

The comparison of blind male and female chess players' mental skills in Iran

Majid Keramatimoghadam^{1*}, Masoumeh Nouredini², Seyed Navid Hojaji³ and Majdeddin Mostaan⁴, Vahid Bakhshalipour⁵

- 1- M.Sc in Sport Psychology, Islamic Azad University Karaj Branch, Iran
- 2- M.Sc in Motor Behaviour, Allameh Tabatabaei University, Tehran, Iran
- 3- B.sc in Statistics, Adiban University, Garmsar, Iran
- 4- M.Sc Student in Sport Psychology, Islamic Azad University Karaj Branch, Iran
- 5- M.Sc in Sport Psychology, Islamic Azad University Karaj Branch, Iran

Corresponding author: Majid Keramatimoghadam

ABSTRACT: The purpose of this study was the comparison of blind male and female chess players' mental skills in Iran. The statistical population of this study was all blind male and female chess players of Iran. 60 blind chess players were selected as statistical sample by stratified sampling ($N_{\text{female}} = 34$ players, $N_{\text{male}} = 26$ players). The instrument of measurement was included the Ottawa Mental Skills Assessment Tool (OMSAT-3) under three broader conceptual components: foundation, psychosomatic, and cognitive skills. The collected data were classified by descriptive statistical methods and were analyzed by MANOVA ($P \leq 0.05$). The results of this study shows that there is no significant difference between blind male and female chess players of Iran in foundation, psychosomatic, and cognitive skills. Therefore, it seems that the gender factor has no decisive role in female and male chess players' mental skill.

Keywords: Mental skills, chess, blind players.

INTRODUCTION

Today, the athletes should have good conditions in psychological aspects alongside their regular, serious, and advanced exercises in order to achieve greater success. The athletes who apply mental skills can improve their focus and they have high self-confidence (1). Also they will increase their mental efficiency and these athletes will have less false excitement so they will be more successful in their sports performance (1). The successful athletes have higher positive thinking and better decision making than other athletes (1). Blindness has not borders and it is affected people regardless of their age, gender, nationality, religion, race, socio-economic class (2). Most of people believe that blind people are needy and in difficulties and deserving of pity and they face with frustrations. Of course, we can not deny the difficulties and limitations are caused due to deprivation of this sense in blind people daily life, education, mental states, employment, sports and in other aspects of their life. But blindness should be accepted as a normal characteristic with attention to the blind individuals' success in various fields of science, education, culture, art and sport. Then we can understand the blind individual s' real needs and we can distinguish theses needs from unrealistic and fictitious needs that are often imaged by our mind. According to exceptional education experts, about 12 percent of school students are exceptional students in Iran that 2 percent of these exceptional students are blind students (3). Chess is two-player memory played on chessboard with 64 squares (black and white colors), both opponents has 16 pawns that they can move one of their pawns in turn. The calmness, predictions of movements, speed decision-making, and mental and intellectual abilities are from success factors in chess (4). Therefore, the final result of a battle between two chess players is not depends only on their knowledge but also other factors such as mental skills have influences on the outcome of chess play. The studies showed that mental skills play an important role in achieving high sports performance (5, 6). Noorbakhsh and Maleki (2005) studied the comparison of male elite athletes, foundation, psychosomatic, and cognitive mental skills in individual and team sports and the relationship of these skills with their self-efficacy in of Khuzestan province (7). 100 team athletes and 10 individual athletes of

