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Revista de cercetare și intervenție socială

ISSN: 1583-3410 (print), ISSN: 1584-5397 (electronic)

Selected by coverage in Social Sciences Citation Index, ISI databases

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Revista de cercetare și intervenție socială, 2014, vol. 45, pp. 17-30

The online version of this article can be found at:

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Published by:

Expert Projects Publishing House



On behalf of:

„Alexandru Ioan Cuza” University,

Department of Sociology and Social Work

and

Holt Romania Foundation

REVISTA DE CERCETARE SI INTERVENTIE SOCIALA

is indexed by ISI Thomson Reuters - Social Sciences Citation Index

(Sociology and Social Work Domains)



Perceived Characteristics of Aggressiveness in Male Adolescent Athletes and Nonathletes

Romualdas MALINAUSKAS¹, Audrone DUMCIENE², Vilija MALINAUSKIENE³

Abstract

This descriptive study examined perceived characteristics aggressiveness in male adolescent athletes and nonathletes aged 14 to 16. The analysis covered 150 male adolescents practicing various sports and 150 male adolescent nonathletes. Two surveys were used in this study: Assinger's questionnaire for the identification of the attitudes to aggression and the questionnaire developed by Buss and Perry for the evaluation of forms of aggressiveness, i.e. at the analysis of physical aggression, verbal aggression, anger and hostility. Nonathletes had more positive attitudes toward aggression than athletes. Nonathletes were less verbally aggressive than athletes. Non-contact athletes were less verbally aggressive than combat athletes, contact athletes, and nonathletes. Nonathletes were less angry than athletes. Also it turned out that combat athletes were the angriest group. Athletes and nonathletes did not differ significantly on physical aggression and hostility, although a breakdown showed that contact athletes score higher than noncontact athletes on both measures.

Keywords: aggressiveness; attitudes towards aggression; self-reported forms of aggressiveness; sport; adolescents.

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Introduction

Researchers have focused on aggressiveness among adolescents in various environments to include education (Ando, Asakura, Ando, & Simons-Morton, 2007; Frey, Hirschstein, & Guzzo, 2000; Reynolds, Ou, & Topitzes, 2004), mental health treatment settings (Knox, Carey, Kim, & Marciniak, 2004; Margolin, Youga, & Ballou, 2002; Reynolds, Temple, Ou, Robertson, Mersky, *et al.*, 2007), and sport (Abalasei & Cojocariu, 2012; Conroy, Silva, Newcomer, Walker, & Johnson, 2001; Kavussanu, Seal, & Phillips, 2006; Kavussanu, Stamp, Slade, & Ring, 2009). The authors of this study sought to contribute to efforts which identify aggressiveness in male adolescent athletes and nonathletes.

Aggressiveness is a complicated multi-factor issue (Benenson, Carder, & Geib-Cole, 2008). The most frequently singled out causes of this aggressiveness are biological, psychological and social (Eron, 1994; Green, 1998). Studies usually indicated four influences in explaining aggressiveness: biological influences (aggressiveness is genetically influenced); psychological influences – frustration (aggressiveness develops when facing real or imagined obstacles in seeking the objective that has been set); social influences (aggressiveness is learnt when observing the behavior of others); cognitive influences (aggressiveness to naturally received stimuli is explained as a consequence of defects in processing the received information) (Eron, 1994). In the present study aggressiveness is defined as mode of communication and behavior intended to harm another living organism either physically or psychologically or willingness to behave aggressively.

A study by Kinney, Smith, and Donzella (2001) established that gender is related to anger and verbal aggression but the differences in perceived characteristics aggressiveness between male adolescent athletes and nonathletes are often small and inconsistent (Conroy *et al.*, 2001; Kavussanu, Seal, & Phillips, 2006; Kavussanu *et al.*, 2009) and we would like to emphasize previous studies that directly address the relationship between aggressiveness and athletic participation. It is possible to present also other factors that might impact the relationship between athletic participation and aggression, such as self-presentation, positive attitudes toward aggression, and attitudes about masculinity. By the term perceived characteristics of aggressiveness we mean attitudes towards aggression as well as self-reported forms of aggressiveness.

