

THE LEVEL OF COPING STRATEGIES TECHNIQUES AND PERFORMANCE ON HANDBALL PLAYERS

Vincent A. Parnabas*

Julinamary Parnabas**

Antoinette Mary Parnabas***

Abstract

Anxiety is one of the main barriers that impact on performance among athletes and countless researches have been conducted on coping strategy techniques to reduce anxiety among athletes. Coping strategies techniques include positive self-talk, physical activity, goal setting, thinking on practice, thought stopping, remembering the worst-case scenario, focus on what you can control, imagery, meditation, simulation, breathing techniques, progressive relaxation, autogenic training and biofeedback. The present study sought to explore potential coping techniques used by handball players. The sample consisted of 98 handball players. The sample was drawn from athletes who competed Sport between Universities. Results showed that though stopping have the highest usage among athletes. National athletes used highest coping techniques than state, district, and university level athletes. Besides that national athletes showed highest performance level compared other categorised. Sport psychologists, sport counselors and coaches should encourage their athletes to use positive coping strategies to improve performance.

Key words: Anxiety, Coping Strategies and Performance.

* Faculty of Sport Science and Recreation, Universiti Teknologi MARA (UiTM), Shah Alam, 40450 Selangor, Malaysia.

** Institut Pendidikan Guru, Kampus Darulaman, Jitra, Kedah, Malaysia.

*** Medical Unit, Hospital Taiping, Taiping, Perak, Malaysia.

Background

According to Raglin and Hanin (2000), anxiety is the main psychology factor has a great influence on performance. Many researches showed that winning in a competition depends on how an athlete can control their anxiety levels (Humara, 2001). Since anxiety is one of the main barriers to performance among athletes (Cox, Qiu & Liu, 1993; Ortiz, 2006), many psychological researches have been conducted on coping strategies to reduce the level of anxiety of athletes (Cox et al., 1993; Taylor, 1996; Humara, 2001; Richards, 2004). When athletes feel anxious in a competitive situation, they try to use personal coping resources to reduce the anxiety (Cox, 2011). Coping has been defined by Lazarus and Folkman (1984: 141) as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding resources of the person”. Coping techniques identified used by athletes are positive self-talk, physical activity, goal setting, thinking on practice, thought stopping, remember the worst-case scenario, focus on what you can control, imagery, meditation, simulation, breathing techniques, progressive relaxation, autogenic training and biofeedback.

As a psychological method for improving self-confidence, positive self-talk deals with stressful situations by eliminating pessimistic thinking and worry, and leads to positive and rational feelings about an athlete's ability (Weinberg & Gould, 2011; Cox, 2011; Ampofo-Boateng, 2009). Researchers have shown that engaging in physical activity has a healthy impact on blood circulation, relaxation and reduces anxiety and tension (Anshel, 2003; Zaichkowsky & Takenaka, 1993). Goal setting is a powerful technique that can be used to improve performance by setting performance, realistic, long term and short term goals (Weinberg and Gould, 1999; Anshel, 2003; Ampofo-Boateng, 2009). In a sport context, when athletes ‘think practice’, they are reflecting on a relatively relaxed, nonthreatening environment in which their sport skills were performed successfully (Quinn, 2008; Anshel, 2003). Thought stopping aims at changing negative thinking to positive thinking and concentrates on the task (Ampofo-Boateng, 2009). The worst-case scenario for an athlete is losing the contest and poor performance (Weinberg & Gould, 2011; Anshel, 2003), but a contest's outcome is not always under the person's control, so by thinking of the worst case scenario, an athlete is placing sport in perspective and enhancing self-confidence (Neil, Mellalieu & Hanton, 2006; Anshel, 2003). By focusing on what can be

controlled, worry about uncontrollable factors is reduced and athletes become task oriented, and concentrate on immediate performance demands (Anshel, 2003; Weinberg & Gould, 2011).

