control when offensive words are thrown by the opponent / outsiders (Weinberg & Gould, 1999).

“I don't like spectators who call my name or tease me. This causes me to lose focus during the game and put a lot of stress on me.”

In this situation, the athlete cannot control the environment, they can only control themselves. Nicholls et al., (2007) conducted a study on rugby and found that the sources of stress experienced by athletes are disruptions from the audience who taunted them, throw objects on them and cursed the way they play.

Personal Problems

It is inevitable for athletes to run away from personal problems. If these problems are not controlled, it could lead athletes to go under stress. According to the university athletes, sometimes their personal problems are sources of their stress during training or competition. The following are statements on the personal problems experienced by some athletes:

“Sometimes I cannot forget the personal problems that I'm going through and because of that, I got carried away in my training and competition. This gives a great stress on me.”

“Sometimes when I have my own personal problems, it's hard for me to get it out of my head. It really distracted my mind during training.”

This is supported by a study done by Hoedaya and Anshel (2003) on Australian and Indonesian athletes. The study reveals that the stress often faced during sport is too much thinking about personal problems. Therefore, uncontrollable personal problems can put athletes under a lot of stress during training or competition.

Overall, sources of stress can be seen in Figure 1 that describes in details the sources of stress experienced by rugby athletes.

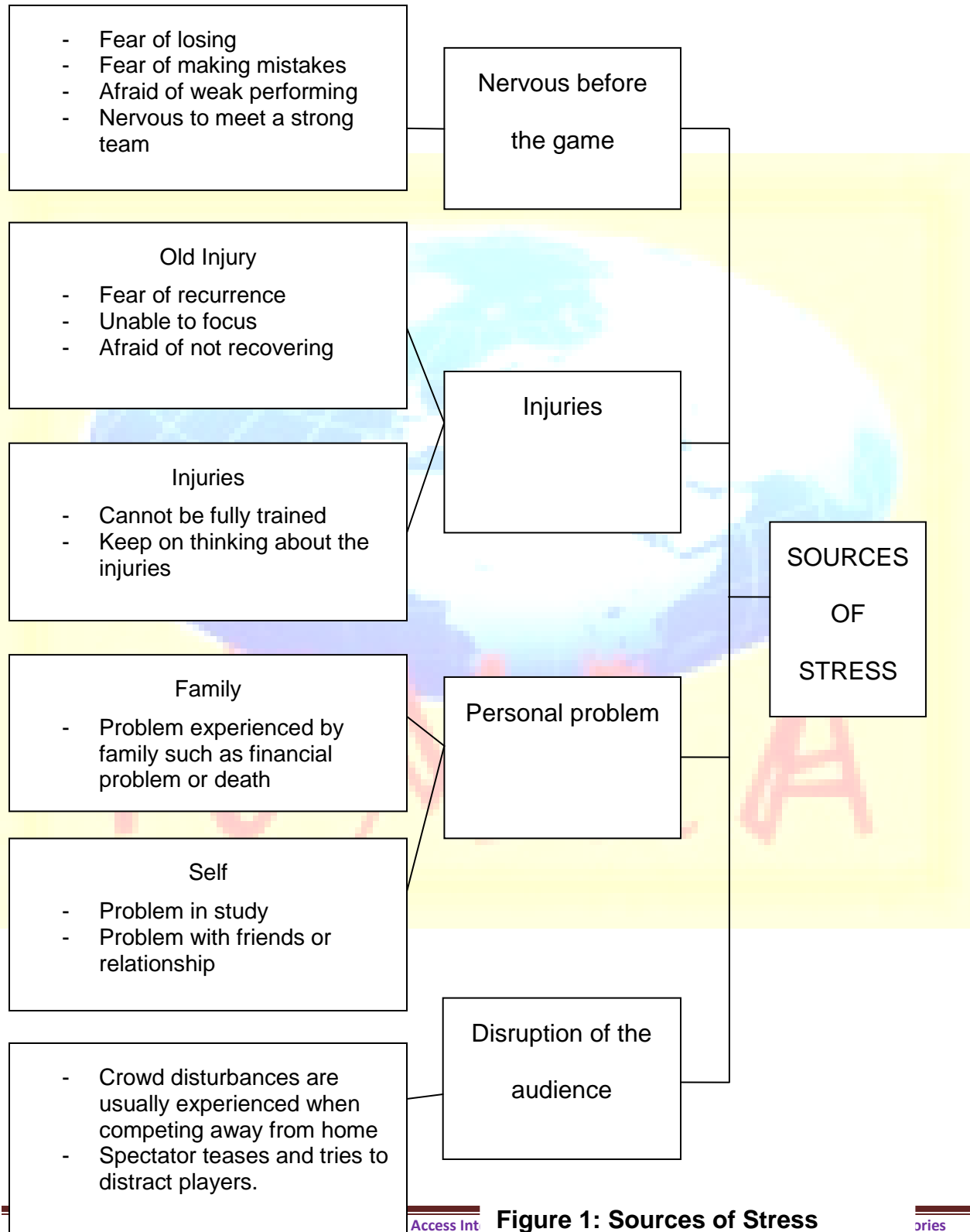


Figure 1: Sources of Stress

The second procedure is to see the coping strategies used by athletes to cope with their sources of stress such as nervous before the game, injuries, disruption of the audience and personal problems. Here are the themes identified in the situation to overcome the sources of stress Table 2.

Table 2: Coping Strategies Used By Athletes Rugby

Coping Strategies	Total Players (15)
Social Support	15
Positive Self-Talk	13
Mind Set	12
Remembering past success	10
Physical preparation	8

Coping Strategies

Social Support

Athletes need the support from coaches, managers, teammates, spectators and family members for them to deal with their stress or to make themselves more enthusiastic (Weinberg & Gould, 1999). All athletes who are involved in this study need social support to enhance their motivation to play hard and improve their self-confidence. This statement is supported by a study conducted by Omar-Fauzee, David, Kamaruddin, Yusof, Soh, Nazaruddin, Aman and Salikon (2009) who found that the factors that motivate athletes in sports are; the supporters, environmental factors, role models, the popularity of the sport and rewards. Besides that, athletes also need motivational words from the coach and teammates. This is shown in the following statement:

“Before the competition, the coach will give words of encouragement to all of us. With those words, I’ll be more confident and eager to play.”

