



Personality traits and aggressive behavior in adolescents

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Abstract

Objective: The main goal of this research was to see the issue of the relationship between personality traits and the level plus structure of aggression in adolescents.

Methods: The study involved students (n = 120) of the John Paul II Upper Secondary School Complex in Krynica-Zdrój, aged 16–19. The survey was group and voluntary and was conducted in the spring of 2018. The sample was randomly selected, the A. Buss and M. Perry Aggression Questionnaire, the NEO-PI-R R Personality Inventory and the Personal Sheet of our own design were used.

Results: Positive relationships of aggression were observed in the case of Neuroticism and Openness to Experiences. A significant number of statistically significant correlations with General Aggressiveness were noted in the following factors: Neuroticism and Conscientiousness. All statistically significant relationships between aggression and Agreeableness, Conscientiousness, and Extroversion turned out to be negative. Analysis of the level of aggressiveness between the sexes showed a difference in the tendency to verbal and physical aggression (higher scores in men). In the men studied, extroversion visibly correlated negatively with the overall level of aggressiveness.

Conclusions: The results of the study indicate a relationship between personality traits and the intensity of aggressiveness in the group of adolescents. These relationships differ from each other depending on the aspect of personality and the type of aggression. The overall level of Aggressiveness correlated most strongly with the severity of neurotic traits. This mainly concerned the tendency to experience hostility and anger. This coincides with the understanding of neuroticism associated with abnormal and low self-esteem, considered a risk factor for aggressive behavior. A high level of extroversion, on the other hand, negatively correlates with the occurrence and intensity of hostility. Openness to experience, on the other hand, fosters physical aggression and hostility.

Key words: aggression, personality development , aggressive behavior, personality traits

Admission

Both clinical practice and observation of social life confront us with an important question about the psychological and interpersonal function of aggression. This question concerns, in other things, the relationship that various aspects of aggression have with the personality structure in its normal and pathological manifestations. Until recently, the prevailing view was that personality problems do not occur in the developmental period (1; 13). However, it is increasingly recognized that, contrary to previous findings, personality disorders also manifest themselves in

adolescence (5). According to some authors, their particular intensity occurs between the ages of 12 and 14 (7). On the one hand, aggressive behavior is a symptom of many mental disorders, including personality problems. On the other hand, adolescence is treated as a period in which more is allowed, and behavioral problems may be an aspect of the broadly understood adolescence crisis. Until recently, aggression in interpersonal relationships was treated only as a sign of weakness, lack of ability to solve problems maturely. Recent findings of social and developmental psychologists indicate the importance of aggression as a way to realize one's own desires and aspirations. Scientific studies

indicate different personality profiles of women and men, as well as different intensity of aggression in both sexes. The question arises about how gender modifies the relationship between aggression and personality traits (2; 3; 11). All of the above points to the importance of research on personality, aggression and their relationships during adolescence. The main objective of this study is therefore to resolve the issue of the relationship between personality traits and the level and structure of aggression in adolescents.

Material and Method

Research group

The study group included students of the John Paul II Upper Secondary School Complex in Krynica-Zdrój, aged 16–19. The survey was conducted at the turn of March and April 2018. The study was group and voluntary.

Two psychometric tests were used in the study.

The first tool – the Aggression Questionnaire by Arnold H. Buss and Mark Perry (4) in the Amity version (BPAQ) (9) is used to measure aggression and consists of 29 statements relating to its behavioral, emotional and cognitive aspects. The discussion adapted to Polish conditions was made by Stanisława Tucholska from the Department of Clinical and Personality Psychology of the Institute of Psychology of the John Paul II Catholic University of Lublin, who also included the results of preliminary research on the use of the questionnaire in the population of Polish youth. They indicate that the questionnaire is a "concise and understandable self-description technique for the respondents", shows high psychometric values also in Polish conditions and can be used both in research and in psychological practice (11; 12).

The aggression questionnaire consists of four factors:

- 1. Physical aggression (PA) – a behavioral aggression variable that describes any behavior aimed at causing pain to another person;
- 2. Verbal aggression (VA) – a behavioral component of aggression characterized by tendencies to verbally humiliate other people;
- 3. Anger (A) – an emotional component of aggressive behavior, meaning physiological arousal associated with readiness to harm someone;
- 4. Hostility (H) – the cognitive aspect of aggressive reactions reflecting such attitudes as: a sense of regret, harm, injustice, suspicion, envy or obstinacy.

