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Difference about level to psychological before competition of dong Nai traditional martial arts athletes

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Abstract

After applied the POMS questionnaire (Profile of mood state) to measure the psychological state of the athletes of Dong Nai traditional martial arts, and through ANOVA analysis, discovering psychological state before competing between 3 groups of athletes with different qualifications of Dong Nai traditional martial arts team has different manifestations. As a basis for coaches to get better psychological preparation for athletes to achieve higher performance in competitions.

Keywords: Psychological state before competitions, Dong Nai Traditional martial arts athlete, POMS

1. Introduction

Vietnam Traditional martial arts is a sport of knockout competition and high resistance. During the competition, the movements are constantly changing, the tactics are complex in many forms, Athletes must both perform attacks or counter-attacks to score points with hands or feet while moving to avoid the attack, block the attack and dodge... so that the opponent won't score. This requires players to have a stable mentality, firm and highly concentrated, brave and determined, with high willpower right from before to the end of the competition. However, before and during the competition, players are easy to be pessimistic, fluctuating when meeting stronger opponents. But, when being stronger than the opponent, it can also arise subjective psychology, from which there are mistakes in the tactics, from confidence to loss of temper, confusion, and other mental pressures such as home, away, referee, facilities etc.. leading to unnecessary failure. According to psychologists, one of the basic causes of that condition is the athlete's psychological state. Following the previous research step, after applying the POMS questionnaire to measure the psychological state of Dong Nai traditional martial arts athletes, the study conducted an in-depth analysis to discover the difference in qualifications to the before the competition psychological state of athletes.

2. Methodology

2.1. Sample

21 Traditional martial arts athletes was selected and randomize chosen in Traditional martial arts athletes team at Dong Nai province. They were informed of the test procedures before providing written consent.

2.2. Instruments

Research using POMS (Profile of mood state) questionnaire includes 40 questions, 7 important components to evaluate psychological state, which are: Tension; Anger; Fatigue; Depression; Vigour; Confusion, self - related feelings.

2.3. Methodology

Reviewing, analyzing and synthesizing researches; Expert interview; Psychological test; Statistics.

3. Results and Discussions

After analysis psychology before the competition of Dong Nai traditional martial arts athletes.

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The study analyzed the expression of psychological state with the athletes level by the method of analysis of variance (ANOVA) to test the average hypothesis of the groups.

Through the calculation process, the results presented in the table are obtained as follows:

Table 1: The difference between the level and the signs of the psychological state before the competition of the traditional martial arts athlete

Expression of psychological state		\bar{x}	S	F	Sig.
Tense	Without level	2,06	0,54	1,575	0,234
	Level 1	2,00	0,00		
	Grand master	3,00			
Angry	Without level	1,11	0,32	1,160	0,336
	Level 1	1,50	0,71		
	Grand master	1,00			
Discouraged	Without level	1,00	0,00	8,143	0,003
	Level 1	1,50	0,71		
	Grand master	1,00			
Unhappy	Without level	1,22	0,55	1,230	0,316
	Level 1	1,00	0,00		
	Grand master	2,00			
Relaxed	Without level	3,11	0,90	1,327	0,290
	Level 1	4,00	0,00		
	Grand master	4,00			
Panicky	Without level	1,17	0,38	0,257	0,776
	Level 1	1,00	0,00		
	Grand master	1,00			
Confused	Without level	1,67	0,59	2,473	0,113
	Level 1	1,50	0,71		
	Grand master	3,00			
Terrified	Without level	1,17	0,38	9,857	0,001
	Level 1	1,50	0,71		
	Grand master	3,00			
Peeved	Without level	1,17	0,38	2,657	0,097
	Level 1	1,00	0,00		
	Grand master	2,00			
Worn Out	Without level	1,89	1,28	0,548	0,587
	Level 1	2,50	0,71		
	Grand master	3,00			
Sad	Without level	1,22	0,43	2,020	0,162
	Level 1	1,00	0,00		
	Grand master	2,00			
Full of Pep	Without level	3,17	1,15	0,079	0,924
	Level 1	3,50	2,12		
	Grand master	3,00			
Unable to Concentrate	Without level	1,17	0,38	0,714	0,503
	Level 1	1,50	0,71		
	Grand master	1,00			
Trusting	Without level	3,67	0,97	1,494	0,251
	Level 1	4,50	0,71		
	Grand master	5,00			
Considerate	Without level	1,67	0,69	0,479	0,627
	Level 1	1,50	0,71		
	Grand master	1,00			
Resentful	Without level	1,22	0,43	2,020	0,162
	Level 1	1,00	0,00		
	Grand master	2,00			
Weary	Without level	1,22	0,55	1,969	0,169
	Level 1	2,00	1,41		
	Grand master	2,00			
Bushed	Without level	1,22	0,55	0,224	0,802
	Level 1	1,00	0,00		
	Grand master	1,00			
Good Natured	Without level	3,17	1,15	0,524	0,601
	Level 1	3,50	2,12		
	Grand master	2,00			
Bewildered	Without level	1,50	0,62	0,890	0,428
	Level 1	1,00	0,00		
	Grand master	1,00			
Restless	Without level	2,06	1,00	1,067	0,365
	Level 1	1,00	0,00		

