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## CONNECTION BETWEEN PERSONALITY TYPE AND SPORTS

Urska Dobersek and Carl Bartling

McNeese State University

[cbartlin@mcneese.edu](mailto:cbartlin@mcneese.edu)

### ABSTRACT

*The purpose of this research was to find out if there is any relationship between personality type and sport preference; why certain people choose a particular sport, why some people prefer a team sport, and others prefer an individual sport. In this research, athletes from four different sports (three individual and one team sport) and non-athletes took part in the study. The primary interest was correlations between measures of personality and different sport involvements within sport participation. One focus of interest was to ascertain what personality is the best for a particular sport, enabling the athletes to find more success with the least effort. Results from this study showed that athletes in team sports are more neurotic than athletes who participate in an individual sport and who tend to be more stable. Considering that there were more participants from an individual sport than team sports, results may be skewed a bit due to the lack of proportionality.*

### INTRODUCTION

This research attempted to determine if there is a relationship between types of personalities and sports. Athletes from different sports and non-athletes played a part in this particular study. The primary interest of the study was to examine their personalities and make a comparison. Based on those results, research showed some of the differences among their personalities, which are presented in the following pages.

It seems reasonable to propose the idea that people will perform more to their potential if they understand themselves better and what drives their motivation. The authors of this study expected to find support for this basic assumption.

Most people do not know what they are capable of achieving. The reason is that they do not know themselves well enough. To know who we are and what we are able to do is especially important in sports. If a person knows more of his or her potentials and what they are able to accomplish, there will be a much greater chance for that person to find success. Therefore, more research should be done in this area in order to be able to help athletes and people in general to decide which sport would be best for them. This is especially relevant for young people, because they are trying to decide which sport they might play and they might even have an inspiration to turn professional later in life. That is why we think this research would be more useful for young children, than for adults. On the other hand, this research is supportive to people at any age in choosing a sport that they will enjoy and find success in. People who are introverted might be prone to an individual sport and a sport where there is no personal contact. By the same token, participants who are more extroverted might choose a team sport and a sport where there is body contact and more aggressiveness.

"Team sports, as compared to one-on-one and individual sports, require close cooperation within the team, and a willingness of the individual player to place himself in a subordinate position" (de Man & Blais, 1982, p.12). Participants who involve themselves in an individual sport will be more egoistic. Macoby and Jacklin (1974) suggested that there are qualitative differences between male and female participants. Females have a tendency to rate themselves higher in social competence, while males more often see themselves as strong, powerful, dominant, prevailing, and muscular. "Therefore, if we assume that each sex has high level of self-respect in areas in more central ego involvement, it is expected that a relatively high level of self-esteem would be found among women involved in team sports and among males involved in individual sports" (de Man & Blais, 1982, p. 11). We can conclude that female sports participants with high social competence feel good about themselves, despite the fact that the same ability is matched with the necessity for team participation. Research shows that female sports participants who are reserved in their social capacities suffer in self-esteem and are more likely to choose sports of a less social nature. Male sports participants with high self-esteem strive for individual attention and are prone to select individual sports. On the other side, male sports participants who view themselves possessing fewer characteristics that form the basis for high self-regard are more open to, and in need of, the social participation intrinsic in team sports (de Man & Blais, 1982).

Extroverts show higher memory performance than introverts and introverts are more competent in forming imagery than are extroverts according to Turner, Kohl, and Morris (1982). This is based on Jung's (1921; cited by Turner et al., 1982) faith that people who are more introvert oriented are learning by attending to internal images, whereas extroverts rely on objective situations. Therefore, introverts have a tendency to engage more in individual sports than team sports and vice versa.

In addition, we also investigated gender in relation to how people choose a particular sport. Gender is a significant factor for people in deciding which sport they will choose. In the past, society often discriminated against girls and women if they chose a more aggressive sport, such as boxing or motorbike racing. However, today people have different points of view and they do not discriminate as much between genders as they did in years past. Another factor that we have to take into consideration is culture and different periods of time (Hartmann-Tews & Pfister, 2003). Female athletes, in comparison to male athletes, in general, choose less