Therefore, the coach plays an important role in shaping the success of great athletes. According to Park (2000), Korean athletes use coping strategies to face the stress by getting social support from coaches, family and friends.

“When I feel stress, I need support from my teammates. Sometimes I would give words of encouragement to my friends when I see them feeling down or made a mistake.”

“If the opponent is leading on the score, my teammates play a role in raising my motivation.”

In addition, athletes should always get the motivation and confidence through the motivation words from family, fans, spectators and friends too (Shaari & Omar Fauzee, 2004).

“I always call my family every time I have a competition. I would feel relieved and excited to play if I can talk to them.”

Another interesting thing is the family's role towards the athletes. Athletes will confide their problems to their family when they are under pressured. This is parallel to the Malaysian community where family tie is closely knotted.

Positive Self-talk

86.6% of the athletes in this study employed positive self-talk. Self-talk helps the athletes to stay and maintain themselves in the training and face the competition with confidence. According to Hardy (2006), positive self-talk can improve performance and skills in sports. Positive self-talk include the use of phrases such as *“I can do it, I have to prove that I am great”, “I want to win, I want to win, I want to win”, “We want to play, put aside laziness and must train hard”, “Play hard”*. Vealey (2007) suggests that positive self-talk will work if the following are applied; strategies, increase emotions and effort, relaxation and staying calm, focus, maintain self-confidence and self-evaluation. Some athletes use self talk when reprimanded by the coach after making mistake. *“The coach scolded me because he has a reason, I have to correct my mistake, I can do it.”*

Thus, the athletes will persuade themselves to focus entirely on their performance. The use of imagery and positive self-talk can reduce anxiety and improve confidence levels (Fletcher & Hanton, 2001).

Mind Set

Athletes have never felt depressed every time they go for training because they have set in their mind ahead of time before going for training. Mental planning provides benefits such as building proper mind set; increases the overall performance, improving performance consistently and ready to face any obstacles (Burton & Raedeke, 2008). In addition, the coach also provides training schedule ahead of time and the athletes will try to prepare themselves before the training. The paragraphs below show the mindset employed by one of the athletes:

“Every time before going for training, I will set in my mind. I will prepare myself and will accept the training that will come.”

Using mind set plays an important role in helping to improve the athlete’s performance. Mind set can help athletes to focus on their assignment without thinking about other things.

“I never felt depressed during training because I feel good and I have a deep interest in this sport. I always set my mind before training.”