In sports, as one of the social phenomena, aggressiveness is tolerated (Conroy *et al.*, 2001). Male adolescents express physical aggression more frequently than verbal aggression or anger (Ramirez, 2003; Campbell, 2006; Coulomb-Cabagno & Rascle, 2006; Coulomb-Cabagno, Rascle, & Souchon, 2005). The associations between masculinity, aggressiveness and specific sports have been found (Burgess, Edwards, & Skinner, 2003; Robertson, 2003). Masculine identity is actively pursued by boys, and sports, especially those involving strength and aggression,

offer an opportunity to stake a claim to masculine status. Although sport is only one area in which males can stake claim to a masculine identity, sport offers an excellent opportunity for this pursuit (Messner, 1990; Weinstein, Smith, & Wiesenthal, 1995). The studies (Messner, 1990; Weinstein, Smith, & Wiesenthal, 1995) also support the hypothesis that aggression partially stems from athletes' adherence to beliefs about appropriate masculine behavior.

It is believed that in modern, individualized society, perceived aggressiveness is particularly common when one's self-image is threatened (Stucke & Sporer, 2002). An inadequate self-image may be a source of aggressiveness (Stucke & Sporer, 2002). Ando *et al.* (2007) established that participation in organized sporting activities positively affects the adequate self-image and negatively influence the aggressiveness of adolescents. Studies (Ando *et al.*, 2007) have shown that whenever adolescents are taught how to deal with problems, and interact, perceived aggressiveness significantly decrease. However contact sports may attract people who are already aggressive or engaging in contact sports may promote aggression (the selection hypothesis (Cox, 2002)). A study by Rutten *et al.* (2008) concentrating on adolescent football players found out that 21 per cent of aggressive behavior beyond the sporting activity and correspondingly 8 and 14 per cent of anti-social and pro-social behavior in sporting activity may be conditioned by the environment of the sporting activity, behavior of the coaches and the social-moral climate within the team. Organized sporting activity may both positively and negatively influence the perceived aggressiveness of adolescents. According to the data of the investigation by Rutten *et al.* (2007), the aggressiveness of 8 per cent of sporting adolescents was conditioned by their sporting behavior; on the other hand, 7 per cent boosted their pro-social behavior. It has been established that adolescents practicing power sports, such as boxing, wrestling, weightlifting, and oriental martial arts are more aggressive beyond their sporting activities (Endresen & Olweus, 2002; Rutten *et al.*, 2007). It has also been discovered (Kavussanu, Seal, & Phillips, 2006) that senior adolescents are more aggressive; however, with the increase of mastery, the aggressiveness decreases. A study by Iannotti, Kogan, Janssen, and Boyce (2009) demonstrates that physical activity positively correlates with physical aggression. Males participating in contact sports rather than other male express physical and psychological aggression against their partners, injure their partners more frequently and are more inclined to committing crimes (Forbes, Adams-Curtis, Pakalka, White, 2006; Rutten *et al.*, 2008).

Many studies (Ando *et al.*, 2007; Bettina, Piko, Keresztes, & Pluhar, 2006; Connor, 2002; Kinney, *et al.*, 2001; Stucke & Sporer, 2002) indicate that males are more inclined to physical aggression while women are more apt to show verbal aggression. However, representatives of some sports, e.g. wrestling, also tend to show verbal aggression before or while performing their fights. The results of a study by Tamborini, Chory-Assad, Lachlan, Westerman, & Skalski (2008)

demonstrate that wrestlers are denoted by verbal aggression; besides, the primary motives of verbal aggression are amusement and anger.

Self-presentation may play a role in adolescent's aggressiveness (Benenson, Carder, & Geib-Cole, 2008). More aggressive adolescents have a superior status among their peers (Moretti, Holland, & McKay, 2001). Adolescents-athletes aspire to achieve commendable identities with their more publicized reputations as competitive athletes (Martin & Harris, 2006). The social integration and self-presentation motives of adolescents can be an important factor in development of their attitudes towards aggression (Elliott, 1982). That is why it is essential to get deeper insights into the following research questions: Is athletic participation of male adolescents associated with positive attitudes toward aggression? Is athletic participation of male adolescents associated with higher levels of self-reported aggressive behavior (physical or verbal) and self-reported aggressive affect (anger and hostility)? Are any of these relationships moderated by type of sport (level of permissible/required contact)?

