Comparing the Age Related Mood Profile of Veteran Basketball Players

Robabeh Rostami (Corresponding author)

Department of Physical Education and Sport Sciences, School of Education and Psychology, Shiraz University, Shiraz, IR Iran

E-mail: Rostami@shirazu.ac.ir

Gholamhossien Nazemzadegan

Department of physical Education, Shiraz University, Iran

E-mail: ghnazem@yahoo.com

Nahid Mohammadi

Department of Physical Education and Sport Sciences, School of Education and Psychology, Shiraz University, Shiraz, IR Iran

E-mail: nahidmohammadi68@yahoo.com

Abstract

Background: Basketball, as an exciting team sport, is very popular among athletes with disabilities. Among psychological skills, mood states as an important variable have been of special interest to researchers**. Objectives:** The purpose of the present study was to investigate and compare profile of mood states (BRUMS) of disabled former soldiers who play basketball in different age groups. **Methodology:** After getting permit to conduct the research, 28 disabled basketball players completed the demographic survey and the Brunel Mood Scale (BRUMS) questionnaire. BRUMS consisted of 24 items in subscales of stress, anger, depression, fatigue, confusion and vigor. The one-way analysis of variance test was used for the data analysis. The significance level was set at $P \leq 0.05$. SPSS Statistics 22.0 was used for the analysis of data. **Results:** The results showed that mood states become less negative with age. However, scores showed a rising trend in the 35-39 age groups (mood of anger with $P=0/02$ fatigue with $P=0/03$ and confusion with $P=0/04$). **Conclusion:** It seems that examining the psychological variables in relation to age can help develop more effective strategies in physical and mental training programs for disabled players.

Keywords: Mood States, Basketball Players, veteran with disabilities, Age

1. Introduction

Recent studies related to sport psychology have investigated several psychological variables in healthy and disabled athletes. However, few psychological studies have addressed "veterans with disabilities" that is athletes who have become disabled or amputated as a result of war (Sokhangouei, Mohammedian and Farhadi, 2000). Obviously, athletes with disabilities in General and disabled veteran athletes in particular are faced with numerous physical, psychological and social problems. Among such problems, psychological factors are undoubtedly the most effective factors in stimulating disabled veteran athletes to perform sports activities.

One of the most important factors in this ability is "Mood states", which is considered a crucial psychological factor in performing ability and is used to predict athletes' performance better and more accurately (Beedie, Terry and Lynn, 2000). Thayer, Newman and McClain (1994) and Thayer (1967) defined mood as "an emotional state that moves along a continuum of energy towards tension". Terry, Lynn and Newell (2005) defined mood as "temporary feelings that are different in intensity and duration and last longer than emotions". They consider mood as a factor involved in evaluating and interpreting a cognitive situation in past, present and future performances. Mood affects individuals' cognition, behavior, successes and failures in external situations. In the two-dimensional classification, mood is classified into two categories of both positive (vigor) and negative (anxiety, depression, anger, fatigue and confusion).

In a study on athletes, Morgan (1985) showed that positive characteristics of mental health are more frequently seen in successful athletes than negative ones. Compared with non-athletes and less successful athletes, successful athletes were in a more optimal condition of "iceberg mood profile". In this condition, athletes' scores on negative mood subscales lie under the diagram and their positive mood subscales lie above the diagram, which graphically depict an iceberg. As a result, in this case, Morgan's theory can be simplified as follows: "successful athletes have larger icebergs than their less successful counterparts" (Beedie et al., 2000, Terry, Lane and Fogarty, 2003).

In addition, in another study on Athletes, Rostami, Chahardah Cherik, Talebi & Rezaie (2013) predicted Motor and Cognitive Performances based on Mood States of Active and Inactive Elderly. The results of their study revealed that positive Mood states and better cognitive and performance are higher in active elderlies. On the other hand, with increase in fatigue and tension, motor and cognitive task performance in older adults deteriorates.

