

Original Article

Are there gender differences in trait anger and anger expression style in Turkish combat athletes?

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Abstract:

The aim of this study was to examine gender differences in the trait anger and anger expression styles of Turkish athletes engaging in karate, judo, or taekwondo. The sample comprised 507 combat athletes (214 female) from seven regions and 30 different cities in Turkey. Data on age, sports experience, height, weight, educational level, number of training sessions per week, and total hours of training per week were obtained using a personal information form created by the researcher and were analyzed using descriptive statistics. Trait anger and anger expression styles were assessed using the Turkish version of Spielberger's State-Trait Anger Scale (STAS), adapted for the Turkish context by Özer (1994). Men were significantly taller and heavier than women ($p < 0.001$). No differences were found for other descriptive statistics. Scores for the trait anger, anger in, anger out, and anger control factors for men and women did not significantly differ ($p < 0.05$). The absence of gender differences may be due to the fact that the athletes who participated in this study have similar age, educational level, sports-related experience, status (experience playing at national level), number of training sessions per week and total hours of training per week.

Key words: combat sports, gender differences, trait anger, anger expression style, Turkish athletes.

Introduction

Personality has been studied for over 2,500 years, even though there is no specific definition of it. The biggest advances in this field were made after the 1950s when the traits approach, which tried to explain personality depending on individual differences, started to gain importance (Tatar,2009).

Personality is formed by an interaction between innate characteristics and environmental factors. Sport is also one of those aforementioned environmental factors. Curneya et al.(1999) tried to explain the effects of exercising on personality with the five-factor model. They found that participants who exercise regularly have lower neuroticism and psychoticism scores, as well as higher extraversion scores than participants who do not exercise regularly (Curneya,Bobick&Schinkle,1999).

Arai and Hisamichi (1998) tried to explain the effects of exercise participation on personality with the three-factor model. They found that individuals who exercise regularly have lower neuroticism and psychoticism scores than the ones who do not (Ingledew, Markland&Sheppard,20004)

Emotions like fear, anger, excitement, and anxiety also affect athletic performance (Woodcock, Cumming, Duda & Sharp, 2012). For example, some coaches argue that anger can improve performance by increasing the adrenalin and energy levels (Brunelle, Janelle&Tennant, 1999). Junge et al.(2000) pointed out that athletes who cannot control their anger levels can hurt themselves or people around them by displaying unfair play during games (Junge,Dvorak,Rösch,Graf,Chomiak&Peterson,2000).

In fact, anger is a natural emotional reaction, but the way it is expressed has great importance. People who have weak anger control or who express anger outward might face problems with other people in their daily lives. Additionally, they are more prone to cardiovascular, gastrointestinal, and psychiatric diseases. Expression of anger can be classified as anger-in, anger-out, or anger control (Albayrak&Kutlu,2009).

Anger-in is an adaptation mechanism developed against anger-related factors by suppressing anger (Brunelle,Janelle&Tennant,1999; Albayrak&Kutlu,2009). Anger-out is the reflection of the anger through physically or orally aggressive behaviour towards other people or objects (Brunelle,Janelle&Tennant,1999; Albayrak&Kutlu,2009). Anger control refers to the expression of anger in an appropriate and positive manner (Kaya&Solmaz,2009)

Studies on the relationship between anger expression style and gender in Turkish university and high school students showed gender differences in trait anger (Albayrak&Kutlu,2009).However, no study has examined gender differences in trait anger in athletes, especially those engaging in combat sports.

In continuation of the above point of view, the current study focuses on assessing the gender differences among Turkish athletes in trait anger and anger expression style in taekwondo, karate, and judo.

Method

The current study is a descriptive study. The sample consisted of 507 athletes specializing in taekwondo, judo, and karate. These athletes were from seven regions and 30 different cities in Turkey (Turkey has 81 cities over seven geographical regions). Basic random sampling was used. Inclusion criteria were the possession of at least two years of experience of the related sport and being 14 years old or above.

A questionnaire that consisted of a personal information form and the trait anger and anger expressive style scale were mailed to those coaches who agreed to support the study. They were also informed that if possible, these forms and scales should be answered at settings where the trainings were held. The completed questionnaires were mailed back to the researcher. Although 582 questionnaires were returned, only 507 were used for data analysis as 75 had been filled incorrectly.

Participants

The average age of female athletes was 18 (range: 15–22) years, whereas it was 17 (range: 16–21) years for male athletes. Further, 36% of the female and 20% of the male athletes were national-level athletes. Female athletes' mean height and weight were 165 (160–170) cm and 54 (49–63) kg, respectively. Male athletes' mean height and weight were 174 (168–180) cm and 65 (56–76) kg respectively. In addition, 53.8% of the female and 61.3% of the male athletes were high school students, while 38.7% and 31.5% respectively were university students. The mean number of years of sports experience was 7 (4–11) years for female and 6 (4–10) years, for male athletes.

