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Exploration study on mental skills level of different event athletes

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Abstract

The aim of the present study was to compare selected mental skills in short distance, middle distance, long distance athletes and jumpers. 48 athletes (12 each in short distance, middle distance, long distance and jumpers) use to answer Ottawa Mental Skills Assessment Tools (version 3). This questionnaire assessed three categories of mental skills: foundation skills, psychosomatic skills and cognitive skills. The results of 4×12 MANOVA revealed no significant difference between different event athletes (short distance, middle distance, long distance athletes and jumpers) on any scale of OMSAT-3. According to the results of this study, it is recommended that athlete's coaches improved mental skill level of their athletes.

Keywords: OMSAT-3 questionnaire, short distance athlete, middle distance athlete, long distance athlete and jumpers

Introduction

The domain of sport competition is developing every day so the athletes nearly have the same physical abilities and have different mental skills. Therefore, it is not possible to ignore the role of mental skills to achieve maximum performance (Van, Z., & J.). As it was observed in recent Olympic Games, some athletes who were considered probable to win medal, failed in the competitions and stated the lack of mental preparedness as one of the important reasons for their failure. Studies conducted in the field of sport psychology have made it evident that mental skills play an important role in achieving excellence in sport (Harris & Harris, 1984, Nideffer, 1985 and Morris, Koehn, & Morris, 2004) ^[11, 18, 16]. The skills such as stress management, concentration, arousal, mental preparation and self-confidence are important components of mental skills which make the psychological profile of elite athletes (Mahoney, Gabriel, & Perkins, 1987) ^[13]. Positive self-confidence is a privilege in sports and on the other hand excessive sensitivity to criticism can lessen a player's performance during the match. The relationship between stress, anxiety, self-confidence and performing motor skills has been mentioned in many researches. Some theories and experiences have strongly supported this positive relationship (Martens, 1977, Bandura, 1997) ^[15, 2]. Athletes usually face a lack of arousal before or during a competition. In this case, energizing techniques would be effective to increase their level of arousal and to have a successful performance. Assessed mental readiness of 235 Canadian Olympic athletes through questionnaires and individual interviews. They found that among physical, technical and mental preparation, the mental preparation was the only variable that significantly differentiated the Olympic athletes (Orlick & Partington, 1988) ^[21]. By using OMSAT3 questionnaire and Psychological Skill Inventory (PSI) to compare successful and unsuccessful college level hockey players and found that the successful group achieved better results in 67% of research variables which included four factors of 18 factors (i.e. achievement motivation, goal direction, goal setting and fear control). Moreover, there was a significant difference between athletes in six factors: achievement motivation, stress reactions, fear control, selfconfidence, mental practice as well as imagery (Kruger, 2010) ^[12].

Materials and Methods

Instrumentation: OMSAT-3 was used to evaluate the extent of selected mental skill application. The questionnaire examined 12 mental skills in three categories:

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1) Foundation skills including goal setting, commitment and self-confidence, 2) psychosomatic skills including fear control, relaxation, activation and stress reaction, 3) cognitive skills including focus, refocus mental practice, imagery and game planning (Durand-Bush, 1995) [7]. The questionnaire reliability and validity was measured in Iran and approved by the researchers.

Statistical Method

In the present study, MANOVA was used to compare the Mean of the Four Group of 48 National level Athletes of Sports Authority of India, North Centre, Sonapat, Haryana. The main effects and intersection the four subject group (short distance, middle distance, long distance and jumpers) and their skills were measured on the OMSAT-3 scales, and measurements of Descriptive Statistics (mean and standard deviation) were employed for describing the groups.

Results

Descriptive data including mean and standard deviation of each mental skill in different groups can be observed in Table 1. Show that the highest score relates to Commitment existing in jumpers and short distance athletes (24.08 ± 2.60), ($24.08+3.08$) respectively and the lowest score is related to Refocus existing in jumpers athletes (10.50 ± 3.84). Descriptive data can be depicts values in Table 2 for test of between subject effect, which shows that there is no significant difference found between the different event athletes Short Distance Runners, Middle Distance Runners, long Distance Runners and Jumpers ($df=3/45$, $p=.432>0.05$) for the variables, Goal Setting, Confidence, Commitment, Stress Control, relaxation, Fear Control, Energizing, Focus, Imagery, Competition Planning, Mental Practice and Refocus as the value found to be .432, .259, .418, .181, .254, .898, .119, .387, .516, .953, .178 and .183 respectively.