Thus, it clearly shows here that mind set helps a lot in avoiding stress and always prepare themselves physically and mentally. In a study conducted by Bertollo, Saltarelli, and Robazza (2009), on pentathlon athletes revealed that athletes need mental preparation before undergoing training or competing. Mental preparation requires setting the goals, imagery, focus, and positive self-talk.

Remembering past success

In order for the athletes to improve their performance, they always reflect or recall their past mistakes. One of the athletes stated *“If I made a mistake, I will keep it to myself. After the game, I will try to recall my mistakes and try not to repeat the same mistakes again.”* Athletes will recall the mistakes they made. However, at the same time they will also try to imagine the best action that they have done. According to Omar-Fauzee et al., (2009) imagery is a method used where individuals imagine themselves in their mind. They can imagine themselves to learn and improve their skills. In some cases, athletes try to reflect on the moments of their victory: *“When the team is left far behind*

in score by the opponent, I will try to recall the moments of our victory. This will uplift my spirit and I want to play better”.

In addition, to bring up their confidence so they can handle the stress, the players will try to reflect the success and the victory that they have achieved before (Holt & Hogg, 2002).

Physical preparation

Physical and mental preparation is very important. Athletes prepare themselves by doing additional training to remain fit. For example, athletes will do exercises such as push-ups, sit-ups or running on their own efforts even when there is no training on that day. According to one of the athletes,

“I will make preparations prior to training. I will do push-ups and sit-ups before going for training”.

“During the holidays, I will do exercises such as jogging or playing basketball, if I was in my village, I will run in the river”.

Physical preparation is intended to build capacity to meet the athlete’s physical training and competition. Physical preparation usually builds the endurance of the muscles and cardiovascular, muscles strength, speed and coordination (Blumenstein, Lidor, & Tenenbaum, 2007).

Besides that, athletes will prepare themselves in terms of their food intake by practicing a balanced diet and taking supplement. Here is a brief set by an athlete:

“I will watch my diet. I would avoid taking ice in drinks”

“I only eat healthy food. I drink plenty of plain water:

The nutritional demands on the athletes involved in team sports are high, with a need of sufficient calories to endure long frequent trainings, and high need for water to sustain hydration state (Benardot, 2006).

“I take supplement such as protein every time before training and after training. This supplement is able to build tissues in my body.”

The use of the supplement is very important to give extra energy. According to Kraener, Ratamess, Volek, Hakkinen, Rubin, and French (2006), protein and/ or amino acid supplement can reduce muscle damage, attenuation of force decrements and enhance recovery resistance exercise in individuals.

Figure 2 describes in details the coping strategies used by athletes to cope with the stress in rugby.