Procedures

Personal Information Form

It was prepared by the researcher and included questions about the type of sport played, place of license, gender, height, weight, category, experience playing at national level, number of training sessions per week, and total training time.

Trait Anger and Anger Expressive Style Scale:

The original scale developed by Spielberger (1983) is called the State-Trait Anger Scale (STAS). It was adapted to the Turkish context by Özer (1994), except for the state anger subscale. The adapted version was named the Trait Anger and Anger Expressive Style Scale. It has 34 questions that are answered using a 4-point Likert scale (1 = none, 2 = a little, 3 = some, and 4 = completely) (Albayrak&Kutlu,2009).It also has two subscales: trait anger and anger style (Kaya&Solmaz,2009)

The first 10 questions in the scale concern anger expression. Questions 13, 15, 16, 20, 23, 26, 27, and 31 are about anger-in. Questions 12, 17, 19, 22, 24, 29, 32, and 33 concern anger-out. Questions 11, 14, 18, 21, 25, 28, 30, and 34 are about anger control. The Cronbach's alpha coefficients for the Turkish version of the scale have been reported to be .84 for anger control, .78 for anger-out, and .62 for anger-in (Albayrak&Kutlu,2009).

Ethics Clearance

This study was approved by the Trakya University Ethical Committee (17 October 2012; Decision No.: 21/09).

Statistics

Normality of the quantitative data was checked using the Kolmogorov–Smirnov test. Since all data did not show normality, Mann–Whitney U tests were used for gender-based comparisons for non-parametric data, for which descriptive statistics are shown as medians (25–75 percentiles). Chi-square tests were used for gender-based comparisons of parametric quantitative data. The significance threshold was set at .05.

Results

Male athletes were significantly taller and heavier than female athletes ($p < 0.005$) (Table 1). Independent variables like age, educational level, status (experience playing at national level), sports experience, number of training sessions per week, and total training time per week, which were thought to affect the trait anger and anger levels, did not significantly differ between male and female athletes (Table 1 and Table 2). Their mean scores for trait anger, anger-in, anger-out, and anger control did not significantly differ ($p < 0.05$) (Table 3).

Table 1. Descriptive Statistics of Male and Female Athletes.

	Female (n = 214)	Male (n = 293)	p
Age (y)	18 (15–22)	17 (16–21)	0.514
Height (cm)	165 (160–170)	174 (168–180)	<0.001*
Body Mass (kg)	54 (49–63)	65 (56–76)	<0.001*
Sports Experience (y)	7 (4–11)	6 (4–10)	0.230
Number of Athletes Competing at National Level	77	85	0.096
Number of Training Sessions Per Week (d/wk)	5 (4–6)	5 (4–6)	0.447
Weekly Total Training Time (h/wk)	8 (8–14)	8 (8–14)	0.796

* p < 0.05

A significant reduction ($p < .01$) in HR was recorded at 8, 10 and 12 km·h⁻¹. In addition, VO₂ differ significantly after beach volleyball period, with a decrease in 8 ($p < .05$) 10 ($p < .01$) and 12 km·h⁻¹ ($p < .001$) in both absolute (l·min⁻¹) and relative (ml·kg⁻¹·min⁻¹) values, showing an improvement of RE. Other parameters of RE such as RER decreased significantly at the speeds of 10 ($p < .05$) and 12 km·h⁻¹ ($p < .01$), whereas VE recorded a significant difference in 12 km·h⁻¹ ($p < .001$) (table2). Moreover, the results indicate a significant increase in a VO_{2max} ($p < .01$) in both absolute (l·min⁻¹) and relative (ml·kg⁻¹·min⁻¹) values (fig1, fig2).

Table 2. Educational Level of Athletes.

Educational Level	Female (n = 214)	Male (n = 293)	p
Primary School	16	20	0.231
High School	114	179	
University	82	93	

Table 3. Comparison of Male and Female Athletes' Scores for Trait Anger and Anger Expression Styles

	Female (n = 214)	Male (n = 293)	p
Trait Anger	22 (17–27)	22 (19–26)	0.226
Anger In	16 (13–19)	16 (13–18)	0.353
Anger Out	16 (13–20)	16 (12–19)	0.239
Anger Control	21 (18–24)	21 (17–24)	0.480

Discussion

Anger and aggression are generally understood to be the same for athletes as well non-athletes. Nevertheless, these two terms, though closely related, are conceptually different. Therefore, trait anger and anger expression style were investigated as independent of aggression or aggressiveness.

Campbell (2006) found significant gender differences in anger expression style but not in anger experience, anger intensity, or anger duration. Moreover, anger is expressed as anger in amongst women and anger out amongst men (Campbell, 2006).