The overall aggression level score (T) is the sum of the scores obtained by the tested person in terms of individual factors.

The second questionnaire – NEO-PI-R contains 240 statements for the diagnosis of personality traits included in the five-factor model (Neuroticism, Extroversion, Openness to Experience, Agreeableness, Conscientiousness), also taking into account the individual components of each of the traits, the veracity of which the respondent assesses on a five-point scale. The interpretation may concern both the results of individual scales and subscales separately, as well as their configuration (e.g. the results of factor pairs). Table 1 contains scales forming individual factors and their basic description (10). The tool is adapted to Polish conditions. It has ten norms for the population up to 29 years of age and from 30 to 79 years separately for women and men, developed on the basis of a sample of several hundred people.

The study also used a Personal Sheet of its own design, consisting of 17 questions. The study began with a short instruction that informed about the procedure, the method of answering, brief information about the purpose of the research and full anonymity in the analysis of the results.

Factor	Scales	Description
Neuroticism (N)	Anxiety, Aggressive hostility, Depressiveness, Over-criticism, Impulsivity, Hypersensitivity	It refers to the assessment of the emotional balance, the adjustment of the person and the tendency to feel negative emotions and general problems of this nature
Extroversion (E)	Warmth, Sociability, Assertiveness, Activity, Sensation seeking, Positive emotions	It measures the way in which a person engages in interpersonal contacts, as well as the level and manner of using energy and motivation to act
Openness to experience (M)	Imagination, aesthetics, feelings, actions, ideas, values	A scale describing a person's attitude to the surrounding world, the need to learn about the world, the way perceptions are described, noticing beauty, values, as well as objects of interest and fascination
Agreeableness (U)	Trust, Straightforwardness, Altruism, Yielding, Modesty, Tendency to Feel Sorry	It illustrates tendencies to conciliatory behavior in contacts with people, indicates the general attitude of the individual towards others
Conscientiousness (S)	Competence, Orderliness, Duty, Achievement, Self-discipline, Consideration	The ability to control one's own impulses and desires reflects commitment to the actions taken and the formulation of requirements for oneself in pursuit of a specific goal

Table 1: Personality factors and components included in the NEO-PI-R questionnaire.

Statistical analysis

In order to demonstrate statistically significant relationships between General Aggressiveness and individual subscales of general personality factors, a Pearson's linear r correlation analysis was performed. The publication includes all relevant results.

In the course of further data exploration, the level of general aggressiveness and scores on individual dimensions of scales describing personality traits obtained by women and men were subjected to differential analysis. In order to obtain an answer to the question regarding the significance of these differences, an analysis was carried out using the Student's t -test for independent groups.

In order to make a comparison between men and women in terms of the relationship between the level of general aggressiveness and the five dimensions of personality structure, Pearson's r linear correlation analysis was performed.

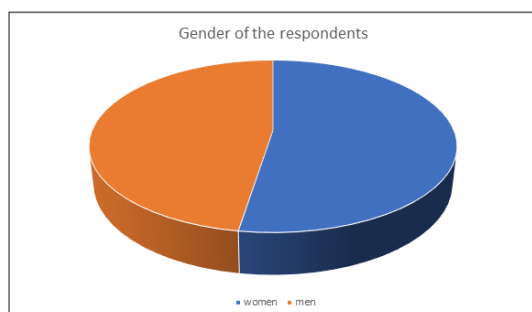


Figure 1: Gender of the respondents.

Results

Results of the demographic survey

The study group consisted of 120 people. Women constituted a slightly higher percentage of the respondents (52.5%), while men constituted 47.5% (Fig. 1).

Among the respondents, the largest group were people aged 17 (75%), followed by students aged 18 (12.5%), followed by 16 (10%). On the other hand, the smallest group was young people aged 19 (2.5%) (Fig. 2).

Among the respondents, the largest group were people living in rural areas (53.33%), while students living in a small town comprise 46.67% of the total number of respondents. There were no residents of a large city among the respondents. 89.17% of the respondents came from a complete family, only 6.67% from a reconstructed family, and the remaining 4.17% from a single-parent family.