The purpose of the present study was to examine perceived characteristics of aggressiveness in male adolescent athletes and nonathletes aged 14 to 16. The integration of perceived characteristics of aggressiveness with self-presentational issues is related to the expressed purpose of the study. Because the findings (Lernieux, McKelvie, & Stout, 2002; Wann, Shelton, Smith, & Walker, 2002) indicate that participation in any sporting activity is associated with higher levels aggressiveness, it was hypothesized that perceived aggressiveness is more characteristic for adolescents athletes than that of adolescents nonathletes.

Method

Sample

After receiving approval from the Ethical Committee of our University, male students of secondary schools and sport schools were randomly chosen for inclusion in the sampling frame. The participants were randomly selected applying a two-stage sampling strategy: first, the school was selected from the list of the schools of district, and then 14-16 year old male students in those schools were invited to participate. Names of male adolescent nonathletes were randomly drawn from official secondary school 7th – 9th grades rosters. Adolescent athletes needed to be members of a sport school-sponsored team. Names of athletes were randomly drawn from official team rosters.

The participants were divided into four groups: Combat Athletes Group – physical contact is necessary (combat sports); Contact Athletes Group – physical contact is tolerated (handball, basketball); No-contact Athletes Group – physical contact is not tolerated (athletics, tennis); adolescents nonathletes. 300 male

adolescents took part in the analysis featuring three groups, each with 50 representatives from sports schools, and Nonathletes Group consisting of 150 adolescents nonathletes.

Groups in male adolescent athletes and nonathletes were as similar on civilized behavior in school or sport school, also on age, and academic achievement variables. The mean age of the participants was 15.09 ± 0.69 years.

Instruments

The research conducted for this study included two surveys:

- *Assinger's Questionnaire* for the identification of the attitudes to aggression (Raigorodskij, 2000).). This instrument consists of 20 items and the range of responses was 3-point scale. Questionnaire has been translated into Lithuanian and adaptation has been performed. Respondents' answers were evaluated by points, where 35 points or less indicate the negative attitude to aggression, 36 to 44 points indicate the neutral attitude, and 45 or more points indicate the positive attitude. The internal consistency of the questionnaire was assessed by Cronbach's alpha coefficient ($\alpha = .74$ (Malinauskas, 2008) and $\alpha = .76$ for the present sample).
- *Buss-Perry Aggression Questionnaire (AQ)*. This instrument consists of 29 items to assess self-reported forms of aggressiveness (Buss & Perry, 1992). The AQ consists of four subscales: hostility (eight items), anger (seven items), verbal aggression (five items) and physical aggression (nine items). Subjects rated their response to each item of the AQ on a 5-point scale that ranged from 1 (*Extremely uncharacteristic of me*) to 5 (*Extremely characteristic of me*). The authors translated the 29 items of the AQ from English to Lithuanian. Lithuanian version of the AQ was independently translated back into English by an English linguist who found no significant difference between his back-translation and the original AQ version. Analyses of the internal consistency of the four *Buss and Perry's Aggression Questionnaire* subscales revealed Cronbach's alpha $\alpha = .79, .63, .71,$ and $.74,$ for the Physical, Verbal, Anger, and Hostility scales, respectively.

Statistical analysis

Kolmogorov-Smirnov test was applied for normality verification. It was established that the Assinger's questionnaire data were from normal distribution. The nonparametric *chi-square test* was used for the statistical analysis of this data. The distribution of the *Buss and Perry's Aggression Questionnaire* data did not significantly differ from the normal distribution. Consequently, *t-test* for independent samples was used for the significance of the difference between the means of groups with the criteria of significance chosen as an alpha error of .05.

The use of multiple *t*-tests with Bonferroni correction for Type 1 error was done and a significance level of .01 was chosen (Bonferroni correction $p < .05 / 4$). Data analysis was performed using the Statistical Package for Social Sciences (SPSS) version 13.

