TEST OF PERFORMANCE STRATEGIES AMONG COLLEGE GOING ATHLETES: DIFFERENCES ACROSS TYPE OF SPORTS AND GENDER

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ABSTRACT

The aim of the study was to examine possible differences in the use of performance strategies of college going athletes of different type of sports and gender. The sample consisted of 68 athletes from Lakshmibai National University of Physical Education Gwalior (36 males, 32 females), aged 21.04 ± 1.75 years, with different sports (team sport and individual sport). The Test of Performance Strategies (TOPS-Thomas, Murphy, and Hardy, 1999) was used. The participants completed the TOPS questionnaire during the competition season of 2011-12 sessions. The results showed that there were significant differences in performance strategies used by male and female athletes during competition and practice condition, further there are significant differences in performance strategies used by athletes of team sports and individual sports during practice and competition condition. During both practice and competition condition female athletes were better compared to male athletes in emotional control, whereas male athletes perform better than female athletes in goal setting, Self talk, imagery and attentional control in practice condition and automaticity, self talk, imagery, attention control and activation during competition condition. Individual sports athletes had better emotional control than team sports athletes during practice and competition condition whereas team sports athletes were better than individual athletes in relaxation and activation during practice condition. The differences between athletes of different sports and gender could be considered from coaches and sport psychologists in order to help athletes improve their athletic performance.

Key Words: Test, Performance Strategies, Athletes, Sports and Gender.

INTRODUCTION:

Athlete gets a little nervous before a big competition. However, for those who experience the severe anxiety, their athletic performance will often suffer. The relationship between athletic performance and anxiety is so strong that a whole field of sport psychology has been devoted to helping athlete's combat nerves. Athletes are using number of coping strategies to manage anxiety before it gets out of hand. Sport psychologists concern about coping strategies and their importance in sport performance, emphasized the need to identify relevant coping strategies as well as to instruct

sport consultants, trainers and athletes, about how they teach, about the way it is learned and how these strategies should be applied in practice (Smith et al., 1995). Participating in competitive sports place players under intense physical and psychological demands (Crockher et al., 1996). These rigorous challenges require players not only to use automated technical and tactical skills but also to develop and employ an arsenal of cognitive and behavioural coping skills to achieve performance success and satisfaction (Gould et al., 1993).

Psychological skills have been found to differentiate successful and unsuccessful athletes. In general, elite performers have higher self-confidence, heightened concentration, can regulate arousal effectively, use systematically goal setting and imagery, and have high levels of motivation and commitment (Gould, Dieffenbach & Moffett, 2002). It has also been found that elite athletes use more goal setting, imagery and activation compared to non-elite athletes (Thomas, Murphy & Hardy, 1999). Gender is an important interpersonal factor in competitive sport. Previous research showed that female athletes, compared with males reported higher cognitive anxiety (Martens, Vealey & Burton, 1990; Russel, Robb & Cox, 1998) and lower self confidence (Krane & Williams, 1994).). Also, males used more problem-focused coping strategies, while females used more emotion-focused coping (Anshel, Porter & Quek, 1998); Hammermeister & Burton, 2004). Male athletes were more win oriented and focused more on interpersonal comparison, while females scored higher on goal orientation and focused more on personal goals (Gill, 1998). Therefore, the purpose of this study was to explore possible differences in the use of performance strategies by college going athletes of different type of sports and gender.

MATERIALS AND METHODS:

Participants- Data for the study was collected from 68 athletes (36 males, 32 females), aged 21.04 ± 1.75 years, with different sports (team sport and individual sports). Participants were sampled from different sports (Soccer, Basketball, Athletics, Weight lifting, Swimming, Hockey, Cricket and Judo from Lakshmibai National University of Physical Education Gwalior. All athletes were in competition or training for competition at the time of data collection.