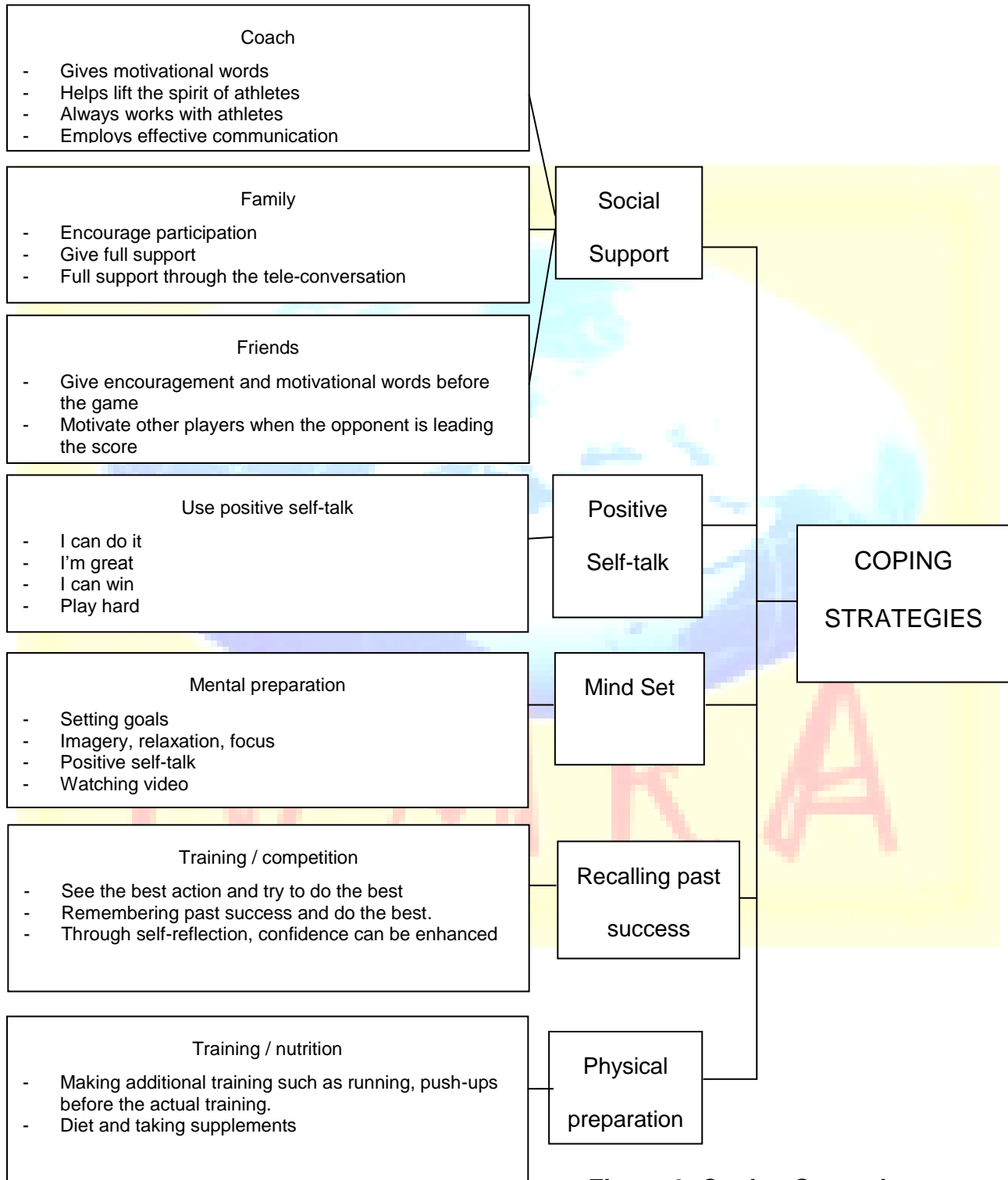


Figure 2: Coping Strategies

Conclusion

The purpose of this study was to determine the coping strategies used in sports by UPM rugby athletes. The results in Table 1 show the sources of stress experienced by athletes during the competition. There are four sources of stress; nervousness before the game, injuries, disruption from the audience and personal problems. Athletes have different experiences of stress and that include being concerned on a few things such as the team's performance, the selection session, team members and physical fitness (Nicholls et al, 2007).

The findings from this study share some similarities with previous studies. Holt and Hogg (2002) conducted a test on a sample of female soccer players who took part in World Cup 1999. The test is conducted on their experience related to stress and coping strategies that they employed. Four main sources of stress categories were reported; coach, demands from international soccer tournament, the stress in the competition and distractions. Anxiety when facing the competition is a problem that is often encountered by the athletes. Athletes will feel depressed, especially when faced with the risk of injury and the mistake in mental and physical interpretation (Nicholls, Holt, Remco & Johny, 2006). On the other hand, Mosewich, Crocker, and Kowalski (2013) found that poor performance, performance plateau and injury were common letdown experiences. However, according to the theory of Transactional Model (Lazarus, 1984), individuals will try to deal with any threat or stress.

Furthermore, Nicholls, Holt, Polman, and James (2005) also conducted a research on Irish international senior golfers. The results showed that the sources of stress were external influence, making mistake, scores, evaluation and the opponent. These findings are similar to studies conducted by Nicholls and colleagues (2005) who found that external sources are also identified as sources of stress. Disruption by the audience is one example of external source of stress. This problem is difficult to be handled by the coach, manager, or athletes because the audience has the right to talk or voice out during the competition. Athletes need to know how to control this situation by studying the techniques of sports psychology. The higher their hardiness of coping

strategies used the high level is their confidence level, which decrease their level of anxiety (Hanton, Neil, & Evans, 2013).

Table 2 shows the coping strategies used by athlete's rugby UPM is social support, positive self-talk, remembering past success, mind set and physical preparation. Coping strategies in the face of competition is very important for athletes to maintain performance. Therefore, the usual strategies used by the athletes to cope during this situation are to avoid these things, additional exercise in mind control and seeking for social support. The term social support here means moral support, support from coaches, managers, teammates, family and spectators. Athletes really need social support especially when they are feeling very stressed or when they are behind in the game. Social support provided by the teammates will help them to keep motivated.