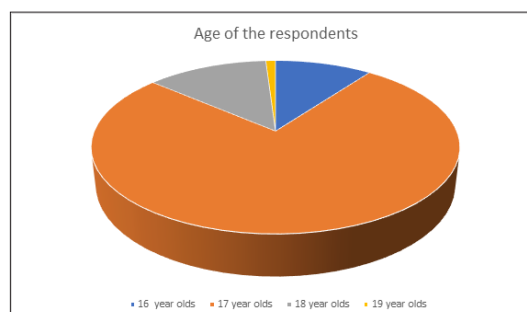


Figure 2: Age of the respondents

Scale	Physical aggression		Verbal aggression		Anger		Hostility	
	r	p	r	p	r	p	r	p
Neuroticism	-0,01	0,872	0,14	0,115	0,33	0,001	0,67	0,001
Extroversion	0,09	0,305	0,15	0,093	0,01	0,899	-0,21	0,021
Openness to experience	0,24	0,008	0,12	0,177	0,03	0,721	0,18	0,049
Agreeableness	-0,27	0,003	-0,29	0,001	-0,42	0,001	-0,18	0,051
Conscientiousness	-0,29	0,001	0,02	0,851	-0,32	0,001	-0,36	0,001

Table 2: The relationship between the scores on the individual scales of the NEO-PI-R Personality Inventory and the scores on the separate scales of the BPQA Aggression Questionnaire. Own elaboration

Links between personality structure and aggression structure in the entire group of respondents

An analysis of the relationship between the Aggression Questionnaire and the main scales of the NEO-PI-R R Personality Inventory is presented in Table 2. Table 3 presents the results of analyses of the relationship between the results of general aggressiveness and the results of individual subscales of the NEO-PI-R Personality Inventory.

Taking into account the number of correlations, the result of which turned out to be significant, the largest number of associations with General Aggressiveness were detected in the subscales of general factors: Neuroticism and Conscientiousness. The number of correlations occurred in all six subscales of these factors, but their strength took on a

different character. Three correlations were found in the Agreeableness factor, and two in the Openness to experience factor. However, no correlation was noted within the Extroversion factor.

Relationships between variables by gender

The analysis of the level of aggressiveness between the sexes indicated that these groups differed mainly in terms of tendencies to verbal and physical aggression.

Within sex, the only clear difference between personality traits and overall levels of aggressiveness was seen in men. In the men studied, extroversion ($r = -0.33, p < 0.013$) visibly correlated negatively with the overall level of aggressiveness. This means that extroverted men show less aggression. Detailed data in this regard are presented in Table 4 & 5.

Scale/Pod Scale	Overall aggressiveness	
	<i>r</i> Pearson	Significance <i>p</i>
N. Neuroticism	0,46	0,001
N1. Anxiety	0,26	0,004
N2. Aggressive hostility	0,61	0,001
N3. Depressive	0,27	0,003
N4. Excessive criticism	0,21	0,024
N5. Impulsivity	0,22	0,016
N6. Hypersensitivity	0,34	0,001
E. Extroversion	−0,01	0,889
E1. Cordiality	−0,11	0,225
E2. Sociability	0,02	0,850
E3. Assertiveness	0,02	0,852
E4. Activity	−0,05	0,554
E5. Sensation Seeking	0,13	0,142
E6. Positive emotions	−0,04	0,666
A. Openness to experience	0,25	0,007
O1. Imagination	0,40	0,001
O2. Aesthetics	0,05	0,625
O3. Feelings	0,27	0,002
O4. Action	0,03	0,734
O5. Idea	0,02	0,796
O6. Values	0,12	0,195
U. Agreeableness	−0,43	0,001
U1. Trust	−0,15	0,105
U2. Straightforwardness	−0,39	0,001
U3. Altruism	−0,39	0,001
U4. Concession	−0,57	0,001
U5. Modesty	0,09	0,322
U6. Tendency to get emotional	0,11	0,215
S. Conscientiousness	−0,42	0,001
S1. Competence	−0,25	0,005
S2. Tendency to order	−0,35	0,001
S3. Obligatory	−0,36	0,001
S4. Striving for achievements	−0,23	0,013
S5. Self-discipline	−0,32	0,001
S6. Consideration	−0,22	0,017

Table 3: The relationship between the scores on the individual subscales of the NEO-PI-R Personality Inventory and the results of general aggressiveness. Own elaboration.