However, given the intense competition between athletes with disabilities, the need for a comprehensive study of factors affecting athletes' success seems necessary. Mood states are among the factors influencing athletes' success. Sport psychologists have always addressed such factors including athletes' mood states in individual and team sports (Morgan, 1976), and identification of mood states after participating in sports activities (Beedie et al., 2000) in healthy athletes. In this regard, researchers such as Campbell and Jones (1994) reported an increase in the number of studies conducted on mood and performance in athletes with disabilities. However, not only research on healthy and disabled athletes' psychological moods has shown conflicting results, also no research has been done on disabled veterans' mood states. In a research using the POMS Questionnaire, McNair, Lorr and Droppleman (1971) observed differences between healthy and disabled athletes (McNair, Lorr and Droppleman, 1981). Hansen et al. (2001) reported no difference in mood and anxiety profile between disabled and healthy athletes (Ausken, 1991). Maestro, French and Hall (1987) compared POMS of blind and sighted elite male and female athletes and concluded that blind and sighted male athletes had similar POMS. Mood states including stress, depression, anger, fatigue and confusion were less in blind women, while vigor was higher in blind women (Maestro, French and Hall, 1987). Paulson, French and Cheryl (1991) investigated POMS of disabled and non-disabled basketball players. As part of the growing literature on disable athletes, they observed that disabled athletes experienced higher vigor and lower depression, anger, fatigue and confusion compared to their non-disabled counterparts (Paulson, French and Cheryl, 1991). Campbell (1995) compared the psychological health of participants in wheelchair sports with those with congenital disorders and disabilities caused by accidents. The study revealed better psychological well-being in those with disabilities caused by accidents compared to those with congenital disorders. It was concluded that those with disabilities caused by accidents can develop their psychological skills better (Lyons and Berger, 2000). Terry and Lane (2000) recommended investigation of mood states immediately before performance compared to weeks before it (Terry and Lane, 2000). What prompted us to conduct the present study was the fact that few studies have been conducted on disabled veterans' mood states. And the fact that the effect of age on mood states has also been mostly overlooked by researchers. It seems that studies on disability sports, and disabled veterans in particular with focus on the age, have faced numerous limitations. Thus, the present study aimed to compare the POMS of veteran basketball players in relation to their age.

2. Methods

2.1 Participants

The sample of the study consisted of 28 disabled veteran basketball players. First, a permit was obtained from Board of Disabled Veterans of Fars Province to conduct the study among the disabled soldiers community participating in the 2007 tournament. In the order to have a sufficient sample to test the hypotheses, the selected participants were aged from 30-50 and the mean of the age of participants was 39.71 years. Among all players participating in the tournament, only 28 basketball players completed the demographic data form and the BRUMS questionnaire the night before the tournament due to time constraints and their special physical conditions. In this study, we divided the participants into 4 categories to determine the exact mood states on the basis of age.

2.2 Measures and Instruments

In order to assess mood states a modified version of Brunel Mood Scale (BRUMS) including 24 items on a 5-point Likert scale from zero (not at all) to four (completely) was used. This scale measures 6 mental states of stress, anger, depression, fatigue, confusion and vigor. Terry et al. (2003) verified the reliability of the questionnaire through factor analysis and the concurrent validity through Morgan's Profile of Mood States (POMS) Questionnaire. They also obtained the following Cronbach's alphas for the internal consistency of subscales: 91%, 76%, 79%, 74%, 72%, and 73% (Terry, Lane and Fogarty, 2003). After completing the mood states questionnaire, subjects were divided into four age groups of 30-34, 35-39, 40-44, and 45 and above.

2.3 Statistical Method

One-way analysis of variance was used to compare age groups in each mood state. In this study, a significant level of α=0.05 was considered. Data analysis was conducted using SPSS Statistics 22.0.

3. Results

Table 1. Mean and standard division of age, weight and height

Mood states Statistical Index	Age	Weight	height
Mean	38.9	72.5	171.3
Standard Division	7.4	9.4	8.7

Table 2. Mean and standard division of state of mood in veteran basketball players

Mood states Statistical Index	Tension	Depression	Anger	Vigor	Fatigue	Confusion
Mean	5.7	4.3	4.8	9.3	5.4	4.8
Standard division	2.6	3.2	3.8	3.4	2.7	2.8

Table 3. Mean and standard division of mood state in veteran basketball players based on age category

Age Groups	Number	Tension		Depression		Anger		Vigor		Fatigue		Confusion	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
1	7	4.6	2.7	1	1.4	2.4	2.4	8.3	4.5	4.1	2.7	3	2
2	5	8	1.7	6.8	2.5	7.8	3.6	9.8	3.6	7.4	1.8	7.4	2.7
3	8	6.3	2.8	6	2.4	7.1	3.6	10	2.6	6.8	2	6	2.3
4	8	4.6	2	3.8	2.9	2.8	3.6	9.3	3.5	3.8	2.6	3.5	2.4

