

# THE RELATIONSHIP BETWEEN PERFECTIONISM AND ANGER IN ADOLESCENTS

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## SUMMARY

**Background:** As a contribution to the dimensional classification of mental disorders, which in the next edition of the American Psychiatric Association (APA) could dominate over the categorical, and in general, due to the impact of anger on the behavior of individuals in our society, it seems important to examine and analyze dimensions that represent risk factors for occurrence and development of anger disorders. **Aim:** To examine gender differences in the expression of the adaptive and maladaptive dimensions of perfectionism and anger (state and trait, as well as the anger expression and control) and to examine whether the dimensions of perfectionism are statistically significant predictors of anger.

**Subjects and methods:** This study included a total of 600 primary and secondary school students (305 girls and 295 boys), 12 to 18 years old. Data were collected using a Socio-demographic Features Questionnaire for general information onto the Adaptive/Maladaptive Perfectionism Scale (AMPS), Child-Adolescent Perfectionism Scale (CAPS), and State-Trait Anger Expression Inventory-2 Child and Adolescent (STAXI-2 C/A).

**Results:** Statistically significant gender differences were found in the expression of the adaptive and maladaptive dimensions of perfectionism and anger. For aspects of anger, girls have been found to control their anger more often than boys. Multiple regression analysis indicates the important contribution of the dimensions of perfectionism in the explanation of anger in adolescents.

**Conclusion:** Given the results obtained, our research represents a contribution to the definition of a dimensional diagnostic system to prevent comorbidity of mental disorders and provide more clinically relevant information about each individual. The instrument which is used to measure anger in this study (STAXI-2 C/A; Brunner & Spielberger 2009) was for the first time applied in Bosnia and Herzegovina. The results of this research are a contribution to its validation.

**Key words:** perfectionism – anger – adolescents

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## INTRODUCTION

In the 20<sup>th</sup> century, anger did not exist as a clinical concept in psychiatry, psychopathology, and clinical psychology. It was back then viewed as part of melancholy - authors Kraepelin and Freud, in the early 20<sup>th</sup> century (W. Jackson 1986, according to DiGiuseppe & Tafrate 2010), cited hostility, irritability, and anger as symptoms of manic states, i.e., depressed individuals, which was resolved by describing anger that is directed inward and that causes depression. Anger needs to be distinguished from aggression, hostility, irritability, and hatred. Spielberger (1991) views anger in two ways - as a state and as a personality trait. Anger as a state is a subjective emotion "associated" with muscle tension and stimulation of the autonomic nervous system, the intensity of which can vary from very moderate to quite strong. Anger, as a trait or personality trait, is perceived in many more situations that can be described as unsatisfactory and frustrating (tendency toward very frequent manifestations of anger). In a study by Radke-Yarrow and Kochanska (1990), it was found that children who often express anger (achieve a high score on the anger scale as personality trait) fall into the risk group for further developmental psychological problems. Such findings are not surprising, however, the

mechanisms underlying maladaptive expression of anger are not yet sufficiently known. In the previously mentioned study (1990), it was also found that mothers participate in and even encourage the anger of a toddler boys, while the anger of a toddler girls is ignored, which is an example of gender socialization of emotions through nonverbal processes.

Furlong and Smith (1993) noted that, despite their primary emotional status, high frequency of occurrence, and potential diminishing social and psychological adjustment, there is no major category of anger in the DSM-IV, as is the case with anxiety and depression. In addition, the DSM-5 (APA 2013) suggests that it is not an appropriate time to consider other types of mental disorders. Authors DiGiuseppe and Tafrate (2010) proposed a clinical disorder for anger, called Anger Regulation-Expression Disorder (ARED), for which assessment would be done in two ways: through the subjective experience of anger and through the negative expression of patterns related to anger. The results of testing five hypotheses of (Spielberger's State-Trait Theory of Anger) in adolescents (Quinn Rollock & Vrana 2014) contribute to the idea that anger is a trait that becomes stable during adolescence, with several developmental differences noted in the literature for adults.