Procedure

Parental consent was obtained before conducting the assessment of students since they were 14-16-year-olds. Adolescent athletes were tested in groups during sport class time. Adolescent nonathletes were tested in groups during class time. Confidentiality was protected because questionnaires were administered to group of students. Participants filled out a consent form, provided demographic information (age, sport field), then completed two questionnaires in determinate order. No names were attached to questionnaires and confidentiality was assured.

Results

The distribution of attitudes towards aggression in male adolescent athletes and nonathletes (descriptive data of *Assinger Questionnaire*) are presented in *Table 1*.

Table 1. *Distribution of attitudes towards aggression in male adolescent athletes and nonathletes (percents and frequencies)*

	Attitudes towards aggression, % (frequency)		
	Negative	Neutral	Positive
Nonathletes*	08 (12)	65 (97)	27 (41)
All athletes	18 (27)	61 (91)	21 (32)

$p < .05$

Differences in the attitudes towards aggression in all athletes and nonathletes were statistically significant ($\chi^2 (2) = 7.07; p < .05$); besides, positive attitudes towards aggression were characteristic for 27% adolescents nonathletes and for 21% adolescents athletes. The distribution of attitudes towards aggression in male adolescents practicing various types of sports and nonathletes (percents and frequencies) are presented in *Table 2*.

Table 2. *Distribution of attitudes towards aggression in male adolescents practicing various types of sports and nonathletes (percents and frequencies)*

	Attitudes towards aggression, % (frequency)		
	Negative	Neutral	Positive
Combat athletes	16 (8)	54 (27)	30 (15)
Contact athletes	16 (8)	60 (30)	24 (12)
Non-contact athletes*	18 (09)	68 (34)	14 (07)
Nonathletes	08 (12)	65 (97)	27 (41)

$p < .05$ – between non-contact athletes and nonathletes

Attention should be paid to the fact that there was no statistically significant difference between combat athletes and adolescents nonathletes attitudes towards aggression ($\chi^2 (2) = 3.18; p > .05$). The attitudes towards aggression of contact athletes did not differ significantly ($\chi^2 (2) = 5.83; p > .05$) from the attitudes of adolescents nonathletes. The attitudes towards aggression of non-contact athletes differed significantly from the attitudes of adolescents nonathletes ($\chi^2 (2) = 6.41; p < .05$). Positive attitudes towards aggression were characteristic for 14% of non-contact athletes and for 27% of nonathletes.

Data of *Buss and Perry Aggression Questionnaire* are presented in *Table 3*.

Table 3. *Comparison of levels of aggression in male adolescent athletes and nonathletes*

	All athletes	Nonathletes	<i>t</i> value
	<i>M</i> ± <i>SD</i>	<i>M</i> ± <i>SD</i>	
Physical Aggression	2.97 ± 0.28	3.03 ± 0.31	-1.76
Verbal Aggression	3.04 ± 0.34	2.96 ± 0.27	2.22*
Anger	3.02 ± 0.35	2.94 ± 0.24	2.31*
Hostility	2.72 ± 0.27	2.77 ± 0.21	-1.79

$p < .05$. *M* – mean; *SD* – standard deviation; *df* = 298.

Differences in physical aggression scale of the Aggression Questionnaire in male adolescent athletes and nonathletes were not observed ($t (298) = -1.76; p > .05$). Male adolescents athletes scored significantly higher than adolescents nonathletes on the verbal aggression scale of the Aggression Questionnaire ($t (298) = 2.22; p < .05$). Mean-score differences between male adolescents athletes and male adolescents nonathletes were significant ($t (298) = 2.31; p < .05$) for the anger factor: anger was more characteristic for male adolescents athletes. Levels of hostility in both groups of participants differed insignificantly ($t (298) = -1.79;$

$p > .05$). The levels of aggression scores in male adolescents practicing various types of sports and adolescents nonathletes are presented in *Table 4*.

