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THE SITUATION OF MENTAL HEALTH OF VIETNAM DISABLED ATHLETES IN WEIGHTLIFTING AND JAVELIN BEFORE PARALYMPIC GAMES 2021[i]

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Abstract:
The purpose of this study was to find out the situation of Vietnam disabled athletes' mental health before Paralympic Games 2021. Seven athletes from the Vietnam disabled team (including 4 male and 3 female athletes in weightlifting and javelin contents) were chosen to identify their mental health before Paralympic Games. The International Olympic Committee's (IOC) Sports Metal Health Assessment Tool 1 (SMHAT-1) was used to determine the risk or experience of symptoms and mental health disorders of national team athletes with disabilities, facilitating timely referral for athletes in need of adequate support and treatment. The study identified the mental health of disabled Vietnam athletes in weightlifting and javelin. Thus, it led the management and coaches to have a specific plan for the appropriate pre-competition preparation for athletes, thereby getting good results in the upcoming Paralympic Games 2021.

Keywords: disabled athletes, mental health, SMHAT-1 tool, Paralympic Games, weightlifting, javelin

1. Introduction

Sports psychology is a large, well-studied field, especially among senior athletes and athletes with disabilities. At present, the psychological tests of athletes are quite diverse, from testing to classify neurological types, personality, thinking tests, emotions to

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assessing expressions of anxiety, stress, and attention. and different aspects of mental health. The diagnosis is to understand and have the necessary psychological support measures for athletes to improve training efficiency, quality of life and sports performance. Studies conducted in the field of sport show that sport participation can play an important role in the rehabilitation of people affected by disability and their social reintegration. It is a powerful tool in rehabilitation, socialization, and quality of life improvement, recreation, and pushing back the limits of one's physical fitness. According to neurosurgeon Gutmann, "*sports can help disabled people to restore contact with the world around them*" (Samulski, 2009).

Besides, the function of counseling is to provide emotional support to athletes in critical situations. Sports psychologists, as consultants, through their interactions with athletes, provide an environment that allows reality to emerge from within. According to Henschen (2005), the characteristics of an excellent mentor/athlete relationship are sincerity, empathy, understanding, respect, positive attitude, positive emotions, social awareness, listen and communicate effectively. Mental training can be applied through various forms of psychological techniques, such as visualization, attention control, stress management, and self-motivation. Visualization is the systematic and repetitive visualization of motor skills, techniques, strategies, or complex situations.

Moreover, the purpose of attentional training is to develop and apply different styles of attentional control depending on the situation. Concentration is the ability to focus attention on relevant stimuli and maintain a high level of concentration for a given period of time. The purpose of stress management training is to develop and maintain optimal activation levels before and during competition. The purpose of self-motivation training is to learn and apply motivational techniques to regulate one's motivation level, overcome obstacles, and persevere in critical situations. Therefore, understanding athletes' mental health issues is of great value to gauge "preparedness" for competitions, as well as helping coaches predict athlete performance from there, there are tactics and fitness maintenance plans to suit the upcoming matches.

2. Materials and Methods

2.1 Participants

07 volunteer healthy athletes from the Vietnam disabled team (04 males and 3 females in weightlifting and javelin) were chosen. All participants were paralyzed in their legs since childhood and attended the course to identify their mental health. They were informed of the test procedures before providing written consent.

2.2 Instruments

The Mental Health Questionnaire (SMHAS-1) has been used by the International Olympic Committee and the International Paralympic Committee. Gouttebarg et al. (2020) developed the "Sport Metal Health Assessment Tool 1" (SMHAT-1) sports mental health questionnaire approved by the International Olympic Committee (IOC) as a

standardized assessment tool. To identify high-level athletes at the onset stage (used for professional athletes, Olympic athletes, Paralympic athletes and athletes at universities or athletes 16 years of age or older) who are at risk or have experienced mental health symptoms and disorders, to facilitate prompt referral or the need for adequate support and treatment. The SMHAT-1 includes: (i) classification with an athlete-specific screening tool, (ii) six subsequent disorder-specific screening tools, and (iii) clinical assessment (and associated management). The SMHAT-1 consists of: (i) triage with an athlete-specific screening tool, (ii) six subsequent disorder-specific screening tools and (iii) a clinical assessment (and related management) by a sports medicine physician or licensed/registered mental health professional (eg, psychiatrist and psychologist).