Furthermore, Imagery, known as mental rehearsal, mental visualization or mental practice, helps athletes to reduce anxiety and improve performance by activating the muscles (Cox, 2011; Ampofo-Boateng, 2009). While, simulation makes athletes use real competition environment like audience, noise, mass media and referee, which can reduce anxiety at the sport event (Weinberg & Gould, 2011; Gervis, 2000; Bull, 2000). Mastering the technique of deep breathing can make athletes relax relieving tension and enhance self-confidence (Weinberg & Gould, 2011; Cox, 2011). Progressive Relaxation based on Jacobson's idea that it is impossible to be nervous or tense in any part of the body where the muscles are completely relaxed (Cox, 2011). Autogenic training involves the use of the mind to influence the body to balance the self-regulative systems that control the physiological functioning of the body, including circulation, breathing and heart rate (Ampofo-Boateng, 2009). Biofeedback uses instruments that help people to control responses of the autonomic nervous system and its usefulness for athletes who suffer from excessive anxiety (Cox, 2011).

Most of the previous researches focus on elite athletes, while ignoring less successful athletes, especially in handball. Therefore the difference in coping strategy level among different categories of skill of athletes in handball remains unclear. In Malaysia, the level of coping strategies among handball athletes of national, state, district and university level are yet to be identified through research.

The result of this research will determine the influence of coping strategy on handball sport performance. The findings allow coaches and trainers of handball to implement coping strategies, especially on unsuccessful athletes to enhance performance in sports.

Aims

The aim of this research was to identify the coping techniques used by handball players to deal with anxiety, used by different categories of athletes. Besides that, this research also evaluates the relationship between level of coping strategy and sport performance of handball players.

Methods

Coping Strategy Techniques Questionnaire was used which comprised of positive self-talk, physical activity, goal setting, think on practice, thought stopping, remember the worst-case scenario, focus on what you can control, imagery, meditation, simulation, breathing techniques, progressive relaxation, autogenic training and biofeedback.

The sample consisted of 98 handball players, including the national athletes (N=33), state athletes (N=21), district athletes (N=25) and university athletes (N= 19).

Result and Discussion

Respondents' Profile

The respondents' profile described their ranking, ethnic and age. Table 1 shows the overall results of the respondents' profile for 98 handball players. The overall mean age for these respondents was 21.21 years old. The age of male respondents varied from 18 to 23 years, where the mean age was 21.27 years old. The age of female players ranged from the minimum of 18 to the maximum of 23 years old. The mean age for female respondents was 19.33 years old.

The variable "rank which is gathered through this study is categorized into four levels namely, national, state, district and university. The result showed that 33 respondents had participated at national, whilst 21 respondents participate at state, 25 had participated at district and 19 respondents participated at the university level. Majority of the respondents, were undergraduates for Degree (n=45) and Diploma (n=53) programmes.

Table 1: Respondents' Profile (n=98)

Variables	Frequency	Percentage	Mean	SD
Athletes according to rank				
National				
State	33	33.67		
District	21	21.43		
University	25	25.51		
	19	19.39		
Programme				
Diploma				
Degree	45	45.92		
	53	54.08		
Age				
Male				
Female			21.27	2.31
Overall			19.33	1.97
			21.21	1.38

Cronbach Reliability Coefficients

In this study, Cronbach alpha coefficients were found relatively high, ranging from .85 to .87 (Table 2).

Table 2: Cronbach Reliability Coefficients

Questionnaire	Cronbach's Alpha (n=98)
Coping Strategy Techniques Questionnaire	.8749
Sports Performance	.8529

Coping Strategy Techniques of Handball Players

Coping strategy techniques were evaluated and thought stopping ($x\bar{=} 27.4478$), have the highest mean, follow by positive self talk ($x\bar{=} 24.4391$), simulation ($x\bar{=} 23.1231$), remember the worst-case scenario ($x\bar{=} 22.7891$), imagery ($x\bar{=} 21.4531$), goal setting ($x\bar{=} 18.7029$) breathing techniques ($x\bar{=} 17.3021$), autogenic training ($x\bar{=} 15.1479$), physical activity ($x\bar{=} 14.1479$), and relaxation ($x\bar{=} 13.1479$).

