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Comparison of athletes' personality characteristics in individual and team sports

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Abstract

This study compared athletes' personality characteristics in individual and team sports. 134 athletes (92 team, 42 individual, 88 males, and 46 females) completed the NEO Personality Inventory-Revised (NEO-PI-R) and the Sociotropy-Autonomy Scale (SAS). The results revealed that individual sport athletes scored significantly higher on conscientiousness and autonomy than did team sport athletes. The team sport athletes scored significantly higher on agreeableness and sociotropy than did the individual sport athletes. No significant difference was found between the two groups on neuroticism, extraversion, and openness. It can be concluded that athletes' personality characteristics are different for individual and team sports.

Keywords: Personality, big-five model, sociotropy, autonomy, sport psychology

1. Introduction

Personality structure has explained based on different models. Three-dimensional model of personality (Eysenck & Eysenck, 1985) including dimensions of extraversion, neuroticism, and psychoticism; and five factor model of personality (Costa & McCrae, 1992) including dimensions of neuroticism, extraversion, openness, agreeableness, and conscientiousness, two that have supported both theoretical and empirical by a large number of researches in the last decades (Markon, Krueger, & Watson, 2005; McCrae et al., 2005; Terraciano, Costa, & McCrae, 2006). Numerous studies (Rhodes, Couneya, & Bobick, 2001; Conner & Abraham, 2001; Naseri, Pakdaman & Asgari, 2008; Saklofske, Austin, Rohr & Andrews, 2007) have examined the relations between five factor model dimensions and sport activities; these studies suggest that there is a positive correlation between sport activities, extraversion and conscientiousness and also a negative correlation between sport activities and neuroticism. Also the results of studies connected with Three-dimensional model of personality have shown a correlation between sport activities with one or more dimensions of low neuroticism, high extraversion and low psychoticism (Arai & Hisamichi, 1998; Potgieter & Venter, 1995; Davis, Elliott, Dionne, & Mitchell, 1991; Yeung, & Hemsley, 1997).

Having different levels of personality characteristics proportionally influences feelings, emotions, and behaviour. For example, high score in extraversion predicts positive emotions like happiness, liveliness, optimism, high level of

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energy and activity (David, Green, Martin & Slus, 1997; Magnus, Diener, Fujita, & Pavot, 1993); whereas neuroticism predicts negative emotions like fear, worry, hastiness, anger, and guilt feeling (Costa & McCrae, 1992; David et al., 1997; Robinson, Ode, Moeller, & Goetz, 2007). Sociotropy and autonomy are proposed by Beck (1983) as two constructs of personality that influence the individual psychological activity. Sociotropy is defined as a combination of beliefs, behavioural tendencies and attitudes that lead a person to attend to and depend on others for personal satisfaction. Autonomy is almost the opposite and is considered to be a combination of beliefs, behavioural tendencies and attitudes that lead people to focus on their own uniqueness, physical functioning and control over their environment (Beck, Epstein, Harrison, & Emery, 1983). The only study on sociotropy and autonomy in sport psychology (Besharat, 2001) showed no differences between athletes and non-athletes college students. Furthermore, Eysenck, Nias & Cox (1982) believe that there is no explanation for similar personality characteristics between team and individual sport athletes. However, despite being acceptable theoretical supports for this suggestion, it is leaved without any study and empirical confirmation.

The process of discovering talented athletes for participation in an organized exercise program is one of the most important issues in sport nowadays, so the study of athletes' personality characteristics, either individual or team sport athletes provide an opportunity for sport counsellor, coaches and specialists to discover and select the talented people for guiding them to the highest level of skills. Based on this, the main purpose of the present study is to survey and diagnose athletes' personality characteristics in individual and team sport and to compare their personality characteristics with each other. With due attention to the limitations of empirical findings in this area, the current study has one aspect of discovery and survey and compares athletes' personality characteristics without formulating any hypothesis.

2. Method

2.1. Participansts and procedure

The population of this study included the students of different sport majors from the Faculty of Physical Education and Sport Science, the University of Tehran, and the athletes of Saipa, Qazvin, Sanam, Paykan, Pass, Piroozi, Irankhodro, Ararat, and Razi clubs. One hundred and thirty-four athletes (92 team, 42 individual, 88 males, and 46 females) after giving the necessary explanations about the purposes of the study and attracting their cooperation, participated in the research by completing "NEO Personality Inventory-Revised (NEO-PI-R)" and "Sociotropy-Autonomy Scale (SAS)". Mean score for all of the athletes' ages was 22/35 (SD=2.28), for team sport athletes 22/42 (SD=2.50) and for individual sport athletes 22/21 (SD=2.47). The frequency and the percentage of diverse sport majors were as follows: volleyball: 33 (24.6%), basketball: 26 (19.4%), football: 19 (14.2%), track and field: 15 (11.2%), each of swimming and futsal: 7 (5.2%), handball: 6 (4.5%), each of martial and box: 5 (3.7%), each of wrestling and gym: 4 (3%), water polo: 3 (2.2%).