The study conducted by Park (2000) revealed that Korean athletes require social support, especially from coaches, teammates and family members. Park further revealed that Korean athletes used coping strategies such as psychological training, training and strategies, somatic relaxation, hobby activities, prayer and substance use. The findings by Park support were supported by Nicholls et al (2005) whereby the effectiveness of coping strategies in sport is made rationally, re-evaluated, making restrictions, positive self-talk, engaging in daily routine, breathing exercise, physical relaxation and seeking programs on social support.

Besides that, positive self-talk approach is used by many athletes. This technique helps the athletes to remain in their training. Other than that, coping strategies are classified into six dimensions: imaging/visualizing, being aware of keywords, competing only against one's own self, confidence in a training session, consistency, and comradeship. Different coping strategies are used depending on the sources of stress. According to Anshel, Raviv, and Jamieson (2001), athletes used a variety of different coping strategies that include cognitive approach strategy, behavioural approach strategy, avoidance coping strategy, avoidance behavioural strategies and a variety of post-match coping strategies. In terms of the behaviour approach strategy, UPM rugby athletes have taken the approach by preparing themselves physically through training and proper diet.

All sources identified are the primary sources. Athletes who have a higher rate in coping strategies are more effective when competing because their coping strategies will be self-employed naturally (Dugdale, Eklund, & Gordon, 2002; Omar-Fauzee, et al., 2009). However, this study cannot be generalized to the whole population because it only involved male athletes from a rugby sport. Therefore, this study suggests future research to investigate coping strategies in various sports and taking into account the gender factor.

References

- Adegbesan, O.A. (2007). Coping: a critical mediating factor of stress among athletes in West African Universities. *Educational Research Review*, 2 (11), 285-291.
- Anshel, M.H., Raviv, S., & Jamieson, J. (2001). Cognitive appraisals and coping strategies following acute stress among skilled competitive male and female athletes. *Journal of Sport Behavior*, 24, 128-134.
- Benardot, D. (2006). *Advanced sport nutrition*. US: Human Kinetics.
- Bertollo, M., Saltarelli, B., & Robazza, C. (2009). Mental preparation strategies of elite modern pentathletes. *Psychology of Sport and Exercise*, 10, 244-254.
- Bjornstal, D.M.W., Lavoi, N.M., & Omli, J. (2009). Child and adolescent development and sport participation. In B. Brewer (ed), *Sport Psychology : Handbook of Sport Medicine and Science*. UK: Blackwell.
- Blumenstein, B., Lidor, R., & Tanenbaum, G. (2007). *Psychology of sport training*. UK: Meyer & Meyer Sport Ltd.
- Brown, S.P., Miller, W.C., & Eason, J.M. (2006). *Exercise physiology : Basic of human movement in health and disease*. Baltimore: Lippincott Williams & Wilkins.
- Burton, D., & Raedeke, T.D. (2008). *Sport psychology for coaches*. US: Human Kinetics.
- Clough, P.J., Karle, K., & Sewell, D. (2000). Mental toughness: The concepts and its measurement. In I. Cockerill (ed), *Solutions in sport psychology*. London: Thomson.
- Dale, G. (2000). Distractions and coping strategies of elite decathletes during their most memorable performances. *The Sport Psychologist*, 14, 17-41.
- David, K., Carlton, C., Anne, F., & Jim, M. (2008). *Key concepts in sport & exercise sciences*. London: SAGE Publications Ltd.

Dominikus, F., Omar-Fauzee, M.S., Chong, M., Meesin, C., & Choosakul, C. (2009). Relationship between mental skill and anxiety interpretation in secondary school hockey athletes. *European Journal of Social Science* , 9, 651-658.

Dugdale, J.R., Eklund, R.C. , & Gordon, S. (2002). Expected and unexpected stressors in major international competition: Appraisal, coping and performance. *The Sport Psychologist* , 16, 20-33.

Fletcher, D. & Hanton, S. (2001). The relationship between psychological skills usage and competitive anxiety responses. *Psychology Of Sport and Exercise* , 2, 89-101.

Hanton, S., Neil, R., & Evans, L. (2013). Hardiness and anxiety interpretation into coping usage effectiveness. *European Journal of Sport Sciences*, 13 (1), 94-104.