	Grand master	2,00			
Miserable	Without level	1,33	0,77	0,143	0,868
	Level 1	1,50	0,71		
	Grand master	1,00			
Fatigued	Without level	1,50	0,92	0,143	0,868
	Level 1	1,50	0,71		
	Grand master	1,00			
Gloomy	Without level	1,22	0,65	1,537	0,242
	Level 1	2,00	1,41		
	Grand master	2,00			
Active	Without level	2,61	1,38	,268	0,768
	Level 1	2,00	0,00		
	Grand master	2,00			
Forgetful	Without level	1,78	1,17	0,250	0,781
	Level 1	2,00	1,41		
	Grand master	1,00			
Efficient	Without level	2,39	0,98	0,215	0,809
	Level 1	2,00	0,00		
	Grand master	2,00			
Bad Tempered	Without level	1,72	0,89	0,698	0,511
	Level 1	1,00	0,00		
	Grand master	2,00			
Furious	Without level	1,50	0,79	0,633	0,543
	Level 1	1,00	0,00		
	Grand master	2,00			
Exhausted	Without level	1,39	0,85	0,285	0,755
	Level 1	1,00	0,00		
	Grand master	1,00			
Worthless	Without level	1,17	0,38	4,224	0,031
	Level 1	2,50	2,12		
	Grand master	1,00			
Ready to Fight	Without level	3,78	1,17	4,323	0,029
	Level 1	1,50	0,71		
	Grand master	5,00			
Uncertain about	Without level	1,94	0,94	0,980	0,395
	Level 1	1,00	0,00		
	Grand master	2,00			
Cheerfu	Without level	2,83	1,29	0,414	0,667
	Level 1	2,00	0,00		
	Grand master	3,00			
Anxious	Without level	1,78	0,65	0,798	0,466
	Level 1	1,50	0,71		
	Grand master	1,00			
On Edge	Without level	1,33	0,49	1,714	0,208
	Level 1	2,00	1,41		
	Grand master	2,00			
Grouchy	Without level	1,44	0,51	13,757	0,0001
	Level 1	1,00	0,00		
	Grand master	4,00			
Helpless	Without level	1,39	0,70	0,179	0,838
	Level 1	1,50	0,71		
	Grand master	1,00			
Energetic	Without level	3,33	1,03	2,954	0,078
	Level 1	1,50	0,71		
	Grand master	3,00			
Vigorous	Without level	3,44	1,10	2,950	0,078
	Level 1	2,50	0,71		
	Grand master	1,00			

Results from Table 1 showed that

- In the expression of Tense of athletes without level, the average value is $\bar{X} = 2,06 \pm 0,54$; the level 1 athletes have average value is $\bar{X} = 2,00 \pm 0,00$; the grand master athletes have average value is $\bar{X} = 3,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0.234 > 0.05.
- In the expression of Angry of athletes without level, the

average value is $\bar{X} = 1,11 \pm 0,32$; the level 1 athletes have average value is $\bar{X} = 1,50 \pm 0,71$; the grand master athletes have average value is $\bar{X} = 1,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,336 > 0,05.