Khuzestan province were selected as subjects and the Ottawa Mental Skills Assessment Tool (OMSAT-3) was used in this study as the instrument for collecting data. The results showed that there is no significant difference in all skills athletes, mental skills in individual and team sports (7). Also, there is no significant difference between athletes in each of 12 mental skills (the components of three part: basic, physical – psychological, and cognitive) (7). Eloff, (2011) evaluated the instruction of mental skills in hokey athletes in South Africa. They stated that women are better than men in goal-setting, self-talk, and commitment while men were better than women in response to stress (8). Torabi (2005) examined the comparison of male and female student athletes, mental skills in individual and team sports of teacher training institutions in Iran. 227 people (102 male players and 135 female players) were selected as statistical sample in Torabi's study and they complete the (SASI) questionnaire (9). The results of this study showed that male and female athletes, mental skills in individual and team sports are evaluated in a good level (9). Sharif Far (2008) studied the relationship between male and female, s physical fitness and mental skills in Iran national squash team (10). The subjects perform the practical tests of Olympic Academy and the Ottawa Mental Skills Assessment Tool (OMSAT-3) was used in this study as the instrument for collecting data (10). The survey of mental profile between male and female groups showed that males had higher scores than females in refreshments, mental training, and reaction to stress skill but females had higher scores than males in relaxation, commitment, and planning competition skill (10). Overall, there is no significant difference between gender and each of research variables (10). Sotoudeh, (2012) compared the elite and non-elite taekwondo players' mental skills (11). 142 male and female taekwondo players were selected as subjects and the Ottawa Mental Skills Assessment Tool (OMSAT-3) was used in this study as the instrument for collecting data. The results of this study showed that the elite taekwondo players were better than non-elite taekwondo players in the relaxation, goal-setting, self-confidence, commitment, and planning competition (11) Also, the non-elite taekwondo players were better than elite taekwondo players in the concentration and reaction to stress components (11). Riahifarsani, (2013) surveyed the effects of emotional intelligence on mental skills in adolescent athletes (12). 80 male and female students were selected as subjects ($N_{\text{female}} = 40$, $N_{\text{male}} = 40$). The Ottawa Mental Skills Assessment Tool (OMSAT-3) was used in this study as the instrument for collecting data. The results showed that there. The results of this study showed that there is no significant difference between emotional intelligence and mental skills (12). Therefore, the researchers want to know in this study whether there is a difference between blind male and female chess players' mental skills in this study or not.

MATERIALS AND METHODS

Method

The method of this study was casual-comparative.

Participants

The statistical population of this study was all blind male and female chess players in Iran. 60 blind chess players ($N_{\text{male players}} = 26$ and $N_{\text{female players}} = 34$) were selected by stratified sampling for this study.

Instruments and Tasks

The instrument was the Ottawa Mental Skills Assessment Tool (OMSAT-3): the first part of his questionnaire was included the questions about athlete s' individual characteristics on age, gender, level of education, field of study, history of chess activities. The second part of the questionnaire was included the questions about mental skills using the Ottawa Mental Skills Assessment Tool (OMSAT-3). This questionnaire especially was made to measure the fitness of champion athletes that it was made by Salma, Barbour, Cox, Gowlett, Imaj, and Ping in 1993 and was validated by Salma and Botha in 1993 (Vaez Mousavi, 2000) (13). The Ottawa Mental Skills Assessment Tool (OMSAT-3) is included 48 questions and it is assessed three categories of mental skills and 12 subscales. These three categories are included a) foundation mental skills (1.goal-setting 2.self-confidence 3.Commitment), b) psychosomatic skills (1.reaction to stress 2.control of fear 3.refreshment 4.relaxation), and c) cognitive skills (1.concentration 2.refocusing 3.mental imagery 4.mental training 5.planning completion). It was scored for reaction to stress, control of fear, refreshment, and relaxation with words never=1, rarely=2, sometimes=3, often=4, always=5 and for goal-setting, self-confidence, and Commitment and concentration, refocusing, mental imagery, mental training, and planning completion with words never=5, rarely=4, sometimes=3, often=4, always=1. The reliability of questionnaire was calculated according to the Cronbach's alpha $r=0.92$ and from Guttman method $r=0.88$ in Maleki' thesis (2005) and $p=0.05$ (14). Sanati Monfared (2006) examined the reliability and validity of this questionnaire on adult athletes who was member in national team or sports club that they had participated in training camp for

dispatched to Qatar Doha competitions (2006). He determined that some of questions had low validity coefficient (15). So, third version of The Ottawa Mental Skills Assessment Tool (OMSAT-3) was adjusted by necessary changes.