Hardy, J. (2006). Speaking clearly : A critical review of the self-talk literature. *Psychology of Sport and Exercise* , 7, 81-97.

Hoedaya, D., & Anshel, M.H. (2005). Use of effectiveness of coping with stress in sport among Australian and Indonesian athletes. *Australia Journal of Psychology*, 55, 159-165

Holt, N.L., & Hogg, J.M. (2002). Perceptions of stress and coping during preparations for the 1999 women's soccer world cup final. *The Sport Psychologist* , 16, 251-271.

Kraemer, W.J., Ratamess, N.A., Volek, J.S., Hakken, K., Rubin, M.K., & French, D.N. (2006). The effects of amino acid supplementation on hormonal responses pattern in younger vs older men to over-reaching. *Metabolism Clinical and Experimental* , 55, 282-291.

Lazarus, R.S., & Folkman, S. (1984). *Stress appraisal and coping*. New York: Springer.

Lazarus, R.S. (2000). How emotions influence performance in competitive sports. *The Sport Psychologist* , 14, 229-252.

McCorry, P., Turner, M., & McIntosh, A. (2009). Preventing injuries to the head and cervical spine. In R. & Bahr, *Olympic handbook of Sport Medicine*. UK: Blackwell Publishing.

Mosewich, A. D., Crocker, P. R. E., & Kowalski, K. C. (2013). Managing injury and other setbacks in sport: Experiences of (and resources for) high performance women athletes. *Qualitative Research in Sport, Exercise, and Health*. Advance online publication. doi:10.1080/2159676X .2013.766810

Nicholls, A.R., Holt, N.L., Polman, R.J.C, & James, D.W.G. (2005). Stress, coping, and coping effectiveness among international adolescent golfers. *Journal of Applied Sport Psychology* , 17, 333-340.

- Nicholls, A.R., Holt, N.L., Remco, C.J., & Johny, B. (2006). Stressor coping, and coping effectiveness among professional rugby union players. *The Sport Psychologist*, 20, 314-329.
- Nicholls, A.R., & Polman, R.C.J. (2007). Coping in sport: A systematic review. *Journal of Sport Science*, 25, 11-31.
- Nicholls, A.R., & Polman, R.C.J. (2007a). Stressors, coping, and coping effectiveness among rugby players from the England under-18 rugby union team. *Journal of Sport Behavior*, 30, 199-218.
- Omar-Fauzee, M.S., Daud, N., Kamaruddin, K., Soh, K.G., Nazaruddin, M.N., Aman, S., & Salikon, R. (2009). What's make University students participate in sports? *European Journal Social Sciences*, 8, 449-458.
- Omar-Fauzee, M.S., Wan Daud, W.R., Abdullah, R., & Abd Rashid, S. (2009). The effectiveness of imagery and coping strategies in sport performance. *European Journal of Social Sciences*, 9, 97-108.
- Park, J.K. (2000). Coping strategies used by Korean national athletes. *The Sport Psychologist*, 14, 63-80.
- Patton, M.Q. (2002). *Qualitative research and evaluation methods* (3rd. Edition ed.). Thousand Oaks CA: Sage.
- Pranabas, V.A., & Omar-Fauzee, M.S., (2002). Meningkatkan motivasi atlet. [Improving athletes motivation]. In Omar-Fauzee, M.S. (ed), *Pendekatan psikologi dalam menangani masalah atlet [Psychological application in overcoming athlete problems]*. Kuala Lumpur: Karisma Publications.
- Robert, C.G. (1992). *Motivation in sport an exercise*. Urbana-Champaign IL: Human Kinetics.
- Shaari, H., & Omar-Fauzee, M.S. (2004). Tingkatkan prestasi melalui kata-kata rangsangan [Improve performance through verbal persuasions]. In Omar-Fauzee, M.S. (ed), *Psikologi kejurulatihan: Membantu membina ketahanan mental atlet [Psychology of coaching: Helping in creating athletes mental toughness]*. Shah Alam: Karisma Production Sdn. Bhd.
- Vealey, S.R. (2007). Mental skills training in sport. Dlm Tenenbaum, G., Eklund, R., & Singer, R. (ed), *Handbook of sport psychology*. New Jersey: Wiley.
- Weinberg, R.S., & Gould, D. (2007). *Faoundations sport and exercise psychology (4th ed)*. Champaign, IL: Human Kinetics.