Table 4. Results of ANOVA test for disabled veterans' mood states by age group

Mood states Statistical Index	Tension	Depression	Anger	Vigor	Fatigue	Confusion
F	2.2	*3.1	4.1	0.12	3.6	3.2
P Value	0.12	*0.05	*0.02	0.95	*0.03	*0.04

Results showed that mean scores of depression, anger, fatigue and confusion in the basketball players in the four groups were significantly different. Least Significant Difference (LSD) post hoc test indicated the following: in depression, group one was lower than group two (P=0.025); group one was lower than group three (P=0.044); group two was higher than group four (P=0.046). In anger, group three was higher than group four (P=0.015); group two was higher than group four (P= 0.012). In fatigue: group two was higher than group four (P= 0.009); group three was higher than group four (P= 0.014). In confusion, group four was lower than group two (P= 0.008); group four was lower than group three (P= 0.043). According to the post hoc tests conducted on mood states, the second age group had higher scores in negative mood subscales compared to other age groups.

4. Discussion

Eight years of war between Iran and Iraq was one of the tragedies in human history in 20th century. After the Vietnam War, this war was the longest war in history. The consequences of this war were physical, mental and social problems for those who were directly and indirectly involved in the war. Generally, everyone has a specific stress threshold in particular conditions and situations. When the stress exceeds this threshold, mental and psychological disorders appear. On the factors which results in stress is amputation and handicapping. The mental and social effects of handicapping are undeniable, because amputation affects adaptive behavior of the individual as well as their mental health. These people experience more chronic stress and are more prone to social isolation compared to other members of society. Many theories have been proposed to explain the ethology of stress (FiroozAbdi, 2000). One of the most important tools to reduce these symptoms is sport and physical activity. Sport is a basic need for handicap people which should not be removed from their life. Disabled athletes who live in society have different needs, and it is essential to pay attention to their special needs (Saberi, Khodaei, & Ebrahimi Etri, 2012). Basketball as an exciting and team sport is especially popular among disabled people. Among the cognitive skills, a mood state has attracted much attention as a very significant variant among the researchers. Sport and physical activity is a fun remedy which can improve different physical, mental and social aspects of the disabled person's life; one of these sporting is basketball. Basketball, as an exciting team sport, is very popular among athletes with disabilities. And among psychological skills, mood states have been of special interest to researchers as an important variable. Therefore, the purpose of the present study was to compare the BRUMS of disabled veteran basketball players in different age groups. For this purpose, mood states scores of 28 disabled veteran basketball players were examined. There were no other similar researches to study this variable among the disabled former veterans. Our findings generally showed that negative mood states decrease with age. But in the second and third age groups (35-39 and 40-44), scores had a more increasing rate compared to other age groups which was more evident in the second group.

McNair, Lorr and Droppleman (1981) used Profile of Mood States (POMS) Questionnaire and their findings revealed a significant difference between healthy and disabled athletes' mood states. In contrast, Hansen et al. (2001) observed no difference in mood profile and anxiety between healthy and disabled athletes. In their study on POMS of healthy and disabled basketball players, Paulson, French and Cheryl (1991) observed that disabled athletes experienced higher levels of vigor and lower levels of stress, depression, anger, fatigue and confusion compared to their non-disabled counterparts. Regarding age, in his research, Desmond (2007) did not find meaningful relationship between age and depression, but he discovered that during a long period after the time of amputation, depression rate would decrease. Unlike Desmond's research, significant difference between age's groups was found in the current study. The impact of age, specifically in the second and third groups, compared to first and last groups, on disabled former soldiers' mood states is likely due to the problems which manifest and increase after the age of 35 in those who have disability due to being exposed to chemicals used during the Iran-Iraq war. Therefore, disabled veteran basketball players have to adapt with disabilities as they grow older. In fact, they manage their mood better. Similar to this results, Campbell (1995) stated that athletes in wheelchair sports enjoy better psychological health and are more capable of developing their psychological skills compared to those with congenital disorders.