aggressive sports. According to Freud (2000; cited by Brannon, 2002), men develop a greater sense for social needs and values than women do; therefore, we can conclude that more men choose team sports, while more women choose individual sports. Macoby and Jacklin (1974) stated that women are more likely than men to admit and express feelings of fear, nervousness, tenseness, or apprehension. Wark and Witting (1979) pointed out that according to sex-roles, males reported significantly less sport anxiety than females who identified as feminine. "In a follow up, Witting (1980) noted that current unipolar models of sex role identity (Bem, 1974) allow effective prediction for sport anxiety, that is, androgynous individuals" (Duffy, 1962, p. 36). Men and women who perceived themselves as equally masculine and feminine (Bem, 1974) described moderate levels of sport anxiety, whereas feminine men were more anxious about sport participation than feminine women. The reverse effect was seen in individuals identified as masculine. With regards to the physiological underpinnings of stress, evidence has been unclear which sex is more likely to show arousal to fearful or stressful situations (Duffy, 1962).

The current study examined female and male athletes participating in McNeese State University sports teams. We looked at the personalities of athletes and non-athletes. Furthermore, the study applied this behavioral analysis to particular sports that would be the best suited for them. "The investigation of athletes' personality type and its relationship with individual and team performance is innovative," says Christina Bortoni Versari (2008). She said that the results from her investigation were very positive. She also pointed out "athletes can now better understand their preferences and utilize that information to maximize their performance in sport and in their second careers." Findings imply that self-esteem is higher among male athletes compared to female athletes (de Man & Blais, 2004).

Individuals who are classified as highly anxious will perform differently from those who are classified as low in trait anxiety. Sarason (1960) reported that subjects low in anxiety respond to challenging test conditions with increased effort and attention, and increase their performance. On the other hand, subjects high in anxiety respond to such conditions with self-oriented, personalized responses, and perform poorly (Wine, 1971).

## METHOD

### *Overview*

Surveys utilized examination of athletes, non-athletes, gender, extroversion, neuroticism, sensation seeking, calmness, and other variables. The researchers compared findings and interpreted the data gathered among different types of sport, and between athletes and non-athletes.

### *Participants*

Fifty students from McNeese State University participated in this research project. Thirty of them were student-athletes and the other 20 were students who were non-athletes. All participants were 18 years old or older. In addition, athletes ( $M = 21.6$ ) were much younger compared to non-athletes ( $M = 25.8$ ). Most of the non-athletes were Caucasian ( $n = 12$ ), some were African American ( $n = 7$ ), and one was Hispanic. Nearly all participants in the athletic department were Caucasian ( $n = 24$ ), four were Hispanic, and one was African American.

In cases where athletes were participating, permission from the coaches and athletes had to be obtained along with their agreement to cooperate in the project. In this regard, no problems were encountered. Athletes were from four different sports. These sports were tennis ( $n = 7$ ), golf ( $n = 8$ ), volleyball ( $n = 7$ ) and track ( $n = 8$ ). There were three male participants on the track team, and two male participants from a non-athlete pool. However, all the rest of the participants were female ( $n = 45$ ).

Some of the participants were international students from various countries and of different ethnicities. Selection of non-athletes was based on their willingness to participate in this research project. There was a sign up-sheet posted in the psychology department and people who were interested in participating signed up. Participants from a subject pool of students in psychology courses received extra credit.

### *Design*

This study used 2 (athletes, non-athletes) x 2 (gender) x 4 (sport type: golf, tennis, volleyball, track) between groups ex post facto design. There were 10 dependent variables: GPA, extroversion, neuroticism, sensation seeking scale, socialism, organization, calmness, intellectual interest, and egocentrism, which were measured with a variety of instruments.

### *Procedure and Instruments*

The recruiting methods utilized the form of a sign-up sheet posted in the psychology department for non-athletes. A researcher contacted athletes through their respective programs. The researcher met with participants, and explained the purpose of the research along with the materials to be completed (survey and instruments).

The sports included women's tennis, volleyball, golf and track (track also included both male and female athletes). Examination of non-athletes took place in the classroom environment. Athletes filled out the surveys in their respective areas of practice. Both types of participants filled out the same type of surveys. All participants completed a demographic questionnaire that assessed gender, age, college major, sport they participate in (only for athletes) and GPA.

One survey, a psychometric test, called the Eysenck Personality Inventory (Eysenck & Eysenck, 1975) measured the major patterns of behavior in human subjects as well as the main dimensions of personality in the context of emotionality and tough-mindedness. This instrument was the most detailed, with 57 questions to answer. It was the first instrument used because participants in general were more motivated in the beginning and levels of concentration were resultantly higher at that stage.