12.4821), think on practice ($x^2 = 11.3782$), meditation ($x^2 = 11.2210$), progressive relaxation ($x^2 = 10.9921$), focus on what you can control ($x^2 = 10.4321$), and biofeedback ($x^2 = 10.0042$).

Categories of handball Players

One way ANOVA showed significant differences among categories of handball players, $F(3, 98) = 17.227, p < 0.01$.

Table 3: Coping Techniques based on categories of athletes

Categories	Mean	Value-F	Value-p
National	23.7128	17.227**	0.000
State	21.4829		
District	18.3781		
University	16.3128		

** $p < 0.01$

The result showed that national athletes used highest coping strategy techniques than state, district, and university level athletes. Coping strategy techniques of university athletes was lower than national, district and state athletes (Table 4).

Table 4: Pos Hock Tukey: Level of Coping Strategies among different skills of handball Players

Categories According to Skills	National	State	District	University	N
National		*(1.4231)	* (1.6145)	* (1.9251)	33
State			* (1.3421)	* (1.8231)	21
District				*(1.0041)	25
University					19

* $p = 0.05$

The purpose of this study was to identify the usage of coping strategy techniques among handball athletes. The result reviewed that national level athletes used the highest coping

strategy techniques and university level athletes the lowest. A few previous researches supported this result that elite athletes used the highest coping strategy techniques, among those research are Jarvis (2002), Dale (2000) and Park (2000).

Research of Hackfort and Spielberger (1989) and, LeUnes and Nation (2002) showed that elite athletes use coping strategy techniques to combat anxiety and to enhance performance. In other words, the highest usage of coping strategy techniques can differentiate between elite and non elite athletes. This research also has been supported Anshel, Williams and Williams (2000) that elite athletes are popular in using many kind of positive coping techniques.

Performance of handball Players

One way ANOVA showed significant differences among categories of performance of handball athletes, $F(3,98) = 16.471, p < 0.01$. (Table 5).

Table 5: Level of Sport Performance among different skills of handball Players

Categories According of Skills	Sport Performance	
	Mean	Value-F
National	21.4826	16.471*
State	19.7481	
District	17.1429	
University	15.3149	

* $p = 0.01$

The result showed that athletes in the categories of district skill exhibit lower level of sport performance than categories of state and university, whereas national athletes showed the highest levels of sport performance.

Table 6: Pos Hock Tukey: Level of Performance among different skills of handball Players

Categories According to Skills	National	State	District	University	N
National		*(1.1341)	* (1.3421)	* (1.7892)	33
State			* (1.4791)	* (1.9216)	21
District				*(1.2101)	25
University					19

*p<0.05

The result showed that high performance athletes use the highest coping strategy techniques and low performance athletes use the lowest coping strategy techniques. Several researches indicated that using positive coping strategies as above can enhance performance. Among those are Cox (2011), Caird, McKenzie and Sleivert (1999) Kavussanu, and Crews and Gill (1998). Coping strategies play an important role in enhancing performance (Aufenanger, 2005; Hanton & Jones, 1999).

Conclusions

As the conclusion of this study, it is found those national or elite handball players use the highest coping strategy techniques and university level athletes, the lowest. Furthermore, the performances of those athletes using high coping strategy techniques are highest and performances of athletes with low coping strategy techniques are the lowest. The findings emphasize the importance of coping strategy techniques to enhance performance. Sport psychologists, sport counselors and coaches should encourage their handball players to use the highest coping strategy techniques since it has been proved as the key for success.