Procedure

The researcher distributed the questionnaires among the subjects. The researcher explains the goal of study to subjects before completing of the questionnaires. The subjects complete the questionnaires without name due to the subject s’ security sense. The questionnaires were collected after 30 minutes.

Data Analysis

The collected data were classified by descriptive statistical methods and were analyzed by Multivariate Analysis of Variance (MANOVA). The SPSS software (version 19) was used for data analysis ($\alpha \leq 0.05$).

RESULTS AND DISCUSSION

Results

The results of table (1) show that the mean of goal-settings, self-confidence, and commitment is respectively 2.63 ± 0.70 , 2.33 ± 0.75 , and 2.96 ± 0.63 in blind female chess players and 2.73 ± 0.88 , 2.14 ± 0.71 , and 2.52 ± 0.80 in blind male chess players.

Table 1. The description of foundation mental skills (goal-settings, self-confidence, and commitment) of blind male and female chess players

Gender		Goal-setting	Self-confidence	Commitment
Female	Mean	2.6324	2.3382	2.9632
	Std. Deviation	.70774	.75849	.63405
	N	34	34	34
Male	Mean	2.7308	2.1442	2.5288
	Std. Deviation	.88012	.71475	.80102
	N	26	26	26
Total	Mean	2.6750	2.2542	2.7750
	Std. Deviation	.78154	.74004	.73747
	N	60	60	60

The results of table (2) show that the mean of reaction to stress, relaxation, control of fear, and refreshment is respectively 2.57 ± 0.73 , 2.81 ± 0.73 , 2.06 ± 0.59 , and 2.74 ± 0.61 in blind female chess players and 2.59 ± 0.76 , 2.56 ± 0.71 , 2.15 ± 0.82 , and 2.54 ± 0.60 in blind male chess players.

Table 2. The description of psychosomatic skills (reaction to stress, relaxation, control of fear, and refreshment) of blind male and female chess players

Gender		Reaction to stress	Relaxation	Control of fear	Refreshment
Female	Mean	2.2868	2.5956	2.0882	2.7574
	Std. Deviation	.73632	.67424	.77821	.73979
	N	34	34	34	34
Male	Mean	2.4231	2.6442	2.0481	2.4519
	Std. Deviation	.73406	.83419	.60423	.52450
	N	26	26	26	26
Total	Mean	2.3458	2.6167	2.0708	2.6250
	Std. Deviation	.73226	.74143	.70274	.66781
	N	60	60	60	60

The results of table (3) show that the mean of reaction to concentration, refocusing, mental imagery, mental training, and planning completion is respectively 2.22 ± 0.74 , 2.47 ± 0.65 , 2.69 ± 0.79 , 3.20 ± 0.84 , and 2.96 ± 0.86 in blind female chess players and 2.21 ± 0.75 , 2.94 ± 0.76 , 2.61 ± 0.95 , 3.07 ± 0.66 , and 3.00 ± 0.84 in blind male chess players.

Table 3. The description of cognitive skills (concentration, refocusing, mental imagery, mental training, and planning completion) of blind male and female chess players

Gender		Concentration	Refocusing	Imagery Mental	Mental Training	Planning Competition
Female	Mean	2.2279	2.4706	2.6912	3.2059	2.9632
	Std. Deviation	.74714	.65356	.79071	.84268	.86413
	N	34	34	34	34	34
Male	Mean	2.2115	2.9423	2.6154	3.0769	3.0000
	Std. Deviation	.75396	.76586	.95192	.66996	.84558
	N	26	26	26	26	26
Total	Mean	2.2208	2.6750	2.6583	3.1500	2.9792
	Std. Deviation	.74375	.73689	.85738	.76911	.84909
	N	60	60	60	60	60

The results of table (4) show that the mean of foundation, psychosomatic and cognitive skills is respectively 2.64 ± 0.54 , 2.43 ± 0.52 , and 2.71 ± 0.39 in blind female chess players and 2.39 ± 0.57 , 2.46 ± 0.51 , and 2.68 ± 0.44 in blind male chess players.