Personality dimension	Overall aggressiveness			
	Women		Men	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Neuroticism	0,54	0,001	0,41	0,001
Extroversion	0,09	0,497	−0,33	0,013
Openness for experience	0,24	0,056	0,04	0,754
Agreeableness	−0,54	0,001	−0,38	0,003
Conscientiousness	−0,30	0,017	−0,55	0,001

Table 4: A Gender comparison of the correlation between general aggressiveness and individual personality dimensions. Own elaboration

Variable	Group		t-Students test	
	Women(<i>M</i>)	Men (<i>M</i>)	<i>t</i>	<i>p</i>
Physical aggression	35,98	46,21	−5,52	0,001
Verbal aggression	42,41	50,42	−4,35	0,001
Anger	45,68	47,05	−0,80	0,427
Hostility	54,79	52,23	1,06	0,293
Level of overall aggressiveness	42,08	47,91	−3,27	0,001

Table 5: Gender differences in the results of general aggressiveness and its individual dimensions. Own elaboration

Then, the level of general aggressiveness and the results on individual dimensions of general aggressiveness obtained by women and men were subjected to differential analysis. Statistically significant gender differences were obtained in terms of scores on the Physical Aggression, Verbal Aggression and General Aggressiveness scales, with men achieving a higher score for all these differences. The scale of gender differences in the mean scores on individual dimensions of General Aggressiveness is presented in Fig. 3.

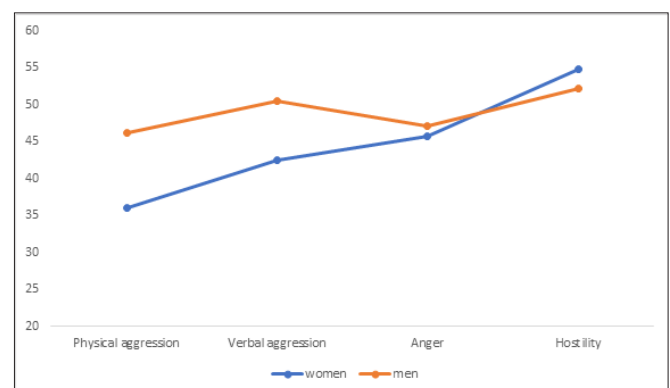


Figure 3: Gender differences in mean scores on individual dimensions of general aggressiveness. Own elaboration.

Overview

The study proved the relationship between various manifestations of aggression and personality traits in the studied youth. These relationships vary depending on the aspect of personality and the type of aggression. All statistically significant relationships observed with Agreeableness, Conscientiousness, Extroversion turned out to be negative. Positive relationships were observed with Neuroticism and Openness to experience. The results obtained in general factors are confirmed by the analysis of the relationships between General Aggressiveness and individual subscales of personality traits. A particularly large number of statistically significant correlations were noted in the subscales of two factors: Neuroticism and Conscientiousness.

The results obtained are in line with the assumptions. Some ambiguity in this regard is caused by the relationships of Extroversion behaving more like factors related to passivity. The negative correlation between Extroversion and Hostility indicates a certain hidden factor causing positive relationships with behaviors described as extroverted. The mixture of anger and hostility, on the other hand, translates into relational inhibition perceived externally as neurotic behavior. In this situation, it can be assumed what distinguishes neurotic people from those open to experience – not so much the internal state, but the possibility of expressing it through a tendency to physical aggression. In this context, Agreeableness and Conscientiousness negatively associated with Physical Aggression, Anger and Agreeableness with Verbal Aggression also indicate that the external perception of people and their perception of themselves are associated with significantly lower intensity of various aspects of personality.

The results of the analysis revealed that in the case of both sexes, General Aggressiveness correlates significantly with Neuroticism, Agreeableness and Conscientiousness, but the strength of this relationship was different. It should also be noted that in the male group, a significant association between General Aggressiveness and Extroversion was recognized, while in the female group this relationship was not noted. A strong positive correlation between Neuroticism and General Aggressiveness took place in the female group, while in men this relationship reached a moderate dimension.