3. Results and Discussions

3.1 Participants Characteristics

No participants dropped out through the study. The average age of the male group (04 athletes) was 32.4 ± 3.3 years, female group (03 athletes) wwas33.3 ± 4.1 years. All of them were paralyzed in their legs since childhood (32.7 ± 3.4 years).

3.2. Assessment of Athlete's Psychological Stress (showed in Table 1)

The results in Table 1 show that all athletes' scores are higher than 17, so athletes must continue to proceed to the next steps of the scale. After conducting for athletes to continue to answer the step 2 questions, the study obtained the following result in Table 2, Table 3, Table 4 and Table 5.

Results in Table 2 shown that the level of athletes' performance is as follows: no worries: 04/7 athletes, accounting for 57%, mild anxiety: 02/7 athletes, accounting for 29%, moderate anxiety: 1/7 athletes, accounting for 14%, male athletes (mean score = 5.25) are higher than female athletes (average score = 4.7), no depression: 04/7 athletes, accounting for 57%, mild depression: 03/7 athletes, accounting for 43%, moderate depression: 0/7 athletes, accounting for 0%.

Table 1: The Mental Health Symptoms and Disorders

Sport	Code	Score*	Result
Weightlifting	CT01	22	>17
	CT02	22	>17
	CT03	25	>17
	CT04	29	>17
Javelin	NL01	20	>17
	NL02	17	=17
	NL03	25	>17

* Total score 10 – 16 >>> No further action needed; Total score 17 – 50 >>> The athlete should complete the Athlete's form 2. Once the Athlete's form 2 is completed, proceed to step 2.

Table 2: Screening 1 (anxiety) and Screening 2 (depression)

Contents	Code	Anxiety			Depression		
		Score	Result	Level	Score	Result	Level
Weightlifting	CT01	8	Under threshold	Moderate	7	Under threshold	Moderate
	CT02	10	Above threshold	Mild	9	Under threshold	Moderate
	CT03	7	Under threshold	Moderate	6	Under threshold	Moderate
	CT04	4	Under threshold	-	4	Under threshold	-
Javelin	NL01	2	Under threshold	-	1	Under threshold	-
	NL02	1	Under threshold	-	2	Under threshold	-
	NL03	3	Under threshold	-	4	Under threshold	-

In male athletes (mean score = 4.75) higher than in female athletes (mean score = 4.67). In terms of individual athlete's results showed in Figure 1.

Figure 1: Expression of anxiety and depression levels in each athlete

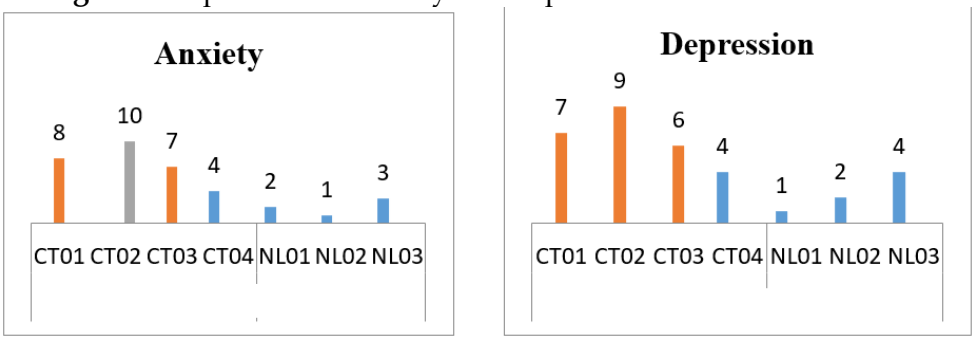


Figure 2 showed the performance status of each athlete. Regarding anxiety, the highest score was weightlifter CT02 with a score of 10, expressing moderate anxiety. The second was weightlifter CT01 with a score of 8, expressing mild anxiety, second. The third was the CT03 athlete with a score of 7, showing mild anxiety, the rest, in turn, the athletes have a score of 1 to 4, without any anxiety.