Table 4. The description of foundation, psychosomatic and cognitive skills of blind male and female chess players

Gender		Foundation Skills	Psychosomatic Skills	Cognitive Skills
Female	Mean	2.6446	2.4320	2.7118
	Std. Deviation	.54135	.52683	.39830
	N	34	34	34
Male	Mean	2.4679	2.3918	2.7692
	Std. Deviation	.66753	.46789	.52366
	N	26	26	26
Total	Mean	2.5681	2.4146	2.7367
	Std. Deviation	.60043	.49840	.45360
	N	60	60	60

Multivariate Analysis of Variance (MANOVA) was used to determine that is there a significant difference between independent groups in more than one continues dependent variable in this study or not.

Table 5. The results of Multivariate Analysis of Variance for determining of difference between foundation mental skills in blind male and female chess players

	Value	F	Hypothesis df	Error df	Sig.
Wilks' Lambda	.133	1.313	5.000	469.000	.369

According to table (5), there is no significant difference between blind male and female chess players in foundation mental skills ($P=0.369$).

Table 6. The results of Multivariate Analysis of Variance for determining of difference between psychosomatic skills in blind male and female chess players

	Value	F	Hypothesis df	Error df	Sig.
Wilks' Lambda	.114	0.985	4.000	444.000	.210

According to table (6), there is no significant difference between blind male and female chess players in psychosomatic skills ($P=0.210$).

Table 7. The results of Multivariate Analysis of Variance for determining of difference between cognitive skills in blind male and female chess players

	Value	F	Hypothesis df	Error df	Sig.
Wilks' Lambda	.136	1.456	5.000	453.000	.115

According to table (7), there is no significant difference between blind male and female chess players in cognitive skills ($P=0.115$).

Table 8. The results of Multivariate Analysis of Variance for determining of difference mental skills in blind male and female chess players

	Value	F	Hypothesis df	Error df	Sig.
Wilks' Lambda	.112	1.165	5.000	469.000	.110

According to table (8), there is no significant difference between blind male and female chess players in all mental skills ($P=0.110$).

Discussion and conclusion

The results of this study showed that there is no significant difference between blind male and female chess players' mental skill in Iran. This result is consistent with Noorbakhsh and Maleki (2005); Sharifi Far (2008); and Riahifarsani, 's (2013) study that the results of Noorbakhsh and Maleki' s (2005) study showed that there is no significant difference in all skills athletes, mental skills in individual and team sports (7). Also, there is no significant difference between athletes in each of 12 mental skills (the components of three part: basic, physical – psychological, and cognitive) (7) and the results of Sharif Far's (2008) study showed that there is no significant difference between gender and each of research variables (10). Also, the results of Riahifarsani, 's (2013) findings that they expressed that there is no significant difference between male and female athletes' emotional intelligence and mental skills (12). This result is conflict with Sotoudeh, (2012); Torabi (2005); Ellof' s (2011) study that the results of Sotoudeh 's (2012) study showed that the elite taekwondo players were better than non-elite taekwondo players in the relaxation, goal-setting, self-confidence, commitment, and planning competition (11). Also, the non-elite taekwondo players were better than elite taekwondo players in the concentration and reaction to stress and the results of Torabi' s (2005) study showed that male and female athletes' mental skills in individual and team sports are evaluated in a good level (9). Ellof (2011) stated that women are better than men in goal-setting, self-talk, and commitment while men were better than women in response to stress (8). According to that there was no significant difference between blind male and female chess players in mental skills and all players were almost at the same level. It should be noted that there is special conditions in every sport and every sport is demanded special psychological and physiological needs. So, the special psychological and physiological factors are played more decisive role in athletes' success of every sport. The precision and concentration on the opponent' movements, correct reaction, and prediction of opponent' movements are played an important role in the chess sport and its win. According to this issue and the results of this study, it can be stated that mental training is played more important role in chess players' success. Of course we can not ignore the role of other mental skill because they have a share in chess players' success too. The findings of this study indicate the importance of this psychological variable in chess players' success. So, coaches and sport psychologists should pay attention to mental training in the athletes' planning competitions and preparation programs. Today, there is more emphasis on psychological preparation than physical fitness.

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