

The Relationship between Intelligence and Aggression among Teen Elite Wrestlers

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ABSTRACT: *The purpose of this study is, to investigate the relationship between intelligence and aggression among adolescent elite wrestlers. The present study in terms of method is descriptive- correlation and in terms of purpose is practical. The population of this research is the elite age group of adolescents aged 14 to 17 years old (mean and standard deviation are 15.27 ± 1.33) who were selected as samples using the available sampling method for adolescent wrestling teams of Hamedan clubs. King's intelligence scale and Bass and Perry aggression questionnaire were used. For data analysis, Pearson correlation coefficient and simple regression method were used to measure variables. Results showed a significant negative relationship between intelligence and aggression. The intelligence scores also have a significant effect on aggression. The findings show that the higher the intelligence, the less likely the aggression of the elite wrestlers in different competitions.*

Keywords: Intelligence, Aggression, Elite Wrestlers

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1. Introduction

Human aggression means any behavior that is directly done an individual to harm someone else. In order to control these behaviors, the perpetrator must believe that his attitude towards the purpose of harming another has the consequence of provoking social behavior (Sedaghat et al, 2014). Aggression may occur in a variety of ways. The verbal and physical form of it representing instrumental or behavioral elements, anger, revelation and hostility reflect the cognitive aspect of aggression (Bass and Perry, 1992). In the world of sports, physical, tactical, professional skills are not only a guarantee of success; many athletes show their best performances, but during the competition and confrontation between opponents, the media, audiences, and emotional stressful situations. (Anger, fear, hope, disappointment, anxiety, feelings of humiliation, pride, sadness, happiness, etc., and the expression of all emotional and psychological states of affection and the accompanying physical signs (Bernstein et al., 1997). The wrestling and professional sport, which can be a scene for transforming organized social struggles into nonviolent struggles, will endure frequent and violent conflicts (Vosoughi and Khosrownejad, 2009). Violent acts and aggressive behaviors have long been commonplace in human societies (Ross, 1997). Among the

stages of human development from childhood to old age, the most aggressive behavior is seen in adolescence (Walker and Roberts 2001). Aggression is the commission of any verbal and non-verbal behavior that is conducted directly or indirectly for the purpose of physical and mental harassment of others. According to this definition, violence, which its statistics is alarming in the world, is only part of the aggression aimed at causing physical harm to others (Moher, 2003). Aggressive teens cannot properly predict the consequences of their behavior, observe social aggression in many hostile signs, have no proper understanding of their aggressiveness, use little verbal solutions to prove themselves in social affairs, and use more aggressive solutions (Graham, 2002). Today in the world of sport, physical and tactical abilities and specialized skills are not only a guarantee of success. Many athletes do their best in exercises. But when it comes to competition, competition and confrontation with rivals, the media and spectators, and other stressful situations, they experience emotional reactions; there are various emotions, including anger, fear, hope, disappointment, concern, pride, and sadness that express emotional and psychological states of affection and Negative and physical signs are used (Bernstein et al.1997). From the perspective of Amram and Dyer (2007), Intelligence has combined the structure of spirituality and intelligence as a new structure. But Van and Casuler (2004) argue that intelligence is not a simple combination of intelligence and spirituality, but intelligence is obtained from combining abilities and interests, personality traits, specific cognitive abilities and specific neurological processes in neurological processes. intelligence represents a set of abilities and capacities that their application enhances adaptability and thus improves the mental health of individuals (King, 2008). According to Vaughan (2002), intelligence integrates inner and life with external life and work environment, and it can be said that intelligence is a mechanism by which the quality of life of individuals would be improved. The researchers concluded that controlling and adjusting emotions through emotional intelligence is very important in athletes and can have a positive effect on psychological variables involved with emotions and improve the performance of athletes (Maleki et al., 2012). The result of the Vagan study is consistent with the studies of King (2008) and King and Desico (2009). In these studies, intelligence showed a negative relationship with depression, aggression, hostility, anxiety and self-affirmation. Also, intelligence had positive relationship with mood attributes, social sensitivity, life satisfaction, energy, and activity (King, 2008; King and Desico, 2009). Betrozie and his colleagues in their research concluded that their intelligence and its subscales had a negative and significant relationship with aggression and its subscales, so that the higher the intelligence, the less likely the athlete's aggression in the sports fields would be. Accordingly, it can be admitted that there is a direct relationship between emotional intelligence and intelligence. Research has shown that there is a high correlation between intelligence and emotional intelligence and personal competencies and mental health. intelligence contributes to the growth and enhancement of emotional intelligence and emotional intelligence also helps in achieving a person's intelligence. A review of research shows that in recent years attention to intelligence has grown as one of the most important and effective structures in mental health and compatibility. Various factors such as individual, family and social factors affect people's aggression. intelligence is one of the factors affecting personality on aggression. Since the relationship between intelligence and research aggression has not been found, the present study attempts to investigate the relationship between intelligence and aggression among adolescent elite wrestlers in Hamadan province. Accordingly, in this research, we seek to answer the question of how much relative share of each area of intelligence is on aggression and its domains.