During the period of childhood and adolescence, empirical data on perfectionism (adaptive and maladaptive) and about his relationship with anger are hard to find.

In the broadest sense, perfectionism implies the pursuit of perfection and as such, it can have a negative impact on a person's health, however, modern knowledge about this term suggests that perfectionism can also be useful in the development of the individual, which is why it is important to observe its positive aspects as well.

According to some authors, when defining perfectionism, it is necessary to distinguish high standards that a person sets from their achievement or realization. Thus, Hewitt and Flett (1991) assessed only the level of a person's standards, while Suddarth and Slaney (2001) assessed to what extent perfectionist standards were achieved. Based on the above estimates, they made a difference between positive and negative perfectionism, because e.g. experiencing any mistake by failure, is a reflection of negative perfectionism. According to Lauri Korajlija (2010), if we view perfectionism as a personality trait, then it is a stable trait that is not affected by environmental factors. On the other hand, the perception of achieving goals may depend on the feedback that we receive from the environment, which means that perfectionists will sometimes be satisfied with what has been done, regardless of the goals set. The most important periods for the development of perfectionism are early childhood and adolescence, in which the level of self-awareness and sensitivity to social evaluation are elevated (Flett et al. 2002).

DSM-5 (APA 2013) approach, compared to previous editions of this manual, is considered more integrative in diagnostic and classification terms, e.g. in some cases the combined diagnosis (conditions with similar symptoms), specific categories added measures (spectrums) that indicate the degree of acuteness, which shows a part of the dimensional approach. However, despite their representation on the continuum of behavior, at a time when a new edition of DSM was in preparation, there were scientific doubts (Brown & Barlow 2005) in the reliability of using the dimensional approach in this way, as well as in the possibility of solving a large number of comorbidity problems. The same authors (2005) believe that the underlying categories of disorders are based on basic vulnerability factors and that variability is the result of the influence of other etiological factors (environmental, psychological, and biological). The primary objective of this study was to examine gender differences in the expression of the dimensions of adaptive and maladaptive perfectionism, the state and trait of anger, as well as the expression and control of anger. The secondary objective of this study was to examine the dimensions of perfectionism as predictors of aspects of anger in girls and boys, respectively, teenage boys and teenage girls.

## SUBJECTS AND METHODS

The participants in the research were students (N=600) of primary (sixth, seventh and eighth grades) and secondary schools (first, second, and third grades) from Mostar. The research was conducted in the primary schools of Ivan Gundulić (N=142) and Silvije Strahimir Kranjčević (N=158), as well as the Pedagogical Gymnasium Mostar (N=162) and the Gymnasium of Fra. Grga Martić (N=138). The group consists of 305 female students (50.8%) and 295 male students (49.2%), which indicates the almost complete equalization of the sample according to gender. The average age of the participants was 14.5 years (SD=1.77), and the age range was from 12 to 18 years.

General information about the subjects was collected by the Sociodemographic Characteristics Questionnaire. We tested perfectionism with the following two measuring instruments: Adaptive/Maladaptive Perfectionism Scale (AMPS; Rice & Preusser 2002) and Child-Adolescent Perfectionism Scale (CAPS; Flett et al. 2000). AMPS is constructed based on cognitive and psychodynamic understandings of perfectionism and contains 27 particles or claims that encompass the four dimensions of perfectionism (Sensitivity to Mistakes, Satisfaction with Success, Organization and Order, or Compulsiveness and the Need for Admiration). Regarding that these variables were used in further analysis, it is important to explain the name of the dimension Satisfaction with Success. Namely, the original term is Contingent self-esteem. In the research of Lauri Korajlija (2010), considering the content of the remaining particles, the name Satisfaction with Success was created, which seemed more appropriate. In the research of Čorluka (2011), the number of particles on this scale remained the same, but it turned out that the mentioned variable was not statistically significantly associated with anxiety and depression, which, according to previous studies in this area, was characterized by adaptive perfectionism. For this reason, it was decided to take the term Satisfaction with Success in this paper as well. In this study, the internal reliability coefficient for the Sensitivity to Mistakes subscale is  $\alpha = 0.68$ , for the Satisfaction with Success subscale 0.72, for the Organization and Order subscale 0.62, and for the Need for Admiration subscale Cronbach's alpha is 0.83. The reliability of the whole scale is  $\alpha = 0.75$ . CAPS is designed to measure two dimensions of perfectionism (Self-oriented Perfectionism and Socially Prescribed Perfectionism), participants aged 10 to 15 years. The original questionnaire contains 22 particles or statements. The first dimension, Self-oriented Perfectionism (SOP), consists of 12 statements, for example: "It bothers me if I don't give my best all the time." The second dimension is Socially Prescribed Perfectionism (SPP) and is generally considered maladaptive and consists of 10 statements such as: "My family expects