Regarding the expression of the depression level of each athlete. The highest score is CT02 athlete with a score of 9, showing mild depression, the second is CT01 athlete with a score of 7- showing mild depression, the third is CT03 athlete with a score of 6 - representing the highest level of depression. showed mild depression, the rest of the athletes had scores from 1 to 4, respectively, without showing signs of depression.

Table 3: Screening 3 (sleep disturbance), Screening 4 (alcohol misuse), Screening 5 (drug(s) use)

Code		Sleep disturbance			Alcohol misuse		Drug(s) use	
		Score	**Result**	**Level**	**Score**	**Result**	**Score**	**Result**
Weightlifting	CT01	4	Under threshold	-	2	Under threshold	1	Under threshold
	CT02	8	Above threshold	Moderate	0	Under threshold	2	Above threshold
	CT03	4	Under threshold	-	0	Under threshold	0	Under threshold
	CT04	6	Under threshold	Mild	0	Under threshold	0	Under threshold
Javelin	NL01	12	Above threshold	Severe	3	Above threshold	0	Under threshold
	NL02	5	Under threshold	Mild	3	Above threshold	0	Under threshold
	NL03	8	Above threshold	Moderate	0	Under threshold	0	Under threshold

Table 3 shows the level of athletes performing as follows: can't sleep: 02/7 athletes, accounting for 28.6%, sleep disorder mild: 02/7 athletes, accounting for 28.6%, sleep disturbance moderate: 02/7 athletes, accounting for 28.6%, serious sleep disorder: 01/7 athletes, accounting for 14.2%.

In male athletes (mean score = 7.25) is higher than in female athletes (average score = 6). Alcohol use below the threshold: 05/7 athletes, accounting for 71%. using alcohol above the threshold: 02/7 athletes, accounting for 29%. In male athletes (mean score = 0.5) is higher than in female athletes (average score = 0), sub-threshold drug use: 06/7 athletes, accounting for 86%, using drugs above the threshold: 01/7 athletes, accounting for 14%. In male athletes (mean score = 0.75) is higher than in female athletes (mean score = 0). In terms of individual results in showed in Figure 2.

Figure 2 indicated the actual state of the disorder level of each athlete. Regarding sleep disturbance, the highest level of sleep disturbance was the weightlifter NL01 with a score of 12, indicating severe sleep disturbance. The second was 2 athletes NL03 and weightlifter CT02 with a score of 8- expressing the disorder level, moderate sleep. The third was athlete CT04 with a score of 6 - showing mild disorder, followed by athlete NL02 with a score of 5 - showing mild disorder, the remaining 2 athletes CT01 and CT03 have a few scores is 4, with no symptoms of sleep disturbance.