Table 1: Descriptive Results of Different Event Athletes

Variables	Short		Middle		Long		Jumpers		Total	
	Distance		Distance		Distance					
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Goal Setting	22.250	2.340	23.083	1.929	21.833	3.460	23.250	1.485	22.604	2.412
Confidence	22.750	1.913	23.250	2.800	22.833	2.038	21.333	2.902	22.541	2.484
Commitment	24.083	3.088	23.583	3.315	22.333	2.570	24.083	2.610	23.520	2.910
Stress Control	15.000	3.357	14.166	2.980	13.833	2.758	12.416	2.234	13.854	2.925
Relaxation	19.416	4.274	21.333	3.229	22.333	4.376	21.250	1.603	21.083	3.596
Fear Control	12.500	3.606	13.000	2.594	12.250	2.094	12.250	2.527	2.527	2.690
Energizing	2.689	2.768	20.916	1.881	23.083	3.204	23.166	2.125	22.479	2.634
Focus	14.333	3.892	12.500	3.371	14.916	3.825	13.000	4.221	13.687	3.844
Imagery	21.500	2.067	23.083	4.122	22.500	4.079	21.250	2.800	22.083	3.357
Competition planning	22.750	2.667	23.083	2.843	22.333	4.141	22.833	3.040	22.750	3.132
Mental Practice	22.000	3.643	19.666	4.519	19.666	4.397	22.416	2.843	20.937	3.997
Refocus	11.250	4.070	11.083	3.728	13.833	3.881	10.583	3.848	11.687	3.969

Discussion

This study aimed to explore the effect of athletes of different event (Short Distance Runners, Middle Distance Runners, long Distance and Jumpers) on selected mental skills. At the mental skill level of different event athletes the results of the study were predictable, except in four cases. Few studies are conducted on mental skills by users of OMSAT-3 (Durand-Bush, 1995) [7] - (Stevenson, 1999) [23] - (Kruger, 2010) [12]. As

per the previous researches the result of mental skill scales is significantly effective on training programs, but as per result of this study no significant differences were found between short distance, middle distance, long distance and jumpers on the variable of mental skill. Short distance and Jumpers athletes use mental skills more than jumpers and Middle distance athletes use too much less mental skills. Below, we will discuss the variables.

Table 2: Concise 4×12 Multivariate Result of Different Event Athletes

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
sd_md_ld_jm	goal_setting	16.396	3	5.465	.935	.432
	Confidence	25.083	3	8.361	1.389	.259
	Commitment	24.562	3	8.188	.965	.418
	stress_control	41.729	3	13.910	1.699	.181
	Relaxation	53.167	3	17.722	1.406	.254
	fear_control	4.500	3	1.500	.197	.898
	Energizing	40.229	3	13.410	2.065	.119
	Focus	45.729	3	15.243	1.034	.387
	Imagery	26.500	3	8.833	.772	.516
	competition_planning	3.500	3	1.167	.112	.953
mental_practice	78.563	3	26.188	1.714	.178	
Refocus	76.563	3	25.521	1.692	.183	

Goal Setting

The results reveal no significant difference between different event athletes by using goal setting skill. The descriptive statistics value of goal setting for different groups a study of mental skill level of different event athletes. Jumper athletes use more mental skills comparing to short distance, middle distance and long distance athletes. The aims to result in

higher performance level are those which are specific and challenging. Also, the effects of difficult objectives are more useful than simple objectives. The elite athletes are motivated by personal objectives and success. The elite athletes believe in themselves a lot and this is the orientation of their life (Mallett & Hanrahan, 2004) [14].

Self-confidence

The results revealed that middle distance athletes were significantly better than the long distance, short distance and jumpers in self-confidence factor. Psychological variables-self-confidence and commitment are the most important variables of an elite athlete's performance (Orlick, 1992) [19]. Self-confidence, commitment and goal setting are the most essential measures for distinction between elite athletes and non-elite ones (Bota, 1993) [3].

Commitment

One of the skills in which the short distance athletes and jumpers uses more mental skill as commitment. These results of different event athletes are committed to their field of exercise in a way that this fact influences other wishes in their personal life and expert performers regularize their life according to their exercise which explains their commitment (Crcium, Dobosi, & Rusu, 2009) [5].