me to be perfect." In our study, the Cronbach's alpha for subscale SOP is 0.75 and for the SPP subscale is 0.86. The reliability of the whole scale is  $\alpha=0.86$ .

State-Trait Anger Expression Inventory-2 Child and Adolescent (STAXI-2 C/A; Brunner & Spielberger 2009) was also used in the study. This instrument consists of 38 statements, intended to assess aspects of anger in children and adolescents who have the ability to read children in the fourth or one of the upper grades of primary school. STAXI-2 C/A is a version of the State Trait Anger Expression Inventory-2 (STAXI-2; Spielberger 1999), the most commonly used measure of anger in adults. STAXI-2 C/A assesses aspects of anger experience as a condition and trait, and anger expression and control as aspects of personality trait. The State Anger scale (SA) consists of two subscales that assess the intensity of feelings that a person is currently experiencing (State Anger-Feelings; SAF) and the intensity of feelings that a person wants to express through verbal or physical aggression (State Anger-Expression; SAE). The Trait Anger scale (TA) consists of subscales that assess how often a person experiences anger without provocation (Trait Anger-Temperament; TAT) and the frequency of feelings of anger that a person experiences in situations when they feel they are not being treated properly (Trait Anger-Reaction; TAR). Expressing anger is assessed by the subscale of the frequency of expressing anger through verbal or physically aggressive behavior (Anger Expression-Out; AEO) or experience and the subscale of non-expression (e.g. suppression) - Anger Expression-In (AEI). Anger Control scale (AC) measures how often a youth tries to control the inward or outward expression of angry feelings. The instructions in the first part of the inventory (state) indicate that respondents should respond to these statements in accordance with current feelings. The instructions in the second part of the inventory (trait) indicate that the respondents should respond to the stated statements in accordance with how they otherwise feel. Participants respond to these claims in one of three ways: "almost never", "sometimes" and "often".

Based on the results from a factor analysis on our sample (the items that were supposed to measure the Anger Expression-Out - 21, 27, and 31, were distributed to other components), it was decided not to take it into account in further data analysis. In our sample, the alpha coefficients, for scales and subscales the State Anger, Trait Anger, Trait Anger-Temperament, Trait Anger-Reaction, Anger Expression-In, and Anger Control, respectively, are 0.88, 0.80, 0.69, 0.74, 0.64 and 0.69.

The results of the research were processed in the statistical package SPSS version 20.0, (IBM) for the Windows operating system.

When examining the normality and suitability of variables for processing and analysis based on parametric statistics, we noticed that all variables, except

Sensitivity to Mistakes, have significant deviations from normality (Kolmogorov-Smirnov z-values), while, for most of them, values of skewness (from -1 to +1) and kurtosis are in the acceptable range. Since the z-value is overly sensitive in larger samples and its sensitivity increases further as a function of the number of results, we preferred the values of the skewness and kurtosis.