Figure 2: Expression of Sleep Disorders, Alcohol Abuse, Drug Use of Each Athlete

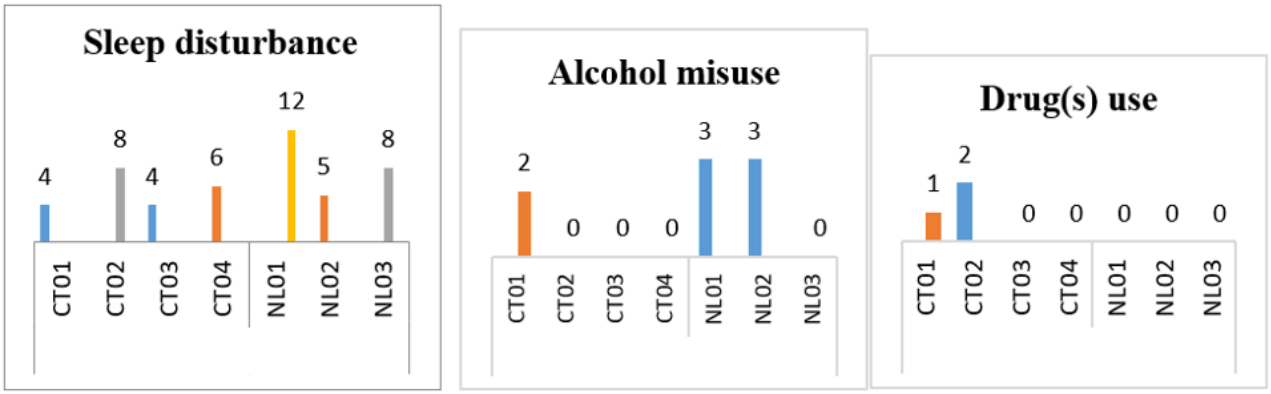


Figure 2 also showed the level of alcohol abuse and stimulant of each athlete. The highest is 02 athletes NL01 and NL02 with a score of 3, showing the level of alcohol abuse and stimulation above the threshold, the second is the athlete CT01 with a score of 2- but showing the level of alcohol abuse, under-threshold stimulation, the rest are athletes CT02, CT03, CT04, NL03 with a score of 0 - no signs of abuse. Regarding the expression of the drug use level of each athlete.

The highest is the weightlifter CT02 with a score of 2, showing substance use above the threshold, the second is the weightlifter CT01 with a score of 1- but exhibiting a substance use level below the threshold, the rest are athletes CT03, CT04, NL01, NL02, NL03 with a score of 0 - no signs of substance use.

Table 4: Screening 6 (disordered eating), Screening 7 (attention-deficit/hyperactivity disorder), Screening 8 (bipolar disorder)

Code		Disordered eating		Attention-deficit/ hyperactivity disorder		Bipolar disorder	
		Score	Result	Score	Result	Score	Result
Weightlifting	CT01	6	Above threshold	0	-	3	-
	CT02	6	Above threshold	3	-	8	-
	CT03	6	Above threshold	2	-	3	-
	CT04	1	Above threshold	4	ADHD	7	-
Javelin	NL01	5	Above threshold	0	-	11	-
	NL02	6	Above threshold	3	-	13	-
	NL03	6	Above threshold	4	ADHD	8	-

Results in Table 2 showed that the level in athletes is as follows: disordered eating below the threshold: 01/7 athletes, accounting for 14%, messy eating above the threshold: 06/7

athletes, accounting for 86%. In male athletes (mean score = 5.75) than in female athletes (average score = 4.33), no hyperactivity disorder, attention deficit/hyperactivity disorder: 05/7 athletes, accounting for 71%.

Hyperactivity disorder, attention deficit/hyperactivity disorder: 02/7 athletes, accounting for 29%, male athletes (mean score = 1.5) are lower than female athletes (mean score = 3.33). No bipolar disorder: 7/7 athletes, accounting for 100%. Bipolar disorder: 0/7 athletes, accounting for 0%. In male athletes (mean score = 8.75) than in female athletes (average score = 6). In terms of individual results in showed in Figure 3.

Figure 3: Expression of disordered eating, hyperactivity disorder, attention deficit/hyperactivity disorder, bipolar disorder in each athlete