Table 4. *Comparison of levels of aggression in male adolescents practicing various types of sports and nonathletes*

	Groups of respondents			
	1 Combat athletes	2 Contact athletes	3 Non-contact athletes	4 Non-athletes
Physical Aggression	2.98 ± 0.21	3.08 ± 0.23 ³	2.85 ± 0.28	3.03 ± 0.28
Verbal Aggression	3.24 ± 0.26 ^{3,4}	3.19 ± 0.31 ^{3,4}	2.68 ± 0.18	2.96 ³ ± 0.27
Anger	3.15 ± 0.27 ⁴	2.98 ± 0.26	3.00 ± 0.21	2.67 ± 0.24
Hostility	2.78 ± 0.21	2.80 ± 0.22 ³	2.58 ± 0.26	2.77 ± 0.21

^{1,2,3,4} – multiple *t*-tests with Bonferroni correction for Type 1 error located significant difference ($p < .01$ with Bonferroni correction $p < .05 / 4$) as compared to those groups

Physical aggression is the most clearly expressed in contact athletes, they show significant differences from non-contact athletes (representatives of sports where physical contact is not tolerated) ($t(98) = 4.49$; $p < .01$), but contact athletes do not show significant differences from combat athletes ($t(98) = 2.27$; $p > .01$) and adolescents nonathletes ($t(198) = 1.26$; $p > .01$). Verbal aggression was the lowest in non-contact athletes. It differed significantly ($p < .01$) from the results of combat athletes, contact athletes, and nonathletes. The highest level of anger scores was observed among combat athletes, while the lowest was among adolescents nonathletes ($t(98) = 9.40$; $p < .01$). Hostility was the most common in contact athletes, while it was at least expressed in non-contact athletes ($t(98) = 4.57$; $p < .01$).

Discussion

More positive attitudes towards aggression in male adolescent nonathletes may be related with their more prominent seeking of recognition from peers (Garandau & Cillessen, 2006). Data of our present research revealed that the distribution of attitudes towards aggression in male adolescent nonathletes differed from that in adolescent athletes. Adolescent nonathletes were characterised by more positive attitudes towards aggression than adolescent athletes because assertive and more aggressive adolescents have a superior status among their peers (Leadbeater, Boone, Sangster, & Mathieson, 2006). In contemporary society boys are trained to be assertive and have independent mindset. Male adolescent nonathletes may have positive attitudes towards aggression because if they choose not to conform to the traditional standards of masculinity, they are not accepted or

respected by their male peers (Harper, 2004). Aggressiveness and observation of aggressive behavior by children and junior adolescents develop the feeling of pleasure (Benenson, Carder, & Geib-Cole, 2008). Besides, stereotypes concerning aggressiveness of junior males are prevalent among adolescents (Coyne, Archer, Eslea, & Liechty, 2008; Coyne, Nelson, Graham-Kevan, Keister, & Grant, 2010).

It was established that nonathletes were less verbally aggressive than athletes and also that nonathletes were less angry than athletes thus, a presupposition is plausible that the self-reported aggressiveness in the first case was determined by the sports activity while in the second case by seeking the recognition of peers. A suitable explanation for our results might be found within the integration of perceived characteristics of aggressiveness with self-presentational issues (Grietens, 1999), which provides an explanation of the different mechanisms that lead to the development of aggressiveness: in the first case the self-reported verbal aggression and anger in male adolescent athletes may be determined by the sports activity because it was established that combat athletes were the angriest group and non-contact athletes were less verbally aggressive than combat athletes, contact athletes, and nonathletes.

Our present study has not shown significant differences in physical aggression and hostility between male adolescent athletes and nonathletes even though other investigations showed that physical activeness positively correlates with physical aggression. The consequences of the present study may be grounded by researches proving that sports activity can also decrease aggressiveness and positively affects behavior (Kavussanu *et al.*, 2006; Rutten *et al.*, 2008; Storch, Werner, & Storch, 2003) and by researches (Benenson, Carder, & Geib-Cole, 2008; Grietens, 1999) proving that the self-reported physical aggression and hostility may be determined by seeking the recognition of peers.