2. Methods

The present study is descriptive and correlation in terms of its purpose. The community of this research was male-dominated elite boys of the age group of adolescents ranging in age from 14 to 17 years old. They were selected by sampling method for Hamadan youth clubs in Hamedan province. Following the presentation of the letter of intent to provide the selected teams, coordination with the team's instructors was carried out to obtain the license to attend training sessions and to know the time and place of the exercises and the number of female wrestlers. At the training site, the team also conducted the necessary in-game training with the required descriptions of how to complete the questionnaires. The total number of elite wrestlers was 50, willing to cooperate

3. Tools

King's Intelligence Scale (2008): An Autoregressive Scale, the main form of which is 83 items. In the present study, a short form of 24 materials was used. This scale consists of four dimensions entitled "Existential Critical Thinking", "Production of Personal Meaning", "Consciousness" and "Development of Consciousness", which completely disagrees with any material on a 5-point scale from the totally agreeable (4) totally opposite (0) Score is given. 1) "Existential Critical Thinking" on topics such as life, death, afterlife, reality, justice, and other existential or extravagant subjects. 2) The "ability to produce personal meaning" and the personal goals of mental and physical experiences, in other words, life based on the goals created.

3) “Consciousness” is the ability to identify transcendental dimensions in oneself, others, and the material world. 4) “Development of consciousness” is the ability to enter into states or beyond consciousness. The overall score is obtained. The coefficient of reliability of the whole test and the subscales based on the coefficient of Cronbach’s alpha coefficient were 0.95, 0.88, 0.87, 0.89, 0.49, respectively (Norzad Qaramalaki, Miransab, Ghojari Bonab and Hashemi, 2011).

In the research of raghibi et al. (2010), the Cronbach’s alpha coefficient of the questionnaire 0.89, and the coefficient of reliability of the Intelligence Questionnaire through rehearsal was calculated in a sample of 70 with an average of two weeks of 67 weeks (Teacher, Competitor, and Salary Management, 2010, Moghimi and Majid, 2011; Agriculture and Yousefy, 2012).

Bass & Perry’s (1992) Questionnaire on Aggression: This questionnaire has 29 questions and quantifies four aspects of aggression (physical, verbal, anger, hostility) and, in general, individual aggression. The cronbach’s alpha coefficient (internal consistency coefficient) for the components of the questionnaire was 0.89 and for the re-test validity, its re-test correlation stability has been reported, 80% after a nine-month period. Validity and reliability of the Persian version of this questionnaire was confirmed by Masoudnia (2007) on athletes and non-athletes, and the Durrani equation coefficient of this scale was reported to be 0.84. Also, in the research of Naghdi (2010), Cronbach’s alpha for the reliability of this instrument was 0.85, and for its structural validity, the internal correlation between the subscales with the total score was calculated to be 0.84 for physical aggression, verbal aggression of 0.88, anger of 86 / 0 and hostility of 0.88. All components of this scale are ranked based on the Likert Five Degree spectrum (very agreeable to very opposite) (Maleki, Mohammadzadeh and Ghavami, 2012, Bass and Perry, 2013).