Tools- The participants completed the Test of Performance Strategies (TOPS) questionnaire during the competition season of 2011-12 sessions. A TOP is a 64-item self-report instrument designed by Thomas, Murphy, and Hardy (1999) to measure the psychological skills and strategies used by athletes in competition and during practice. It consists of two scales, competition and practice. Each scale is consisted of eight subscales. The 8 competition subscales are: self-talk (maintaining a positive internal dialogue), emotional control (controlling emotions under pressure), automaticity (performing with little conscious effort, automatically), goal-setting (setting personal, specific goals), imagery (visualizing sport performance), activation (maintaining an optimal level of arousal), relaxation (practicing to remain calm under pressure), and negative thinking (thoughts of failure). The practice subscales are the same except negative thinking which is replaced by attentional control (focusing attention effectively). TOPS have been used in numerous studies in order to evaluate the psychological skills used by athletes from various sports (Katsikas et al., 2009).

STATISTICAL ANALYSIS:

The statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS) Version 19.0. Descriptive statistic (Mean and Standard Deviation) and Independent sample t test was performed to compare different sports and gender for performance strategies.

RESULTS AND DISCUSSION:

Tables below show the descriptive statistic (Mean and standard deviation) and independent t-test for different parameters of performance strategies used by athletes during practice and competition condition.

Table-1.Independent t-test for differences between male and female athletes for performance strategies during practice condition

Variable	Gender	N	Mean	S. D.	T	df	P value	Mean Difference	Std. Error Difference
Goal setting	Male	36	15.55	1.55	5.21*	66	.000	1.89	.36
	Female	32	13.65	1.42					
Emotional control	Male	36	10.69	2.93	-5.50*	66	.000	-3.49	.63
	Female	32	14.18	2.19					
Automaticity	Male	36	15.47	1.78	.84	66	.402	.31	.37
	Female	32	15.15	1.22					
Relaxation	Male	36	15.63	1.91	1.97	66	.053	.85	.43
	Female	32	14.78	1.64					
Self talk	Male	36	16.16	1.48	3.56*	66	.001	1.26	.35
	Female	32	14.90	1.42					
Imagery	Male	36	16.61	1.79	4.21*	66	.000	1.70	.40
	Female	32	14.90	1.51					
Attention control	Male	36	14.30	2.31	5.34*	66	.000	2.61	.49
	Female	32	11.68	1.61					
Activation	Male	36	14.77	1.88	-1.42	66	.158	-.59	.41
	Female		37	1					

(*significant at P≤ 0.05)

Table-1 Shows Independent t-test found significant difference in the performance strategies used by male and female athletes during practice condition. In practice condition female athletes were better compared to male athletes in emotional control (‘t’ ratio -5.50) at 66 degree of freedom (p≤0.05), whereas male athletes perform better than female athletes in goal setting (‘t’ value 5.21), Self talk (‘t’ ratio 3.56), imagery (‘t’ ratio 4.21) and attentional control (‘t’ ratio 5.34) at 66 degree of freedom (p≤0.05).

Table-2 Independent t-test for differences between male and female athletes for performance strategies during competition condition

Variables	Gender	N	Mean	S. D.	t	df	P value	Mean Difference	Std. Error Difference
Goal setting	Male	36	14.05	1.58	1.656	66	.102	.618	.37
	Female	32	13.43	1.47					
Emotional control	Male	36	10.75	3.06	-5.128*	66	.000	-3.09	.60
	Female	32	13.84	1.58					
Automaticity	Male	36	15.83	1.85	3.041*	H	.003	1.30	.42
	Female	32	14.53	1.64					
Relaxation	Male	36	15.02	1.76	-.090	66	.928	-.03	.38
	Female	32	15.06	1.34					
Self talk	Male	36	15.86	1.89	3.746*	66	.000	1.67	.44
	Female	32	14.18	1.76					
Imagery	Male	36	16.50	1.52	4.402*	66	.000	1.56	.35
	Female	f	14.93	1.38					
Attention control	Male	36	13.86	2.55	5.849*	66	.000	3.14	.53
	Female	32	10.71	1.74					
Activation	Male	36	16.02	1.90	2.767*	66	.007	1.12	.40
	Female		90	5					

(*significant at P≤ 0.05)

Table-2 shows Independent t-test found significant difference in the performance strategies used by male and female athletes during competition condition. In competition condition female athletes were better compared to male athletes in emotional control (‘t’ ratio -5.28) at 66 degree of freedom (p≤0.05), whereas male athletes perform better than female athletes in automaticity (‘t’ ratio 3.041), Self talk (‘t’ ratio 3.764), imagery (‘t’ ratio 4.402), attentional control (‘t’ ratio 5.849) and activation (‘t’ ratio 2.764) at 66 degree of freedom (p≤0.05).