The second survey, "Global 5" (2008) was based on five proven independent elements. Specifically, it measures extroversions, emotional stability, orderliness, accommodation, and intellect. "Global 5" had twenty-five items to fill out. In order to use this instrument no permission was necessary, as this test is free for individual use and non-profit organizations. However, any commercial use requires licensing. The third survey was the Sensation Seeking

Scale from the Zuckerman-Kuhlman Personality Questionnaire (Zuckerman, 2002), which determined the level of sensation and seeking dispositions. This questionnaire had 19 items to answer and was the briefest of all instruments used in collecting data.

All participants completed written instruments in approximately 20 minutes. Noticeably, the majority of those surveyed were conscientious about answering the surveys in a sincere effort to provide meaningful input.

## RESULTS

To examine the impact of the personality of athletes and non-athletes, gender differences, and differences for type of the sport, the researchers conducted *t*-tests and an ANOVA on the gathered data. In this analysis, there were three independent variables, athletes versus non-athletes, gender, and sport type.

Statistics for these comparisons are in Table 1. We used an ANOVA to make comparisons across the various groups of participants. There were some approaching statistical significance on a neurotic range  $F(4, 46) = 2.08, p < .10$ , partial eta squared = .153. The analysis approached statistical significance for the organizational scale as well,  $F(4, 46) = 2.29, p < .10$ , partial eta squared = .166. In addition, further investigation with *t*-tests indicates a significant difference between Group 1 (Athletes) ( $M = 3.40, SD = .44$ ) which is higher than Group 2 (Non-athletes) ( $M = 3.13, SD = .41$ ),  $t(49) = 2.20, p = .032$  when comparing their GPA. All other variables were not significant and did not approach statistical significance. Additionally, results accumulated with the ANOVA test showed that Group 1 (Athletes) ( $M = 3.40, SD = .44$ ) was significantly higher when compared to Group 2 (non-athletes) ( $M = 3.13, SD = .40796$ ),  $F(1, 49) = 4.85, p = .032$  on the GPA scale.

Paradoxically, an ANOVA indicated that group 2 (non-athletes) ( $M = 26.25, SD = 8.62$ ) scored significantly higher in contrast to group 1 (athletes) ( $M = 20.94, SD = 2.35$ ),  $F(31, 20) = 10.67, p = .002$  when comparing age, which indicated that non-athletes were significantly older than athletic participants. All other dependent variables did not approach statistical significance.

We also examined the possibility of gender differences in relation to the data gathered. Using a *t*-test, men ( $M = 14.76, SD = .53$ ) scored marginally lower on the organization level than women ( $M = 18.80, SD = 2.95$ ),  $t(49) = 1.66, p < .10$ .

The researchers also made a comparison among athletes and different sports. There were no statistically significant differences among individual sports setting alpha at .05. The *t*-Test revealed some scores that approached statistical significance. The participants on the golf team ( $M = 16.00, SD = 3.87$ ) scored marginally higher than participants on the track team ( $M = 11.17, SD = 3.87$ ),  $t(13) = 2.57, p < .10$  on the organization scale. The group of participants on the track team ( $M = 3.57, SD = .39$ ) had a marginally higher GPA than participants on the tennis team ( $M = 3.26, SD = .18$ ),  $t(14) = 1.95, p < .10$ . Another comparison between two individual sports is also evidence for approaching statistical significance. The golf team ( $M = 18.14, SD = 8.75$ ) scored marginally higher on the organization scale than the tennis team ( $M = 11.17, SD = 2.99$ ),  $t(11) = 1.85, p < .10$ .

**Table 1**

*Demographic statistics, GPA, extroversion, neuroticism, sensation seeking (SS), social level, calmness, organization, egocentrism, and non-curiosity from athletes, non-athletes, males, females, and different sport types*