The results of the research were analyzed using SPSS software version 23. Descriptive statistics (mean, standard deviation, and charts) were used to describe the findings. Also for data analysis, multiple regressions were used simultaneously to predict aggression through intelligence components. To predict aggression through the total intelligence score of simple linear regression, Pearson correlation test was used to determine the relationship between intelligence and aggression.

4. Findings

The mean age of 52 individuals is 15.27 years with a standard deviation of 1.33. Also, the mean age of the wrestlers in the sample group is 4.32 years with a standard deviation of 1.66. In tables 1, the dispersion index includes mean, standard deviation, minimum and maximum score for the research variables.

Also, to determine the relationship between the variables of the research, their correlation was calculated (Table 3).

Variable	SD ±MEAN	Coefficient of variation	Minimum score	maximum score
Critical Existential Thinking	4.33 ± 19.38	0.22	6	28
Production of personal meaning	3.03 ± 14.52	0.21	7	0
Transcendental consciousness	3.38 ± 15.37	0.22	7	23
Extension of consciousness	3.43 ± 12.04	0.29	3	19
Intelligence	10.09 ± 61.31	0.17	37	82
Body Aggression	6.41 ± 15.5	0.41	1	31
Verbal aggression	2.92 ± 10.19	0.29	2	15
Anger	3.97 ± 14	0.28	4	24
Hostility	5.20 ± 15.42	0.34	3	25
Aggression	14.19 ± 55.12	0.26	15	84

Table 1. Descriptive statistics of the research variables

According to the results of table (1), elite male wrestlers of the Hamadan province have had the highest or least tendency in the aggression test with the lowest or the highest coefficient of variation.

Variable	Critical Existential Thinking	Production of personal meaning	Transcendental consciousness	Extension of consciousness	Intelligence	Aggression
Critical Existential Thinking	1					
Production of personal meaning	**0.468	1				
Transcendental consciousness	*0.304	0.148	1			
Extension of consciousness	*0.295	0.185	**0.578	1		
Intelligence	**0.777	**0.621	**0.707	**0.716	1	
Aggression	*0.326	*0.285	**0.500	**0.393	**0.527	1

** Significantly at a level of 0.01%

* Significantly at the level of 0.05%

Table 2. Correlation coefficient of research variables

According to the results of Table (2), it is observed that the highest correlation between the components of intelligence and aggression is the transcendental consciousness component and the least link is the component of the production of personal meaning. In the following, we examine the hypotheses of the research.

First hypothesis of research: Intelligence has an effect on aggressive elite wrestlers.

Predictor variable	The response variable	Correlation coefficient	determination coefficient	F statistic	Beta coefficient	Significance level
Intelligence	Aggression	0.277	0.527	19.202	0.741	0.000
Existential Critical Thinking	Aggression	0.106	0.326	5.938	1.069	0.018
Production of personal meaning	Aggression	0.081	0.285	4.435	1.338	0.040
Transcendental consciousness	Aggression	0.250	0.500	16.654	2.095	0.000
Development of awareness mode	Aggression	0.155	0.393	9.146	3.024	0.004

Table 3. Regression test

Regression analysis of the effect of intelligence on aggression shows that 28% of the changes in aggression are due to intelligence. Also, the predictive variable beta coefficient is 0.741, which results in a meaningful ($p < 0.05$) test, and the null hypothesis is rejected and therefore the main hypothesis of the research is confirmed (Table 3).

First sub-hypothesis: Existential critical thinking influences the aggressiveness of elite wrestlers.

Regression analysis of the effect of existential critical thinking on aggression shows that 11% of the changes in aggression are due to critical thinking existential. Also, the beta variable of the predictive variable is 1.069, which results in a significant level of test ($0.05 > p$). The null hypothesis is rejected, and therefore the first sub-hypothesis of the research is confirmed (Table 3).