In examining the expression of the dimensions of perfectionism and anger, given the gender of the respondents, we used a series of t-tests for large independent samples. Appropriate control analyzes were performed, which are necessary for the application of this parametric data processing procedure. In examining the significance of prediction of the state and trait of anger, as well as the expression and control of anger, based on different aspects of perfectionism, in girls and boys, we applied multiple regression analysis. The regression analysis procedure was performed in accordance with the recommendations given by Cohen et al. (2003). The results of the subjects on the variables of perfectionism were centered (the arithmetic mean of the results on the given variable was subtracted from each individual result), in order to avoid multicollinearity.

## RESULTS

Table 1 shows the t-test results for large independent samples. Since we did not divide the sample according to the age groups of respondents, all the presented results for the sample of girls also apply to teenage girls, and all the presented results for the sample of boys also apply to teenage boys. Out of a total of six criterion variables of perfectionism, it can be observed that t-values are statistically significant for the following five dimensions: STM, SWS, NFA, OO and SPP. For the variable Self-oriented Perfectionism, there is no statistical significance in its expression, given the gender of the respondents. Of the four variables of anger, statistically significant gender differences were found in the expression of only one of its aspects, and that is Anger Control. The obtained differences are interpreted based on the average values of the perfectionism variables in relation to the gender of the respondents (Table 1).

In order to examine the contribution of the dimensions of perfectionism in explaining the expression of the state and trait of anger, as well as the expression and control of anger, we first checked the correlations of these dimensions (Pearson's coefficient) concerning the gender (Table 2). The variable Satisfaction with Success is in a statistically significant negative correlation with anger variables (state and trait), in the subsample of boys, and in a low but significant positive correlation with the Anger Control scale, in girls and boys. In the subsample of girls, Satisfaction with Success is in a significant negative correlation with the Anger Expression-In.

**Table 1.** Arithmetic means, standard deviations, t-test values, and significance of gender differences on all research variables

Variables	Gender	N	M	SD	t-test	df	p
STM	F	304	20.05	5.19	3.99	597	0.00
	M	295	18.40	4.94			
SWS	F	304	34.51	4.47	6.82	596	0.00
	M	294	31.92	4.84			
NFA	F	303	11.22	4.74	-2.77	594	0.01
	M	293	12.28	4.60			
OO	F	304	20.56	4.61	2.51	598	0.01
	M	296	19.58	4.94			
SOP	F	304	23.96	6.09	-1.04	597	0.30
	M	295	24.46	5.57			
SPP	F	304	22.69	8.68	-3.58	598	0.00
	M	296	25.15	8.13			
SA	F	303	15.21	4.44	0.38	596	0.70
	M	295	15.07	4.55			
TA	F	303	19.07	4.11	1.97	592	0.05
	M	291	18.43	3.86			
AEI	F	305	9.31	2.26	-1.04	596	0.30
	M	293	9.50	2.20			
AC	F	304	12.07	2.15	2.50	597	0.01
	M	295	11.60	2.42			

Legend: STE - Sensitivity to Mistakes; SWS – Satisfaction with Success; NFA – Need for Admiration; OO – Organization and Order; SOP – Self-oriented Perfectionism; SPP – Socially Prescribed; Perfectionism; SA – State Anger; TA – Trait Anger (temperament and reaction); AEI – Anger Expression-In; AC – Anger Control

**Table 2.** Matrix of bivariate correlations of dimensions of perfectionism and anger, according to the gender of the respondents

	1	2	3	4	5	6	7	8	9	10
1.	-	-0.07	0.27**	0.29**	0.40**	0.31**	0.15*	0.31**	0.21**	0.15**
2.	0.10	-	-0.10	0.08	0.05	-0.20**	-0.20**	-0.12*	-0.13*	0.19**
3.	0.40**	0.05	-	0.21**	0.34**	0.42**	-0.02	0.08	0.18**	-0.09
4.	0.36**	0.03	0.33**	-	0.35**	0.13*	-0.06	-0.02	0.12*	0.07
5.	0.44**	0.14*	0.48**	0.36**	-	0.45**	0.04	0.19**	0.24**	0.11
6.	0.24**	-0.16**	0.42**	0.23**	0.40**	-	0.16**	0.28**	0.22**	-0.01
7.	0.06	-0.31**	-0.08	-0.01	-0.06	0.01	-	0.59**	0.02	-0.07
8.	0.21**	-0.20**	0.06	-0.04	0.10	0.10	0.48**	-	0.01	-0.09
9.	0.16**	0.09	0.03	0.13*	0.08	0.09	-0.10	-0.05	-	0.30**
10.	0.06	0.21**	-0.02	0.09	0.10	-0.02	-0.02	0.07	0.26**	-