References

- Ampofo-Boateng, K. 2009. *Understanding sport psychology*. Selangor, Malaysia: UiTM Press.
- Anshel, M.H. 2003. *Sport psychology: from theory to practice*. New York: Benjamin Cummings.
- Aufenanger, S. J. 2005. *Relationships between mental skills and competitive anxiety interpretation in open skill and close skill athletes*. Thesis Master Miami University, Oxford, Ohio.
- Anshel, M.H., Williams, L.R.T., & Williams, S.M. 2000. Coping style following acute stress in competitive sport. *The Journal of Social Psychology* 140, 751-773.
- Bull, S.J. 2000. *Sport Psychology: A self-help guide*. Ramsbury, Marlborough: Crowood.
- Caird, S.J., McKenzie, A.D., & Sleivert, G.G. 1999. Biofeedback and relaxation techniques improve running economy in sub-elite long distance runners. *Medicine and Science in Sports and Exercise* 31 (5), 717-722.
- Cox, R. H. 2011. *Sport Psychology, concepts and applications*. New York: McGraw-Hill.
- Cox, R.H., Qiu, Y. & Liu, Z 1993. Overview of sport psychology. In R.N. Singer, M. Murphey and L.K. Tennant, *Handbook of research on sport psychology*. New York: Macmillan.
- Dale, G.A. 2000. Distractions and coping strategies of elite decathletes during their most memorable performances. *The Sport Psychologist* 14: 17-41.
- Gervis, M. 2000. Children in sport. In S.J. Bull, *Sport Psychology: A self-help Guide*. Ramsbury, Marlborough: Crowood.
- Hackfort, D & Spielberger, C.D. 1989. *Anxiety in sports: an international perspective*. New York: Hemisphere.
- Hanton, S. & Jones, G. 1999. The acquisition and development of cognitive skills and strategies: I. Making the butterflies fly in formation. *The Sport Psychologist* 13, 1-21.
- Humara, M. 2001. The relationship between anxiety and performance: A Cognitive-behavioral perspective. *Athletic Insight 1(2): The Online Journal of Sport Psychology*.
- Jarvis, M. 2002. *Sport Psychology*. New York: Routledge.
- Kavussanu, M., Crews, D.J., & Gill, D.L. 1998. The effects of single versus multiple

measures of biofeedback on basketball free throw shooting performance. *International Journal of Sport Psychology* 29 (2), 132-144.

Lazarus & Folkman. 1984. *Stress appraisal and coping*. New York: Springer.

Leunes, A. & Nation, J.R. 2002. *Sport Psychology*. CA, USA: Wadsworth.

Neil, R., Mellalieu, S.D. & Hanton, S. 2006. Psychological skills usage and the competitive anxiety response as a function of skill level in rugby union. *Journal of Sports Science and Medicine* 5, 415 – 423.

Ortiz, J. 2006. Efficacy of relaxation techniques in increasing sport performance in women golfers. *The Sport Journal* 9. (<http://www.thesportjournal.org/2006Journal/Vol9-No1/OrtizLaGrange1.asp>)

Quinn, E. 2008. Don't choke. How to reduce performance anxiety. *Medical Review Board*. (http://sportsmedicine.about.com/cs/sport_psych/a/aa010603a.htm).

Park, J. 2000. Coping strategies by Korean national athletes. *The Sport Psychologist* 14, 63-80.

Raglin, J.S. & Hanin, Y.L. 2000. Competitive anxiety. In Yuri, L.H., *Emotions in Sport*. Champaign, IL: Human Kinetics.

Taylor, J. 1996. Intensity regulation and athletic performance. In J.L. Van Raalte and B.W. Brewer (Eds.), *Exploring sport and exercise psychology*. Washington, DC: American Psychological Association.

Weinberg, R.S. & Gould, D., 2011. *Foundations of Sport and Exercise Psychology*. Champaign, IL: Human Kinetics.

Zaichkowsky, L. & Takenaka, K. 1993. Optimizing arousal level. In R.N. Singer, M.Murphy, & L.K. Tennant (Eds.), *Handbook of research in sport psychology*. New York: MacMillan Publishing Company.