Second sub-hypothesis: Production of personal meaning influences the aggression of elite wrestlers.

Regression analysis the effect of generating personal meaning on aggression shows that 8 percent of the change in aggression results from the production of personal meaning. Also, the beta coefficient of the forward variable is 1.338, which results in a significant level ($p < 0.05$) of the test. The null hypothesis is rejected, and therefore the second sub-hypothesis of the research is confirmed (Table 3).

Third sub-hypothesis of research: Transcendental awareness influences the aggressiveness of employees.

Regression analysis of the effect of transcendental consciousness on aggression shows that 25 percent of the changes in aggression are due to transcendental consciousness. Also, the predictive variable beta coefficient is 2.095 which results in a significant level ($p < 0.05$). The null hypothesis is rejected, and therefore the third sub-hypothesis of the research is confirmed (Table 3).

The fourth sub-hypothesis of the research: The development of awareness mode affects the aggression of elite wrestlers.

Regression analysis the effect of awareness development on aggression shows that 16% of the changes in aggression are due to transcendental consciousness. Also, the predictive variable beta coefficient is 3.024, which results in a meaningful test result ($p < 0.05$). The null hypothesis is rejected and therefore the fourth sub-hypothesis of the research is confirmed (Table 3).

In order to better understand the causal relationships and the effect of the dimensions of intelligence on the aggressiveness of elite wrestlers, path analysis has been done using structural equation model. Chart (1) and Table (3) show the results of the path analysis in the structural model of the research model. As we can see in the estimates and also the significant numbers related to path analysis in the main hypothesis of the research (Table 3 and Chart 1), the intelligence structure, which as a variable in the four variables of critical existential thinking ($\alpha = 0.95$ and $\gamma = 14.99$), Production of personal meaning ($\alpha = 0.52$ and $\gamma = 7.95$), transcendental consciousness ($\lambda = 1.10$ and $\gamma = 6.68$), and extension of consciousness ($\alpha = 1.00 = \gamma =$