Comparing with other studies conducted by Endresen and Olweus (2002) and Chow, Murray, and Feltz (2009), who investigated and compared aggressiveness in contact and in non-contact athletes, the data in the present study found corroborate the fact that higher levels of physical aggression are observed in sports, where physical contact is tolerated. The higher aggressiveness in contact than in non-contact athletes is consistent with learning theory (Lernieux *et al.*, 2002). This may be related with the type of sports since the results of studies by Robertson (2003) demonstrate that relationship between aggressiveness and certain sports does really exist. Study by Maxwell and Moores (2008) and study by Keeler (2007) discovered that in sports where physical contact is necessary (i.e. combat sports), athletes conceive aggressiveness as a factor positively influencing their behavior, i.e. aggressiveness is considered as helpful for energizing behavior and to channeling physical and mental resources for skill execution.

Limitations and future directions

Our results limited to male adolescents, did not show gender differences; because they confirmed other studies in which differences between male and female were described (Kinney, *et al.*, 2001; Tucker, & Parks, 2001). This analysis did not cover female adolescent athletes; as a result, the conclusions cover only the attitudes in male adolescent athletes towards aggression and forms of aggressiveness among those practicing various sports. This research did not separate aggressiveness related to adolescents' development from those related to the environmental features because the present study concentrates only on perceived characteristics of aggressiveness, i.e. attitudes towards aggression as well as self-reported forms of aggressiveness. This study does not concentrate on the duration (i.e. experience) of the sports activity in male adolescent athletes.

Further analyses will expand the batch of respondents covering both genders of adolescents, as studies of other researchers (Bettina *et al.*, 2006; Stucke & Sporer, 2002; Tucker & Parks, 2001) showed that scores of self-reported aggression are gender-related. In addition, ways to decrease the perceived aggressiveness in adolescent athletes and nonathletes should be sought. Also, further studies are needed to concentrate on the duration (i.e. experience) of the sports activity of adolescents. In spite of these limitations, the study makes a significant contribution to the literature by demonstrating the perceived characteristics aggressiveness in male adolescent athletes and nonathletes.

Conclusions

The objective of the present study was to compare perceived characteristics of aggressiveness in male adolescent athletes and nonathletes aged 14 to 16, and presented results that not contrasted with findings of studies previously performed. It became clear that athletes and nonathletes are significantly distinguished in most perceived characteristics of aggressiveness studied.

Specifically, this study empirically examined not only self-reported forms of aggressiveness in male adolescent athletes and nonathletes but also the attitudes to aggression. While some studies investigated forms of physical and verbal aggression this study provided a specific focus on the population of adolescents aged 14 to 16 and peculiarities of four self-reported forms of aggressiveness: hostility, anger, verbal aggression and physical aggression.

On one hand, we showed that nonathletes had more positive attitudes toward aggression than athletes. On the other hand, when the latter group was broken into subcategories ("combat athletes," "contact athletes," "non-contact athletes"), it turned out that the driving force was non-contact athletes, i.e., the attitudes

towards aggression of non-contact athletes differed significantly from the attitudes of adolescents nonathletes. Those, for whom physical contact is either required or tolerated, did not differ from nonathletes in their attitudes, consequently we can state that athletic participation in physical contact sport was not associated with the attitudes to aggression.

Nonathletes were less verbally aggressive than athletes. It was established that non-contact athletes were less verbally aggressive than combat athletes, contact athletes, and nonathletes. Nonathletes were less angry than athletes. It also turned out that combat athletes were the angriest group. In such case this study provided supporting evidence of previous findings, which confirmed that self-reported verbal aggression and anger in male adolescent athletes is determined by the sports activity, i.e. by the fighting sports activity. Athletes and nonathletes did not differ significantly on physical aggression and hostility, although a breakdown showed that contact athletes score higher than noncontact athletes on both measures.

Although complete elimination of positive attitudes towards aggression is an unrealistic goal, the findings of this study could ultimately contribute to understanding of the attitudes towards aggression and the aggression forms in adolescent athletes and nonathletes that affect contemporary society because in contemporary society boys are trained to be assertive and have independent mindset. If adolescent athletes and nonathletes learn that different aggression forms are an acceptable at a young age, they are more likely to continue their aggressive behavior in all aspects of their life through adulthood.

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