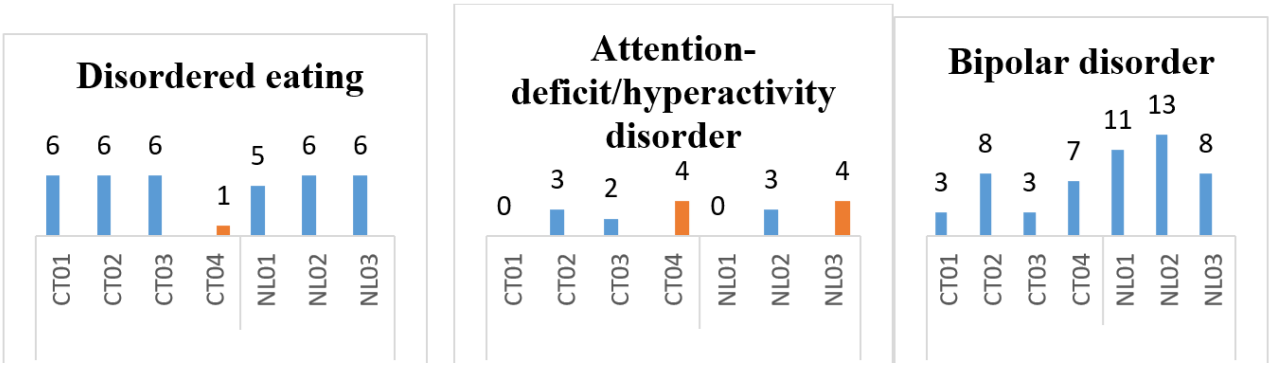


Figure 3 indicated that at the highest level of disordered eating, athletes CT01, CT02, CT03, NL02, NL03 with a score of 6, exhibiting disordered eating above the threshold, followed by athletes NL01 with a score of 5-. The disordered eating level is above the threshold, the rest athleteCT02 with a score of 1 – indicates the disordered eating level below the threshold. Therefore, all athletes have one or more screening items equal to or above the threshold.

Regarding hyperactivity disorder, attention deficit/hyperactivity disorder of each athlete. The highest was 2 athletes CT04 and NL03 athlete with a score of 4, showing ADHD symptoms, followed by 2 athletes CT02 and NL02 athlete with the same score of 3, without showing signs of hyperactivity disorder, hypoactivity disorder. attention/hyperactivity, the third is the athlete CT03 with a score of 2, no signs of hyperactivity disorder, inattention/hyperactivity disorder. The rest are athletes CT01 and NL01 with a score of 0, not showing any level of hyperactivity disorder, attention deficit/hyperactivity disorder. About the level of bipolar disorder of each athlete. The highest is athlete NL02 with a score of 13, second place is athlete NL01 with a score of 11, the third is 02 athletes CT02 and athlete NL03 has a score of 8, ranked fourth is athlete CT04 with a score of 7, The remaining 2 athletes CT01 and CT03 had a score of 3.

Results in Table 5 showed that no stress after injury: 6/7 athletes, accounting for 86%, post-traumatic stress: 1/7 athletes, accounting for 14%. In male athletes (mean score = 1) is higher than in female athletes (average score = 0), gambling is not a problem: 4/7 athletes, accounting for 57%, low-rate chess with little or no negative results: 3/7 athletes, accounting for 43%, flag the average rate of problems leading to some negative

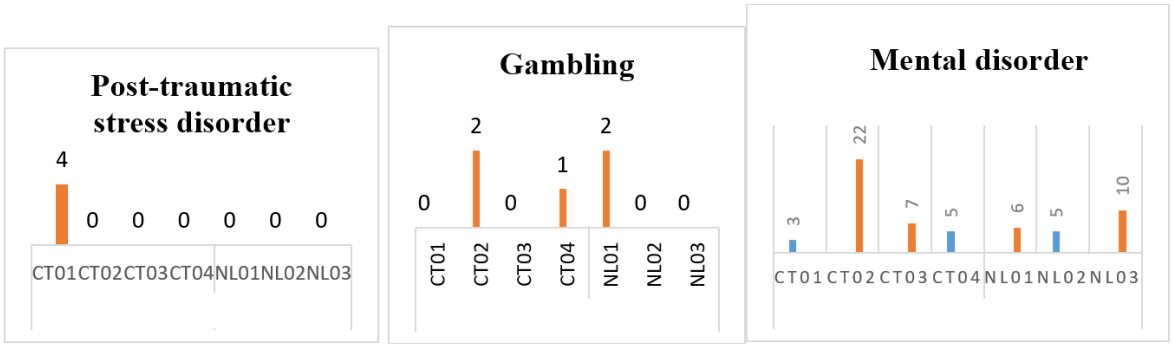
consequences: 0/7 athletes, accounting for 0%. Problem gambling with negative consequences and possible loss of control: 0/7 Athletes, 0%. In male athletes (mean score = 1) is higher than in female athletes (mean score = 0.33), no risk: 3/7 athletes, accounting for 43%, at risk: 4/7 athletes, accounting for 57%. In male athletes (average score = 9) lower than in female athletes (average score = 14).