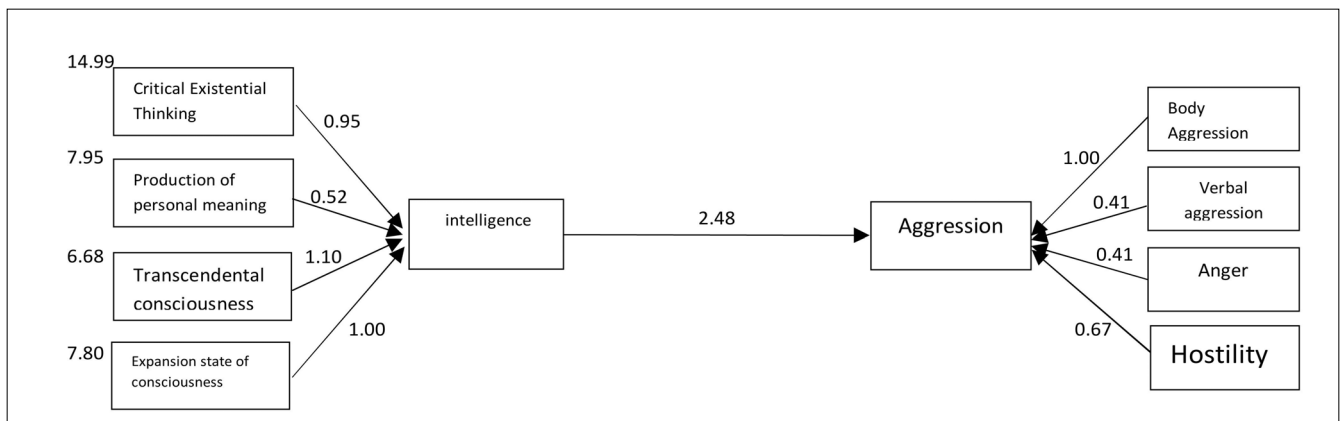


Chart 1. Results of path analysis coefficients

7.80), on aggression ($l = 2.48$) Includes physical aggression ($a = 1.00 = 1.00$ and $g = 17.31$), verbal aggression ($l = 0.41 = g$ and anxiety = $0.41 = g = 11.60$) and hostility ($l = 0.67$ and $g = 16.32$), have had positive and significant impact. In other words, findings suggest that creating a proper type of intelligence can lead to increased aggression among wrestlers. In the event that critical existential thinking is the most important element in intelligence, verbal aggression is the weakest element of aggression of wrestlers.

Table 4 shows the results of the above model which illustrates the suitability of the fitness indicators for the proposed structural model.

Table 3 Findings of Path Analysis and Structural Equation Model

5. Discussion and Conclusion

The findings show that intelligence training reduces aggression among elite wrestlers. In this case, it can be said that; teaching and learning intelligence can help reduce aggressive behaviors. Therefore, the areas of intelligence can predict aggression and can reduce them. Based on the findings, it can be acknowledged that if a person can communicate morally with others and help others in all circumstances, one can see a human morality. Therefore, the strengthening of intelligence, which is actually the same as moral, improves social behavior and respects emotions and observes the rights of others, in other words, improves and strengthens emotional intelligence and subsequently reduces aggression (Hajian et al. 2012: P.505). According to the findings, a reverse relationship can be found between intelligence and aggression. These findings are consistent with the results of King and Desico (2009) and Behroozi et al. (2013). Few studies have examined the relationship between spirituality and aggression. Existing literature shows that there is an inverse relationship between spirituality and hostility (Kevin, 2001, p. 100; Lansac, Clifsuffy, Marlath, Bloom, and Title, 2006). Researchers in sports psychology have also concluded that as the athlete is more capable of understanding, identifying, regulating and expressing emotions, they will have habits of thought that will make them more efficient and show better performance (Lani and Colleagues, 2009). Researchers in their studies entitled "The relationship between intelligence and attachment styles with aggression in adolescents" concluded that there is a negative relationship between intelligence and secure attachment style with aggression (Nourmohammadi et al., 2013). One of the traits that psychologists call intelligence is self-control (empowerment in self-control and self-control) (Immuns, 2000b, p. 3). Denson, Diwal and Finkel (2012) reported in their study, Self-Control and Aggression, that self-control and had an effect on aggression (Denson, Diwal and Finkel, 2012, p. 20). Findings of Denson (2012) are consistent with the results of Wilsonworth (2011) and Abhari (2013) that self-control skills are the main tool for preventing aggression (Wiggersworth, 2011, p. 4; Abhari, 2013). In fact, researches have shown that people who are not self-reliant in their behavior are more likely to have violence and aggression (Castillo, Falun, Baca, Confront and Covalace, 2002, p. 119; Orcat, King L. and King D., 2003, p. 382). In terms of Immunes (2000), intelligence is an adaptive application of intelligence to solve a problem in daily life and the process of achieving the goal. He has initially proposed five components for intelligence, one of which is the ability to use resources to solve problems of life (Imûns, 2000b, quoted by Sohrobi, 2008, p. 16). In general, the results of this research suggest that it is possible to conclude that as elite wrestlers in their lives as God do their work as their criterion and do their work and actions on the basis of knowledge and knowledge, can reduce the negative emotions, including aggression. Accordingly, it is possible to increase the intelligence of the elite wrestlers of the adolescence, and even the ages earlier, to refrain from cultivation, and subsequently to reduce aggression in them, and thus to witness the behaviors that are right and in line with the values of society. As a way to increase the mental fitness of elite athletes in order to improve their performance, they recognize that it is applicable to the major psychological areas of sport that are particularly effective in the preparation of the heroes. It is suggested that a similar study be conducted on group and individual sports enthusiasts, or in other age groups, and the results be compared. It is suggested that in future research, interventional factors such as economic status, religious background, and parental parenting style will be monitored.

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