Women seem to feel anger and hostility to a degree comparable to men, but they do not show it. The more neurotic they are, the greater their tendency to be aggressive, and the more agreeable and conscientious they are, the less. A profile of a similar level of feeling and a different level of showing aggression can be considered an expression of the suppression of feelings that are experienced. One may wonder to what extent suppression is adaptively beneficial, and to what extent it is related to an attempt to meet expectations about what a young woman is supposed to be like. The strength of the correlation was also high, but negative in the dimensions of General Aggressiveness, and Agreeableness in women, and moderate in men. The difference appeared in the case of the relationship between General Aggressiveness and Conscientiousness. A moderately strong negative index appeared in the female group, while in the male group it was high. In addition, a negative moderate correlation between Extroversion and General Aggressiveness was observed in men. In order to fully verify the assumption, an analysis was also carried out using the *Student's* t-test for independent groups. Significant gender differences were obtained in the area of the scale: Physical Aggression, Verbal Aggression and General Aggressiveness. A higher score was recorded on all scales in the male group.

Analyzing the concept of aggression, a normative assessment of this phenomenon comes to mind. An example of such an event is, m.in., an act of physical self-defense. This context suggests that only those acts that violate the norms of social conduct should be included in the group of aggressive behaviors (Berkowitz, 1993; quoted in Krahe, 2006). However, the authors believe that the problem of perception of normative evaluation of behavior depends on the perspective of looking at the problem. Aggression can also be a way to achieve interpersonal or social goals. Such an optics is represented by Ranschburg (1993), who distinguishes two types of aggressive behavior, which include instrumental and affective aggression. The first is a specific way of implementing plans that, for some reason, cannot be implemented in another, more acceptable way. It is aggression described as cold, premeditated. The second type has the overtone of an internal need and aims to relieve mental tension, negative emotions or frustration. They can interpenetrate and influence each other. Especially when aggression becomes a way to achieve the expected results in the process of upbringing, it can be promoted in this way. Significant differences in this regard concern gender. Boys are expected to be "brave" and "feisty", girls to be submissive and submissive (Martin, 1990).

The study has a number of limitations resulting from the method adopted and the population studied. Aggression, as described by the Aggression Questionnaire tool by A. Buss and M. Perry, is in some aspects a development of traits described as related to the structure of personality. Therefore, it may mean that we are not studying two separate phenomena, but certain aspects of the continuum of features. Questions about experiencing are questions that require introspection skills.

One may wonder whether people with aggressive tendencies and defense mechanisms presenting a false assessment of reality will provide true facts and descriptions of their behavior in this type of research. However, this doubt applies to a limited extent to the general population, in which this type of personality problem is not significantly represented.

Applications

1. There is a visible relationship between personality traits and the level of aggressiveness.
2. Neuroticism is a personality variable that has the strongest impact on the intensity of aggressiveness.
3. Agreeableness and conscientiousness are personality traits that reduce the intensity of the level of aggressiveness.
4. Individual personality traits correlate differently with the dimensions of aggressive behavior.
5. A high level of extraversion is negatively correlated with the occurrence and severity of hostility.
6. Openness to experience correlates positively with the occurrence of physical aggression and hostility.
7. The overall level of aggressiveness is higher in the group of boys compared to the group of girls (Fig.4)
8. Boys score higher on scales associated with direct manifestations of aggression.
9. Male and female adolescents differ in the level of declared aggressiveness.

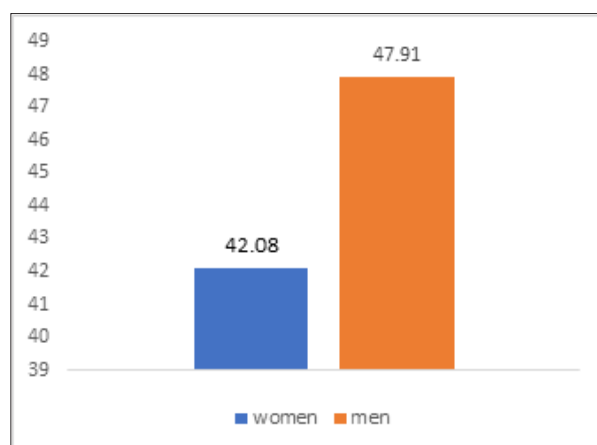


Figure 4: Gender differences mean scores on the overall aggressiveness scale. Own elaboration.

Conflict of Interest

The authors do not report any financial or personal connections with other persons or organizations that could adversely affect the content of the publication and claim the right to this publication.

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