- In the expression of *Discouraged* of athletes without level, the average value is $\bar{X} = 1,00 \pm 0,00$; the level 1 athletes

- have average value is $\bar{x} = 1,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 1,00$. The difference was statistically significant in the probability threshold 95% due to the value of Sig. = $0,003 < 0,05$.
- In the expression of Unhappy of athletes without level, the average value is $\bar{x} = 1,22 \pm 0,55$; the level 1 athletes have average value is $\bar{x} = 1,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,316 > 0,05$.
 - In the expression of Relaxed of athletes without level, the average value is $\bar{x} = 3,11 \pm 0,90$; the level 1 athletes have average value is $\bar{x} = 4,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 4,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,290 > 0,05$.
 - In the expression of Panicky of athletes without level, the average value is $\bar{x} = 1,17 \pm 0,38$; the level 1 athletes have average value is $\bar{x} = 1,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 1,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,776 > 0,05$.
 - In the expression of Confused of athletes without level, the average value is $\bar{x} = 1,67 \pm 0,59$; the level 1 athletes have average value is $\bar{x} = 1,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 3,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,113 > 0,05$.
 - In the expression of Terrified of athletes without level, the average value is $\bar{x} = 1,17 \pm 0,38$; the level 1 athletes have average value is $\bar{x} = 1,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 3,00$. The difference was statistically significant in the probability threshold 95% due to the value of Sig. = $0,001 < 0,05$.
 - In the expression of Peeved of athletes without level, the average value is $\bar{x} = 1,17 \pm 0,38$; the level 1 athletes have average value is $\bar{x} = 1,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,097 > 0,05$.
 - In the expression of Worn Out of athletes without level, the average value is $\bar{x} = 1,89 \pm 1,28$; the level 1 athletes have average value is $\bar{x} = 2,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 3,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,587 > 0,05$.
 - In the expression of Sad of athletes without level, the average value is $\bar{x} = 1,22 \pm 0,43$; the level 1 athletes have average value is $\bar{x} = 1,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,162 > 0,05$.
 - In the expression of Full of Pep of athletes without level, the average value is $\bar{x} = 3,17 \pm 1,15$; the level 1 athletes have average value is $\bar{x} = 3,50 \pm 2,12$; the grand master athletes have average value is $\bar{x} = 3,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,924 > 0,05$.
 - In the expression of Unable to Concentrate of athletes without level, the average value is $\bar{x} = 1,17 \pm 0,38$; the level 1 athletes have average value is $\bar{x} = 1,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 1,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,503 > 0,05$.
 - In the expression of Trusting of athletes without level, the average value is $\bar{x} = 3,67 \pm 0,97$; the level 1 athletes have average value is $\bar{x} = 4,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 5,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,251 > 0,05$.
 - In the expression of Considerate of athletes without level, the average value is $\bar{x} = 1,67 \pm 0,69$; the level 1 athletes have average value is $\bar{x} = 1,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 1,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,627 > 0,05$.
 - In the expression of Resentful of athletes without level, the average value is $\bar{x} = 1,22 \pm 0,43$; the level 1 athletes have average value is $\bar{x} = 1,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,162 > 0,05$.
 - In the expression of Weary of athletes without level, the average value is $\bar{x} = 1,22 \pm 0,55$; the level 1 athletes have average value is $\bar{x} = 2,00 \pm 1,41$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,169 > 0,05$.
 - In the expression of Bushed of athletes without level, the average value is $\bar{x} = 1,22 \pm 0,55$; the level 1 athletes have average value is $\bar{x} = 1,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 1,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,802 > 0,05$.
 - In the expression of Good Natured of athletes without level, the average value is $\bar{x} = 3,17 \pm 1,15$; the level 1 athletes have average value is $\bar{x} = 3,50 \pm 2,12$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = $0,601 > 0,05$.
 - In the expression of Bewildered of athletes without level, the average value is $\bar{x} = 1,50 \pm 0,62$; the level 1 athletes have average value is $\bar{x} = 1,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 1,00$. The difference was not statistically significant in the probability threshold