Legend: Correlations for girls are shown above the diagonal and below for boys; 1. STE - Sensitivity to Mistakes; 2. SWS – Satisfaction with Success; 3. NFA – Need for Admiration; 4. OO – Organization and Order; 5. SOP – Self-oriented Perfectionism; 6. SPP – Socially Prescribed Perfectionism; 7. SA – State Anger; 8. TA – Trait Anger (temperament and reaction); 9. AEI – Anger Expression-In; 10. AC – Anger Control; \*\* p<0.01; \* p<0.05.

Three regression analyzes were performed - one on the girl's subsample, the other on the boy's subsample, and the contributions on the whole sample were also checked. The obtained results indicate a different structure of predictors in relation to the gender of the respondents.

The results of the regression analysis for the criterion variable State Anger are shown in Table 3. On the whole sample, all entered predictors together explain 9% of the variance, which proved to be statistically significant. In the girl's subsample, aspects of perfectionism explain slightly smaller variance (8%), which is statistically significant. In the boy's subsample,

all aspects of perfectionism together explain 12% of the variance, which also proved to be statistically significant, at a level of less than 1%.

The results of the regression analysis for the criterion variable Trait Anger (temperament and reaction) are shown in Table 4. On the whole sample, all entered predictors together explain 12% of the variance, which proved to be statistically significant. In the subsample of girls, the dimensions of perfectionism explain 16% of the variance, which is statistically significant. In the boy's subsample, all aspects of perfectionism together explain 11% of the variance, which also proved to be statistically significant.

**Table 3.** Results of regression analysis for prediction of State Anger, on the total sample and by gender of respondents, with dimensions of perfectionism

Predictors	Total (N=582)		Girls (N=293)		Boys (N=289)	
	$\beta$	p	$\beta$	p	$\beta$	p
STM	0.17	0.00	0.16	0.02	0.15	0.02
SWS	-0.24	0.00	-0.16	0.01	-0.33	0.00
NFA	-0.12	0.01	-0.12	0.07	-0.09	0.20
OO	-0.30	0.51	-0.08	0.22	0.09	0.90
SOP	-0.30	0.58	-0.02	0.83	-0.04	0.62
SPP	0.10	0.21	0.15	0.03	-0.03	0.64
R	0.30		0.29		0.38	
R <sup>2</sup>	0.09		0.08		0.12	
F	9.16**		4.23**		6.46**	

Legend: STM - Sensitivity to Mistakes; SWS – Satisfaction with Success; NFA – Need for Admiration; OO – Organization and Order; SOP – Self-oriented Perfectionism; SPP – Socially Prescribed Perfectionism; R - multiple correlation coefficient; R<sup>2</sup> – coefficient of multiple determination; F – the ratio of ANOVA; \*\* p<0.01

**Table 4.** Results of regression analyzes for prediction of the Trait Anger, on the total sample and according to the gender of the respondents, with the dimensions of perfectionism

Predictors	Total (N=580)		Girls (N=294)		Boys (N=286)	
	$\beta$	p	$\beta$	p	$\beta$	p
STM	0.30	0.00	0.29	0.29	0.26	0.00
SWS	-0.12	0.00	-0.05	-0.05	-0.23	0.00
NFA	-0.08	0.09	-0.09	-0.09	-0.02	0.82
OO	-0.12	0.01	-0.19	-0.19	-0.14	0.03
SOP	0.05	0.36	0.04	0.04	0.50	0.47
SPP	0.12	0.01	0.22	0.22	0.02	0.74
R	0.35		0.40		0.33	
R <sup>2</sup>	0.12		0.16		0.11	
F	13.56**		9.32**		5.78**	