5. Conclusion

From a conceptual point of view, in recent years, the number of studies about mood profile has increased, but few studies have examined the disabled veteran basketball players. Findings of the present study indicated a more negative mood states in the second and third groups in comparison to other age groups. According to the results of this study, it is recommended that Iran's Sports Federation for the Disabled design and implement psychological plans to improve disabled former soldiers' mood states in the age group of 35-44.

References

Asken, M. J. (1991). The challenge of the physically challenged: Delivering sport psychology services to physically disabled athletes. *The sport psychologist*, 5(4), 370-381.

Beedie, C. J., Terry, P. C., & Lane, A. M. (2000). The Profile of Mood States and athletic performance: Two meta-analyses. *Journal of applied sport psychology,* 12(1), 49-68.

Campbell, E., & Jones, G. (1994). Psychological well-being in wheelchair sport participants and nonparticipants. *Adapted Physical Activity Quarterly,* 11, 404-404.

Desmond, D. M. (2007). Coping, affective distress, and psychosocial adjustment among people with traumatic upper limb amputations. *Journal of psychosomatic research,* 62(1), 15-2.

FiroozAbadi, A. (2000). Symptoms of mental disorders in spouses of veterans' health centers province Veterans Foundation. Paper presented at the Proceedings of the third Conference mental neurological complications caused by the war, in Persian date May.

Hansen, C. J., Stevens, L. C., & Coast, J. R. (2001). Exercise duration and mood state: How much is enough to feel better? *Health Psychology,* 20(4), 267.

Lane, A. M., Terry, P. C., & Fogarty, G. (2007). Construct Validity of the Profile of Mood States.

Lane, A. M., Whyte, G. P., Terry, P. C., & Nevill, A. M. (2005). Mood, self-set goals and examination performance: the moderating effect of depressed mood. *Personality and Individual Differences,* 39(1), 143-153.

Leunes, A., & Burger, J. (2000). Profile of mood states research in sport and exercise psychology: Past, present, and future. *Journal of applied sport psychology,* 12(1), 5-15.

Mastro, J. V., French, R., & Hall, M. M. (1987). Test-retest reliability of the Profile of Mood States using visually impaired athletes. *Perceptual and motor skills,* 65(2), 593-594.

McNair, D., Lorr, M., & Droppelman, L. San Diego, CA: Educational and Industrial Testing Service; 1971. Manual for the profile of mood states.

McNair, D., Lorr, M., & Droppelman, L. (1992). Revised manual for the Profile of Mood States. San Diego, CA: *Educational and Industrial Testing Services*, 731, 732-733.

Morgan, W. P. (1985). Selected psychological factors limiting performance: A mental health model. Limits of human performance, 70-80.

Paulsen, P., French, R., & Sherrill, C. (1991). Comparison of mood states of college able-bodied and wheelchair basketball players. *Perceptual and motor skills,* 73(2), 396-398.

Rostami, R., Chahardah Cherik, M.,Talebi, R., & Rezaie, M. (2013). Predicting Motor and Cognitive Performances Based on Mood States of Active and Inactive Elderly. *Sport Psychology Review*, 2(5), 1-12.

Rostami , R., Mohammadi, N. (2015). A Comparative Study on Emotional Intelligence and Mental Toughness for Visually Impaired Male and Female Athletes. *International Journal of Kinesiology & Sports Science,* 3 (5),74-78.

Saberi, M., Khodaei, M., & Ebrahimi Etri, A. (2012). Comparison of spirometric indices Veterans injured spinal cord injury athletes in various sports groups. *Iranian Journal of War and Public Health,* 5(1), 7-14.

Sokhangooi Y, Farhadi Zad M, & Mohammadian F. (2000). Department of physical education of girls. *Physical disability sport*. [Persian].

Terry, P. C., & Lane, A. M. (2000). Normative values for the Profile of Mood States for use with athletic samples. *Journal of applied sport psychology*, 12(1), 93-109.

Thayer, R. E. (1967). Measurement of Activation through Self-Report Monograph Supplement 1-V20. *Psychological reports*, 20(2), 663-678.

Thayer, R. E., Newman, J. R., & McClain, T. M. (1994). Self-regulation of mood: strategies for changing a bad mood, raising energy, and reducing tension. *Journal of Personality and Social Psychology,* 67(5), 910.