Table 5: Screening 9 (post-traumatic stress disorder), Screening 10 (gambling), Screening 11 (psychosis)

Code		Post-traumatic stress disorder		Gambling		Psychosis	
		Score	Result	Score	Result	Score	Result
Weightlifting	CT01	4	Stress disorder	0	No problem	3	-
	CT02	0	-	2	Low level	22	At risk for psychosis
	CT03	0	-	0	No problem	7	At risk for psychosis
	CT04	0	-	1	Low level	5	-
Javelin	NL01	0	-	2	Low level	6	At risk for psychosis
	NL02	0	-	0	No problem	5	-
	NL03	0	-	0	No problem	10	At risk for psychosis

In terms of individual results in showed in Figure 4.

Figure 4: Expression of post-traumatic stress, gambling problems, mental disorders in each athlete



In terms of post-traumatic stress in Figure 4 showed that the highest was CT01 athlete with a score of 4 - showing signs of post-traumatic stress. The rest of the athletes all had zero scores - all showing no signs of post-traumatic stress.

On the expression of gambling problems of each athlete. The highest was 02 athletes CT02 and NL01 with scores equal to 2 manifestations of low-level gambling with

little or no negative consequences. The second was the CT02 athlete with a score of 1, showing a low level of gambling with little or no negative consequences, the rest of the athletes all have a score of 0, showing no problem gambling.

About mental disorders of each athlete. The highest is the athlete CT02 with a score of 22 at risk of mental disorders. Second place is athlete NL03 with a score of 10 signs at risk of mental disorders. The third is the athlete CT03 with a score of 7 showing signs of risk of mental disorders. The fourth is the athlete NL01 with a score of 6 showing signs of mental disorder, the rest of the athletes have a score of 3 to 5, respectively, without any symptoms of mental disorder.

The high mental and physical demands on elite athletes are a unique aspect of a sporting career, and these demands can increase their susceptibility to several issues as mental health and risk-taking behavior (Hughes & Leavey, 2012). Furthermore, the peak years of elite athletes tend to overlap with a peak age in terms of risk of the onset of psychosis (Gulliver, 2012a, 2012b). In addition to physical and competitive stress, elite athletes face a range of stressors, including pressure from increased public scrutiny through mainstream and social media, limited support networks due to relocation, group dynamics in team sports, and the potential for early career-ending injuries (Bruner et al., 2008; Woodman & Hardy, 2001). How athletes assess and deal with these stressors can be a powerful determinant of stressors' effects on both mental health and success in their sport (Lazarus, 2000).

Athletes tend not to seek support for mental health issues, for reasons such as stigma, ignorance about mental health and its potential effect on performance, and perceived help-seeking as a sign of weakness (Sundgot-Borgen & Torstveit, 2004; Gulliver, 2012a). While there have been efforts to disseminate sports-related mental health findings to promote the prevention, identification, and early treatment of mental illness in elite athletes, there are suggested that some sport governing bodies continue to downplay the importance of mental illness-health conditions in this population (Sundgot-Borgen & Torstveit, 2004). This has serious implications if elite athletes in such organizations do not have access to timely or adequate mental health care, or do not feel that the sports organization's culture. This allows them to even raise concerns about their mental health, and risk of mental health problems, including eating disorders and suicide (Baum, 2005).

4. Conclusion

In short, the study identified the mental health of disabled Vietnam athletes in weightlifting and javelin. Thus, it led the management and coaches to have a specific plan for the appropriate pre-competition preparation for athletes, thereby getting good results in the upcoming Paralympic Games 2021.

Authors' Contributions

Le Thi My Hanh (main author) drafted, wrote down, and revised the manuscript while Vu Viet Bao and Tran Minh Tuan took control of revising and editing the manuscript after all. All authors have approved the latest paper of this manuscript. We agreed on the order of the presentation.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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