- 95% due to the value of Sig. = 0,428>0,05.
- In the expression of Restless of athletes without level, the average value is $\bar{x} = 2,06 \pm 1,00$; the level 1 athletes have average value is $\bar{x} = 1,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,365>0,05.
 - In the expression of Miserable of athletes without level, the average value is $\bar{x} = 11,33 \pm 0,77$; the level 1 athletes have average value is $\bar{x} = 1,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 1,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,868>0,05.
 - In the expression of Fatigued of athletes without level, the average value is $\bar{x} = 1,50 \pm 0,92$; the level 1 athletes have average value is $\bar{x} = 1,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 1,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,868>0,05.
 - In the expression of Gloomy of athletes without level, the average value is $\bar{x} = 1,22 \pm 0,65$; the level 1 athletes have average value is $\bar{x} = 2,00 \pm 1,41$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,242>0,05.
 - In the expression of Active of athletes without level, the average value is $\bar{x} = 2,61 \pm 1,38$; the level 1 athletes have average value is $\bar{x} = 2,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,768>0,05.
 - In the expression of Forgetful of athletes without level, the average value is $\bar{x} = 1,78 \pm 1,17$; the level 1 athletes have average value is $\bar{x} = 2,00 \pm 1,41$; the grand master athletes have average value is $\bar{x} = 1,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,781>0,05.
 - In the expression of Efficient of athletes without level, the average value is $\bar{x} = 2,39 \pm 0,98$; the level 1 athletes have average value is $\bar{x} = 2,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,809>0,05.
 - In the expression of Bad Tempered of athletes without level, the average value is $\bar{x} = 1,72 \pm 0,89$; the level 1 athletes have average value is $\bar{x} = 1,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,511>0,05.
 - In the expression of Furious of athletes without level, the average value is $\bar{x} = 1,50 \pm 0,79$; the level 1 athletes have average value is $\bar{x} = 1,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,543>0,05.
 - In the expression of Exhausted of athletes without level, the average value is $\bar{x} = 1,39 \pm 0,85$; the level 1 athletes have average value is $\bar{x} = 1,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 1,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,755>0,05.
 - In the expression of Worthless of athletes without level, the average value is $\bar{x} = 1,17 \pm 0,38$; the level 1 athletes have average value is $\bar{x} = 2,50 \pm 2,12$; the grand master athletes have average value is $\bar{x} = 1,00$. The difference was statistically significant in the probability threshold 95% due to the value of Sig. = 0,031<0,05.
 - In the expression of Ready to Fight of athletes without level, the average value is $\bar{x} = 3,78 \pm 1,17$; the level 1 athletes have average value is $\bar{x} = 1,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 5,00$. The difference was statistically significant in the probability threshold 95% due to the value of Sig. = 0,029<0,05.
 - In the expression of Uncertain about of athletes without level, the average value is $\bar{x} = 1,94 \pm 0,94$; the level 1 athletes have average value is $\bar{x} = 1,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,395>0,05.
 - In the expression of Cheerful of athletes without level, the average value is $\bar{x} = 2,83 \pm 1,29$; the level 1 athletes have average value is $\bar{x} = 2,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 3,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,667>0,05.
 - In the expression of Anxious of athletes without level, the average value is $\bar{x} = 1,78 \pm 0,65$; the level 1 athletes have average value is $\bar{x} = 1,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,466>0,05.
 - In the expression of On Edge of athletes without level, the average value is $\bar{x} = 1,33 \pm 0,49$; the level 1 athletes have average value is $\bar{x} = 2,00 \pm 1,41$; the grand master athletes have average value is $\bar{x} = 2,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,208>0,05.
 - In the expression of Grouchy of athletes without level, the average value is $\bar{x} = 1,44 \pm 0,51$; the level 1 athletes have average value is $\bar{x} = 1,00 \pm 0,00$; the grand master athletes have average value is $\bar{x} = 4,00$. The difference was statistically significant in the probability threshold 95% due to the value of Sig. = 0,0001<0,05.
 - In the expression of Helpless of athletes without level, the average value is $\bar{x} = 1,39 \pm 0,70$; the level 1 athletes have

average value is $\bar{x} = 1,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 1,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,838 > 0,05.

- In the expression of Energetic of athletes without level, the average value is $\bar{x} = 3,33 \pm 1,03$; the level 1 athletes have average value is $\bar{x} = 1,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 3,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,078 > 0,05.
- In the expression of Vigorous of athletes without level, the average value is $\bar{x} = 3,44 \pm 1,10$; the level 1 athletes have average value is $\bar{x} = 2,50 \pm 0,71$; the grand master athletes have average value is $\bar{x} = 1,00$. The difference was not statistically significant in the probability threshold 95% due to the value of Sig. = 0,078 > 0,05.

4. Conclusions

Through ANOVA analysis discovered Psychological state before the competition of the Dong Nai Traditional Martial Arts team between 3 groups of athletes with different qualifications (without level; level 1; grandmaster). They has 35/40 expression of psychological state have no difference in threshold 95% probability. From that, it can be seen that the psychology before the competition between the three groups of athletes with different qualifications of the Dong Nai Traditional Martial Arts team has a high similarity. However, some expression have different (Discouraged; Terrified; Worthless; Ready to Fight; Grouchy) this also creates psychological problems for athletes before the competition, so the coach should be mindful and take corrective measures.

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