Table-3 Independent t-test for differences between team and individual sports athletes for performance strategies during practice condition

Variable	Sports	N	Mean	S. D.	t	df	P value	Mean Difference	Std. Error Difference
Goal setting	Team	37	14.94	1.89	1.461	66	.149	.62	.426
	Individual	31	14.32	1.55					
Emotional control	Team	37	11.40	3.49	-2.819*	66	.006	-2.04	.725
	Individual	31	13.45	2.20					
Automaticity	Team	37	15.48	1.78	.953	66	.344	.35	.375
	Individual	31	15.12	1.17					
Relaxation	Team	37	15.86	1.87	3.325*	66	.001	1.38	.415
	Individual	31	14.48	1.48					
Self talk	Team	37	15.70	1.88	.735	66	.465	.28	.385
	Individual	31	15.41	1.11					
Imagery	Team	37	16.18	1.77	1.874	66	.065	.83	.445
	Individual	31	15.35	1.88					
Attention control	Team	37	13.13	2.71	.230	66	.819	.13	.587
	Individual	31	13.00	1.98					
Activation	Team	37	14.48	1.83	-3.165*	66	.002	-1.25	.396
	Individual		74	4					

(*significant at P≤ 0.05)

Table-3 shows Independent t-test found significant difference in the performance strategies used by athletes of different type of sports during practice condition. In practice condition individual sports athletes were better compared to team sports athletes in emotional control ('t' ratio -5.28) and activation (t ratio-3.16) at 66 degree of freedom (p≤0.05), whereas team athletes perform better than individual sports athletes in relaxation ('t' ratio 3.32) at 66 degree of freedom (p≤0.05).

Table-4 Independent t-test for differences between team and individual sport athletes for performance strategies during competition condition

Variables	Sports	N	Mean	S. D.	t	df	P value	Mean Difference	Std. Error Difference
Goal setting	Team	37	14.00	1.61	1.371	66	.175		.376
		31	13.48	1.45					
Emotional control	Team	37	11.45	3.078	-2.387*	66	.020	-1.63	.686
	Individual	31	13.09	2.46					
Automaticity	Team	37	15.13	1.97	-.410	66	.683	-.18	.457
	Individual	31	15.32	1.75					
Relaxation	Team	37	14.94	1.87	-.561	66	.577	-.21	.383
	Individual	31	15.16	1.12					
Self talk	Team	37	15.37	2.37	1.376	66	.174	.66	.486
	Individual	31	14.70	1.41					
Imagery	g	37	16.08	1.87	1.755	66	.084	.69	.395
	Individual	31	15.38	1.25					
Attention control	Team	37	12.86	3.14	1.627	66	.109	1.05	.650
	Individual	31	11.80	1.95					
Activation	Team	37	15.81	1.96	1.620	66	.110	.68	.420
	ividual		12	8					

(*significant at P≤ 0.05)

Table-4 shows Independent t-test found significant difference in the performance strategies used by athletes of different type of sports during competition condition. Individual sports athletes were better compared to team sports athletes in emotional control ('t' ratio -2.38) at 66 degree of freedom ($p \leq 0.05$).