Milovchevich, Howells, Drew, and Day showed that Australian men have higher trait anger scores than Australian women (Milovchevich, Howells, Drew & Day, 2001). Another important result from this study is that men scored higher on anger-out and that women scored higher on anger control.

Armstead and Clark found no difference between adolescent Spanish girls and boys in regard to anger expression style (Armstead,Clark,2002). On the other hand, Thomas and Smith (2004) showed that American girls tend to direct their anger inward, whereas American boys tended to direct their anger outward (Thomas,Smith,2004)

Soysal, Can and Kılıç found that female university students have higher trait anger scores than male university students and that the former tended to direct their anger inward. They also found no gender difference in trait anger and anger expression style (Soysal,Can&Kılıç,2009).

Yöndem and Bıçak (2008) noted that women and men have similar anger control styles but men have higher trait anger, anger-in and anger-out scores than women Yöndem and Bıçak also argued that men and women have significant differences in anger levels and anger styles (Yöndem&Bıçak,2008).

Albayrak and Kutlu (2009) found no difference between the anger control scores of adolescent male and female high school students. However, they also found that male students have higher trait anger and anger-in scores than female students (Albayrak&Kutlu,2009).

All of the above studies were related to the trait anger and anger expression style of women and men aged between 13 and 45 years. Although results seem contradictory, these might conclude that there are differences, especially in the anger expression style of men and women.

In a study done with volleyball players, Esfahani and Soflu found that male volleyball players have higher trait anger scores than females. In addition, they also noted that female volleyball players have a higher tendency to express anger than males (Esfahani&Soflu,2010).

Mowlaie, Besharat, Pourbohloul, and Azizi (2011) found that females from different sports in Iran (aged 18 to 25 years) have a trait anger score of 11.69 ± 3.84 , anger-in score of 12.56 ± 4.23 , anger-out score of 12.24 ± 3.73 , 'anger in control' score of 18.38 ± 3.42 , and 'anger out control' score of 19.12 ± 3.52 . Iranian professional football players (aged 18 to 33 years) have a trait anger score of 12.23 ± 3.41 , anger-in score of 13.15 ± 3.87 , anger-out score of 12.85 ± 3.37 , 'anger in control' score of 17.20 ± 3.18 , and 'anger out control' score of 18.55 ± 3.17 (Mowlaie, Besharat, Pourbohloul &Azizi,2011)

In a study conducted by Ruiz and Hanin (2011) on 20 highly skilled Spanish karate athletes (14 males and 6 females) who possessed an experience of 17 years in the sport, a trait anger score of 19.30 ± 6.01 , an anger-in score of 14.70 ± 4.16 , and an anger-out score of 18.65 ± 4.55 were found (Ruiz & Hanin,2011)

Ahmadi, Besharat, Azizi, and Larijani (2011) found the athletes in contact sports (e.g. wrestling, taekwondo, basketball, and football) had mean trait anger scores of 14.07 ± 3.73 , anger-in scores of 12.70 ± 3.92 , anger-out scores of 17.36 ± 3.59 , anger-control-in scores of 16.57 ± 3.34 , and anger -control-out scores of 17.36 ± 3.59 (Ahmadi, Besharat, Azizi &Larijani,2011).

Birinci, Sivrikaya and Erhan (2012) found that male athletes who compete in team sports (e.g. football, basketball, volleyball, and handball) have mean trait anger scores of 21.36 ± 5.22 , anger-in scores of 16.29 ± 5.28 , and anger-out scores of 22.90 ± 4.81 (Birinci, Sivrikaya & Erhan,2012)

The results from Ruiz and Hanin (2011) and Mowlaie et al (2011) show that both male and female Turkish athletes have higher trait anger, anger-in, anger-out, and anger control scores than Iranian and Italian athletes.

The mean scores for trait anger, anger-in, and anger-out among Turkish male combat athletes in the current study are similar to those obtained by Birinci, Sivrikaya and Erhan (2012).

The basic finding of the present study is that there are no gender differences among Turkish combat athletes in regard to the trait anger and anger expression style. This finding differs from those of Esfahani and Soflu (2010) and Mowlaie et al. (2011) This difference may have arisen because the athletes in the present study had similar amounts of sports experience, status (experience playing at national level), educational level, number of training sessions per week, and total training time per week.

Robazza and Bortoli's (2007) findings also support the present conclusion. They found that rugby players who have high-level sports experience are more successful at controlling their anger than the ones who have lesser experience (Robazza &Bortoli,2007).

Conclusions

This study concludes that there are no gender differences in Turkish combat athletes in regard to trait anger and anger expression style. This result might be due to the fact that the male and female athletes in this study had similar age, educational level, sports experience, status (experience playing at national level), number of training sessions per week, and total training time per week.

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