	Athletes	Non-athletes	Sport Type				Gender	
			Tennis	Track	Golf	Volleyball	Male	Female
n	30	20	7	8	8	7	5	45
Age								
<i>M</i>	20.94	26.25	21.71	21.78	21.50	19.11	21.60	23.17
<i>SD</i>	2.35	8.62	2.29	3.68	2.26	1.05	1.14	6.51
GPA								
<i>M</i>	3.40	3.13	3.26	3.57	3.30	3.41	3.36	3.29
<i>SD</i>	.44	.41	.18	.39	.53	.56	.51	.44
Extroversion								
<i>M</i>	10.65	12.05	11.29	11.33	8.08	10.67	13.40	10.96
<i>SD</i>	4.45	2.86	4.82	4.00	5.42	4.39	2.88	3.98
Neuroticism								
<i>M</i>	10.77	12.35	8.86	9.56	9.33	14.44	12.20	11.30
<i>SD</i>	5.27	4.92	5.81	5.08	4.80	4.13	5.26	5.184
SS								
<i>M</i>	36.29	41.90	40.43	37.90	42.83	27.11	45.00	37.78
<i>SD</i>	22.50	20.37	23.34	22.90	25.58	20.29	24.65	21.493
Social level								
<i>M</i>	18.42	17.70	17.14	17.90	19.00	19.56	15.80	18.39
<i>SD</i>	6.91	3.89	8.67	7.06	7.56	5.81	7.76	5.690
Calmness								
<i>M</i>	17.68	18.20	17.14	17.11	16.00	19.78	15.80	18.11
<i>SD</i>	6.01	4.83	6.54	5.42	4.29	7.41	7.16	5.38
Organized								
<i>M</i>	14.61	16.00	18.14	16.00	11.17	12.78	18.80	14.76
<i>SD</i>	5.63	4.65	8.75	3.87	2.99	3.90	2.95	5.32
Egocentric								
<i>M</i>	21.26	19.55	22.71	22.00	18.00	21.56	22.80	20.35
<i>SD</i>	4.84	3.91	6.42	4.66	5.33	2.60	3.19	4.62
Non-curious								
<i>M</i>	20.42	21.30	19.29	20.11	21.50	20.90	18.20	21.04
<i>SD</i>	4.87	2.96	8.65	3.55	4.18	2.62	2.77	4.27

There were some significant differences when comparing team sports with individual sports. Participants from the volleyball team ( $M = 14.44$ ,  $SD = 4.13$ ) scored significantly higher than participants from the golf team on neuroticism ( $M = 9.33$ ,  $SD = 4.80$ ),  $t(13) = 2.21$ ,  $p = .046$ . In addition, there was also a notable difference between the ages of those two groups. The golf team members ( $M = 21.50$ ,  $SD = 2.26$ ) were older than volleyball players ( $M = 19.11$ ,  $SD = 1.05$ ),  $t(13) = -2.79$ .

The volleyball team ( $M = 14.44$ ,  $SD = 4.13$ ) achieved significantly higher scores than the track team ( $M = 9.56$ ,  $SD = 5.08$ ),  $t(16) = 2.242$ ,  $p = .040$  on neuroticism. In addition, there were some age differences as well. Noticeably the track team members ( $M = 21.78$ ,  $SD = 2.68$ ) were significantly older than members of the volleyball team ( $M = 19.11$ ,  $SD = 1.054$ ),  $t(16) = -2.78$ . Furthermore, participants on the volleyball team ( $M = 16.00$ ,  $SD = 3.87$ ) approached

statistical significance in scoring higher than the track team ( $M = 12.78$ ,  $SD = 3.90$ ) on the organization scale.

Participants on the tennis team ( $M = 8.86$ ,  $SD = 5.81$ ) scored lower on neuroticism than participants on the volleyball team ( $M = 14.44$ ,  $SD = 4.13$ ),  $t(14) = -2.25$ ,  $p = .041$ . Conversely, members of the tennis team ( $M = 21.71$ ,  $SD = 2.29$ ) were significantly older than members of the volleyball team ( $M = 19.11$ ,  $SD = 1.05$ ),  $t(14) = 3.04$ ,  $p = .009$ .

## DISCUSSION

The pragmatic focus of this investigation was to evaluate the appropriateness and connection between an athlete's chosen sport and his or her personality. As supporting data, non-athletes took a survey in order to provide further insight pertaining to personality in relation to sport. The endeavor of this research was to find how personality lends itself best to a particular sport. This research included only four sports with only one being a team sport. More conclusive results might have been attained with the inclusion of more sports and survey participants. Time constraints and logistics were limiting factors to the research.

Previous researchers have concluded that "team sports, as compared to one-on-one and individual sports, require close cooperation within the team, and a willingness of the individual player to place himself in a subordinate position" (de Man & Blais, 1982). In contrast, this research indicated that athletes who were engaged in a team sport are more egocentric or egoistic as compared to the athletes who were participating in an individual sport. As mentioned, there might not have been enough team sport participants to support results found in the past studies.