2.2. Measures

2.2.1. NEO Personality Inventory-Revised (NEO-PI-R)

This scale is a 243-item questionnaire from which 240 items assess 5 main factors of personality and the last three items determine the executive validity of the test. Every dimensions or main factors of this scale prepare the grounds for a vast evaluation of personality characteristics by surveying six subscales or secondary factors. Different studies corroborated reliability and validity of NEO personality inventory. During a 7-year study, reliability coefficients for 18 subscales were ranging from .51 to .82 and for 5 main factors in men and women from .63 to .81. The done researches concerning psychometric properties of this scale in the Iranian sample reported that the reliability coefficients of the major dimensions of the test range from .53 to .87 (Haghshenas, 1999).

Sociotropy-Autonomy Scale (SAS)

Sociotropy and autonomy properties of the athletes were measured by Sociotropy-Autonomy Scale (SAS). This scale is a 60-item test which assesses the two factors of autonomy and sociotropy. 30 items of both of subscales determine sociotropy and autonomy properties in a 5-point Likret scale from score 0 to 120. Sociotropy-Autonomy Scale has a high internal consistency and satisfactory test-retest reliability. In the Persian version of this scale

(Besharat, 2007), Cronbach alpha were estimated at .89 for sociotropy subscale and .87 for autonomy which signify the high internal consistency. Correlation coefficients between the subject's scores taken in two times with a 4-week interval were r=.82 for sociotropy and r=.79 for autonomy which suggest the high test-retest reliability of the Persian version of the test.

3. Results

Means and standard deviations related with neuroticism, extraversion, openness, agreeableness, sociotropy, and autonomy for individual and team sport athletes are shown in table 1.

Table 1. Means, standard deviations, and the t-test results for comparing the scores of personality characteristics of neuroticism, extraversion, openness, agreeableness, conscientiousness, sociotropy, and autonomy in individual and team sport

Personality. Var.	Group. Var.	M	SD	df	t	P
Neuroticism	Individual sport	103.21	21.00	132	.348	.729
	Team sport	101.92	19.42			
extraversion	Individual sport	117.66	19.90	132	.697	.487
	Team sport	120.33	20.86			
openness	Individual sport	119.76	23.50	132	1.02	.309
	Team sport	115.69	20.35			
agreeableness	Individual sport	117.21	18.75	132	2.60	.010
	Team sport	127.19	21.30			
conscientiousness	Individual sport	126.54	19.59	132	4.07	.001
	Team sport	111.61	19.74			
Sociotropy	Individual sport	65.80	15.41	132	2.39	.018
	Team sport	73.31	17.44			
autonomy	Individual sport	74.28	14.36	132	2.32	.021
	Team sport	67.30	16.83			

For comparing the scores of personality characteristics of neuroticism, openness, extraversion, agreeableness, conscientiousness, sociotropy, and autonomy in individual and team sport, independent group t-test was performed. The synopses of the t-test results showed that the scores of individual sport athletes on neuroticism, openness, conscientiousness, and autonomy are higher than the scores of team sport athletes on these variables. These differences were significant only on conscientiousness and autonomy. The results also showed that the score of team sport athletes on extraversion, agreeableness, and sociotropy is higher than the scores of individual sport athletes in these variables. These differences were significant only on agreeableness and sociotropy characteristics.

4. Disscusion

The findings of this study showed that the athletes' mean scores for the personality characteristics of extraversion and conscientiousness are relatively higher and for neuroticism are lower than the mean scores of non-athlete subjects reported in other researches. These findings are in line with previous researches (Rhodes et al., 2001; Conner & Abraham, 2001; Naseri et al., 2008; Saklofske et al., 2007; Arai & Hisamichi, 1998; Potgieter & Venter, 1995; Davis et al., 1991; Yeung, & Hemsley, 1997), and are explained as follows: sport as a collection of systematic behaviours requires more positive emotions like happiness, liveliness, optimism, high level of energy and activity (David et al., 1997; Magnus., 1993) and less negative emotions like fear, worry, hastiness, anger, and guilt feeling (Costa & McCrae, 1992; David et al., 1997; Robinson et al., 2007). These requirements associate with the personality characteristics of extraversion and neuroticism (Costa & McCrae, 1992). The explanation for this association is that the personality characteristics of higher extraversion and lower neuroticism likely prepare the individual for involvement in sport activities. Accordingly, sport and sport activities prepare the grounds for achieving these characteristics.