Stress Reaction

Comparing the different event athletes showed that the short distance athletes acted better than the jumpers' ones in the stress reaction. Negative reaction to stress could be harmful to performance, while positive reactions could improve the performance. The factors that can create stress in players include selection for the team, confinement of financial supporters, attendance of high-ranking authorities in the matches, circumstantiates of the media and expectations of the individual to be the champion, experiences of previous injuries or fear of the previous defeats (Weinberg & Gould, 2007) [25].

Relaxation

According to the results of this study, the long distance athletes also use relaxation more than short distance athletes. While we find that, elite Taekwondo players could focus and plan efficiently, relaxation is a factor that has an important role in this matter (Durand-Bush, Salmela, & Green-Demers, 2001) [8].

Energizing/Activation

According to the descriptive statistics value of four different group athletes shows that the mean & standard deviation ($M \pm SD$) of energizing jumpers are more significantly than other athletes. One of the possible reasons could be the role of the coach in regularizing mental preparedness programs and conducting the players to gain mental energy level (Murphy, Woolfolk, & Budney, 1988) [17].

Imagery

There are many requirements in achieving the desired effect of mental imagery, but the first is the approach to teaching and learning the specific techniques. According to imagery mental skills of different event athletes, middle distance athlete's uses more mental skills in their training programs compare to other event athletes. The Visio-spatial and temporal components form the "procedural" knowledge required for effective mental imagery, while conceptual (ideas of movement) and symbolical (language representations) elements form the "declarative" knowledge of mental imagery (Annett, 1995) [1].

Competition Planning

The results reveal no significant difference between different event athletes by using competition planning skill. The

descriptive statistics value of competition planning for different groups' middle distance athletes uses more mental skills compare to long distance athletes. The past studies showed that the elite athletes usually prepared clear and distinct designs for the matches. These players used planning in order to reach mental preparedness, decrease consternation and deal with unpredicted situations (Gould, Eklund, & Jackson, 1992) [10] - (Orlock & Partington, 1988) [21].

Mental Practice

The descriptive statistics value of mental practice reveals jumpers uses more mental skills compare to short distance athletes, and long distance athletes and middle distance athletes uses too less mental skills for their performance. Cognitive-behavior therapy (CBT) has been used successfully in a wide range of applications, from developing social skills. The overall goal of CBT is to strategically plan and execute a definite approaches the given task in order to lay the foundation for specific performance enhancement techniques to occur, like mental rehearsal, mental imagery and VMBR. Thus, CBT concentrates more on the general aspirations and psychological profile of the athlete, rather than specific task affective actions (Curran, 1982) [6].

Refocus

The results reveal no significant difference between different event athletes by using refocus skill. The descriptive statistics value of refocus of different groups a study on the mental skill level of different event athletes long distance athletes use more mental skills comparing to short distance athletes. Jumper athletes use less mental skill to compare to jumpers. In spite of being an important skill retrieval of concentration is exercised rarely by the players, which are more exposed to stimuli such as orders of the coach, shout and cheer of the fans, reporters and cameras and so on which all disturb their concentration (Orlick & Partington, 1988) [21].

Conclusion

The objective of this study was to identify the requirement of mental skills and effectiveness on different levels of athlete's to enhance their performance and for the perception of their capacities to be psychologically prepared for competitions. The result of this study is shown by using OMSAT-3 and groups of different event athletes that there is no significance difference between short distance, middle distance, long distance and jumpers. Moreover, the results proved that the athlete's uses mental skills differently on different level or events and some mental skills components are effective to increase the performance. The majority of athletes were of the opinion that their ability to mentally prepare for competition was important. It was also shown that the different event athlete's perceived a no-significant difference between the 12 mental skills of the short distance, middle distance, long distance and jumpers during training and competition. The trainers must devote time necessary to acquire these fundamentals and thus to bring a minimum of the mental training to their athletes. This study would thus bring a new lighting in the direction where it would seem that the lack of the trainer qualification would not prevent them from determining the mental skills of their athletes, on the other hand that would pose indeed problems as for their development. It is recommended to the coaches in this field to use game planning, goal setting, activation, self-confidence, commitment, focus, mental imagery and relaxation for players, nurture these skills in these players and try to make them proceed towards upper levels.

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