This research also indicates that women choose more individual sports than team sports. Indeed, participants that took part in this research were mostly women; therefore, conclusions might have some degree of inaccuracy. Implications from the results are that athletes in a team sport are more neurotic than athletes enrolled in an individual sport. This might suggest that athletes participating in an individual sport need to be more mentally stable. They do not have the luxury of a team "support system." Consequently the individual is more stable, self-reliant and secure.

Additionally, this research indicates that sports may stimulate mental acuity. Athletes surveyed had a higher GPA than non-athletes. This might seem contradictory to some, who might have the opinion that the time demands imposed by the athlete's sport would prevent adequate time for devotion to academics. The higher GPAs might be the result of the athletes having developed a higher level of organization and time management skills. Discipline learned from sports, combined with innate competitiveness, would easily carry over from playing the sport to the classroom.

It was also interesting that there were no significant differences across the individual sports for the dependent variables that we measured. For future investigation, more men will be included in the participant selection in order to make the ratio of men to women more equal. In addition, a greater variety of athletes from both team and individual sports would be included. Ideally, there would be interviews with athletes to obtain more data about their personalities.

Observing practices, games or matches would be valuable in further understanding aspects of the personality differences among the athletes.

## REFERENCES

- Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting & Clinical Psychology, 42*, 385-389.
- Brannon, L. (2002). *Gender: Psychological perspectives* (3<sup>rd</sup> ed.). Boston, MA: Allyn & Bacon.
- Cozby, P. C. (2001). *Methods in behavioral research* (7<sup>th</sup> ed.). California: Mayfield Publishing Company.
- de Man, A. F., & Blais, G. (1982). Relationship between preference for a type of sport and two aspects of personality: social alienation and self-esteem; *Perceptual and Motor Skills, 54*(1), 11-14.
- Duffy, E. (1962). *Activation and behavior*. Oxford: Wiley.
- Eysenck, H. J., & Eysenck, S. B.G. (1975). *Manual of the Eysenck Personality Questionnaire (Adult and Junior)*. London, UK: Hodder & Stoughton.
- Feist, J., & Feist, G. (2002). *Theories of personality* (5th ed.). Boston: McGraw-Hill.
- Gackenbach, J. (1982). Collegiate swimmers: Sex difference in self-reports and indices of psychological stress. *Perceptual and Motor Skills, 55*, 555-558.
- Global 5 (2008). *Global 5-SLOAN Multidimensional Typing System*. Retrieved February 1, 2008 from: <http://similar minds.com/sloan.html>.
- Hartmann-Tews, I., & Pfister, G. (2003). *Sport and women: Social issues in international perspective*. London: Routledge/ISCPES.
- Macoby, E. E., & Jacklin, C. N. (1974). *The psychology of sex differences*. Stanford, CA: Stanford University Press.
- Niednagel, J. P. (1992). *Your key to sports success*. California: Laguna Press.
- Sarason, I. G. (1960). Empirical findings and theoretical problems in the use of anxiety scales. *Psychological Bulletin, 57*, 403-415.
- Turner, P. E., Kohl, M. R., & Morris, L. W. (1982). Individual difference in skilled performance following imagery of bilateral skill. *Perceptual and Motor Skills, 55*(3, Pt. 1), 771-780.
- Versari, C. B. (2008). Athletes and personality type. *Self help Magazine*. Retrieved on May 23, 2008 from: <http://www.selfhelpmagazine.com/articles/sports/pers.html>.
- Wark, K. A., & Wittig, A. F. (1979). Sex roles and sport competition anxiety. *Journal of Sport Psychology, 1*(3), 248-250.
- Weinberg, R. S., & Gauld, D. (2003). *Foundations of sport and exercise psychology* (3<sup>rd</sup> ed.). Champaign, IL: Human Kinetics.
- Wine, J. (1971). Test anxiety and direction of attention. *Psychological Bulletin, 76*, 92-104.
- Zuckerman, M. (2002). Zuckerman-Kuhlman Personality Questionnaire (ZKPQ): An alternative five-factorial model. In B. de Raad and M. Perugini (Eds.), *Big Five assessment* (pp. 377-396). Gottingen: Hogrefe and Huber Publishers.