Comparison of athletes' personality characteristics in individual and team sports showed that first group scored significantly higher on conscientiousness and autonomy than did the second group, while the second group scored

higher on agreeableness and sociotropy than did the first group. These findings confirm previous findings (Eysenck et al., 1982) about the possibility of difference between personality characteristics of individual sport athletes and team sport athletes. This is considered as a discovery in sport psychology and can be explained in several ways. Competence is one of the main components of conscientiousness in the 5-factor model. Whereas achieving competence is possible both in individual and team activities, but its values belong totally to the person when earned by individual endeavours. The state of athletes' more conscientious in individual sports comparison with team sports can be approximately ascribed to the personal competence achievement process.

Another factor of conscientiousness in the 5-factor model is achievement striving. Endeavour for achievement is originally based on the achievement motive which in comparison with affiliation and social motive has an individual aspect. The state of athletes' more conscientious in individual sports in comparison with team sports can be attributed to their more desire for the achievement. The predominance of achievement motive leads the person to concentration on the individual activities, whereas affiliation motives take the priority in team activities. Self-discipline is another factor of conscientiousness. This characteristic which signify the tendency and attention to order and discipline especially in personal matters, affect the individual's predominant direction in comparison with team and collective tendencies. This characteristic explains the athletes' more conscientious in individual sports comparison with team sports. In individual sports, order and discipline are gained through the individual's management and control, and the unpredicted interferences inevitable in team sports are avoided. Competence, achievement striving, and self-discipline are three main components of conscientiousness in the 5-factor model. The amount, intensity, arrangement, and combination of competence, achievement striving and self-discipline components in the form of one main personality trait (conscientiousness) prepare the individual for choosing individual sports.

For confirming the point that team sport athletes are more agreeable in comparison with individual sport athletes, as one of the findings of the present study, the following explanations are provided. Trust, one of the components of agreeableness, as an interpersonal factor helps the individual so that he/she can rely on others more easily and develop the group activities and relationships. Team sports provide a suitable ground for achieving this characteristic. Accordingly agreeableness based on trust prepares the individual for team sports. Altruism is another factor of agreeableness. Tendency for loving and assisting prepares the individual for taking care of another one's business and cooperating in team activities. In sport activities, team sports more than individual sports prepare the grounds for achieving and accomplishing this characteristic. Compliance, one of the other components of agreeableness, is by nature an interpersonal factor. This factor simultaneously distances the individual from himself/herself and brings him/her near to the others. Trust, altruism, and compliance are three main components of agreeableness in the 5-factor model. The amount, intensity, arrangement, and combination of trust, altruism, and compliance in the form of one main personality trait (agreeableness) prepare the individual for choosing team sports. There's a possibility that sociotropy by activating compatibility motive, and autonomy by activating achievement striving motive affect the individual's direction taking toward the individual and team sports.

The result of the study revealed that the team sport athletes are more sociotropic than the individual sport athletes and in opposition individual sport athletes are more autonomous than the team sport athletes. These results which corresponded to the theoretical basics and the findings associated with the two factors of sociotropy and autonomy, are explained according to the following possibilities: sociotropy and autonomy are two determinant personality concepts, and affect the individual's selection of sport major beforehand. Based on this, when sociotropy characteristic is dominant, the individual is attracted to team sports and when autonomy characteristic is dominant the individual is led to individual sports. The direction Taking toward sociotropy is enforced by the mechanisms of positive interactions with others, preservation and endurance of social relationships, and for autonomy by the mechanisms of distancing from others and independence striving.

The outcomes of this study can be useful in several levels for sport psychology: in practical level the in-time recognition of personality characteristics for decision making of counsellors, sport trainers and volunteers in relation to "investment" and "sport major selection" is very effectual. Based on these findings, producing interference programs in order to make necessary changes in the effective features on sport readiness is another practical outcome of this study. In theoretical level, the findings of the present study pose new questions and hypotheses as a suggestion for performing further studies: are the conditions of personality traits in diverse individual sports the same or different? What is the outcome of the comparison of these traits' effects on the sport success in different individual sports? What is the outcome of the comparison of these traits' effects on sport behaviour in different team

sports? What is the role of moderating variables, e.g. achievement striving and affiliation motives, in the effect of these traits on sport behaviours?

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