DISCUSSION:

The aim of the present study was to examine possible differences in the use of performance strategies by college going athletes of different type of sports and gender. Independent sample t-test was conducted for gender and sports to determine if any significant differences existed between male and female athletes and between individual and team sports athletes for the performance strategies used during practice and competition condition. The study found that there are some gender differences in the performance strategies used by male and female athletes and also difference

between athletes of team and individual sports. Male athletes were found better than female athletes in most of the variables of performance strategies, on the other hand female athletes were better in emotional control over male athletes in both practice and competition condition. Previous studies found female athletes use emotion-focused strategy more often, and the male athletes used the problem-focused strategies more often. Problem-focused coping refers to strategies used to manage or alter a stressor through behaviours such as information gathering, goal-setting, time management skills, and problem-solving. Emotion-focused coping refers to attempts at regulating emotional responses resulting from a stressor through actions like meditation, relaxation, and cognitive efforts to change the meaning an individual attaches to a situation (Nicholas, 2003). Present study found that male sports athletes were using more problem focused strategies like goal setting, self talk and imagery whereas female athletes were using more emotion focused strategies like emotional control and activation. Extraverted athletes were more likely to use problem-focused coping strategies whereas athletes with low levels of openness, or high levels of neuroticism were more likely to demonstrate use emotion-focused coping strategies and avoidance coping behaviour (Mark S. A., Iain G. & Marc J., 2011). Generally team athletes were found to be more extrovert than individual athletes. Present study found that team sports athletes were using more problem focused strategies, and individual sports athletes used more emotional focused strategies. It is likely that performance strategies used by athletes were gender specific and sports specific as well. The findings of the present study, hopefully, could help coaches and sports psychologist to design more effective coping strategies to manage anxiety before getting out of hand.

References:

Anshel M.H, Porter A. & Quek J., (1998). Coping with acute stress in sport as a function of gender: An exploratory study. Journal of Sport Behaviour 21: 363-377.

Crocker P, Graham T.R (1995). Coping by competitive athletes with performance stress: gender differences and relationships with affect. Sport Psychologist, 9: 325–338.

Crook K, Beaver BR, Bell M (1998). Anxiety and depression in children: a preliminary examination of the utility of the PANAS-C. J. Psychopathol. Behav. Ass. 20: 323–350.

Gill D L., (1988).Gender differences in competitive orientation and sport participation. International Journal of Sport Psychology 19: 145-159.

Gould D, Dieffenbach K, Moffett A. (2002).Psychological characteristics and their development in Olympic champions. Journal of Applied Sport Psychology 14: 172-204.

Gould D, Eklund RC, Jackson SA (1993). Coping strategies used by US. Olympic Wrestlers. Res. Quart Exercise Sport, 64: 83-93.

Hammermeister J, Burton D., (2004). Gender differences in coping with endurance sports: Are men from Mars and women from Venus? Journal of Applied Sport Psychology 27: 148-164.

Krane V, Williams J M., (1994). Cognitive anxiety, somatic anxiety, and confidence in track and field athletes: The impact of gender, competitive level and task characteristics. International Journal of Sport Psychology 25: 203-217.

Mark S. A., Iain G. & Marc J.(2011). An investigation of the five-factor model of personality and coping behaviour in sport. Journal of Sports Sciences, 29(8): 841–850.

Martens R, Vealey R, Burton D, (1990). Competitive anxiety in sport. Champaign, IL: Human Kinetics.

Nicholas L. Holt. (2003). Coping in Professional Sport: A Case Study of an Experienced Cricket Player. Athletic Insight. 5(1).

R. Mirnasouri, M.A. Thesis, Tarbiat Moallem University, (Tehran, Iran, 1994). Retrieved from http://scholarsresearchlibrary.com/ABR-vol3-iss1/ABR-2012-3-1-36-40.pdf

Russel W D, Robb M, Cox R, (1998). Sex, sport, situation, and competitive state anxiety. Perceptual and Motor Skills 86: 816-818.

Smith, R., Schutz, R., Smoll, F., & Ptacek, J. (1995). Development and validation of a multidimensional measure of sport-specific psychological skills: the athletic coping skills inventory-28. Journal of sport &Exercise Psychology, 17, 379-398.

Thomas P, Murphy S, Hardy L. (1999). Test of performance strategies: Development and preliminary validation of a comprehensive measure of athletes' psychological skills. Journal of Sport Sciences 17: 697-711.

Thomas P, Murphy S, Hardy L. (1999).Test of performance strategies: Development and preliminary validation of a comprehensive measure of athletes' psychological skills. Journal of Sport Sciences 17: 697-711.