Legend: STM - Sensitivity to Mistakes; SWS – Satisfaction with Success; NFA – Need for Admiration; OO – Organization and Order; SOP – Self-oriented Perfectionism; SPP – Socially Prescribed Perfectionism; R - multiple correlation coefficient; R<sup>2</sup> – coefficient of multiple determination; F – the ratio of ANOVA; \*\* p<0.01

The results of the regression analysis for the criterion variable Anger Expression-In are shown in Table 5. On the whole sample, all entered predictors together explain only 5% of the variance, which is statistically significant. In the subsample of girls or teenage girls, the dimensions of perfectionism explain slightly more of Anger Expression-In variance (9%), which is also statistically significant. Unlike the whole sample and subsample of girls, it was shown that, on the boy's subsample, the model was not significant, which is why it is not shown in the table.

The results of the regression analysis for the for the criterion variable Anger Control are shown in Table 6. On the whole sample, all entered predictors together explain 8% of the variance, which proved to be statistically significant. In the girl's subsample, the dimensions of perfectionism explain 9% of the variance, which is statistically significant. In the boy's subsample, aspects of perfectionism together explain smaller variance 6%, compared to the whole sample and the subsample of girls, which also proved to be statistically significant.

**Table 5.** Results of regression analysis for prediction of Anger Expression-In, on the total sample and for girls, with dimensions of perfectionism

Predictors	Total (N=581)		Girls (N=294)	
	$\beta$	p	$\beta$	p
STM	0.10	0.04	0.08	0.19
SWS	0.06	0.13	-0.11	0.06
NFA	-0.01	0.79	0.03	0.62
OO	0.04	0.35	0.04	0.53
SOP	0.09	0.08	0.13	0.06
SPP	0.09	0.07	0.09	0.20
R	0.23		0.30	
R <sup>2</sup>	0.05		0.09	
F	5.30**		4.57**	

Legend: STM - Sensitivity to Mistakes; SWS – Satisfaction with Success; NFA – Need for Admiration; OO – Organization and Order; SOP – Self-oriented Perfectionism; SPP – Socially Prescribed Perfectionism; R - multiple correlation coefficient; R<sup>2</sup> – coefficient of multiple determination; F – the ratio of ANOVA; \*\* p<0.01

**Table 6.** Results of regression analysis for prediction of Anger Control, on the total sample and according to the gender of the respondents, with the dimensions of perfectionism

Predictors	Total (N=581)		Girls (N=293)		Boys (N=288)	
	$\beta$	p	$\beta$	p	$\beta$	p
STM	0.10	0.10	0.15	0.02	0.03	0.69
SWS	0.22	0.22	0.21	0.00	0.20	0.00
NFA	-0.13	-0.13	-0.17	0.01	-0.09	0.20
OO	-0.02	-0.02	-0.01	0.91	-0.04	0.51
SOP	0.10	0.10	0.07	0.29	0.13	0.08
SPP	0.01	0.01	0.01	0.88	0.02	0.77
R	0.28		0.31		0.25	
R <sup>2</sup>	0.08		0.09		0.06	
F	8.33**		4.88**		3.02*	

Legend: STM - Sensitivity to Mistakes; SWS – Satisfaction with Success; NFA – Need for Admiration; OO – Organization and Order; SOP – Self-oriented Perfectionism; SPP – Socially Prescribed Perfectionism; R - multiple correlation coefficient; R<sup>2</sup> – coefficient of multiple determination; F – the ratio of ANOVA; \*\* p<0.01.

## DISCUSSION

In examining gender differences in the expression of the dimensions of adaptive and maladaptive perfectionism, the state and trait of anger, as well as the expression and control of anger, we obtained results that are, in part, in line with expectations. We expected that the dimensions Sensitivity to Mistakes, and Organization and Order or Compulsiveness, would be more pronounced in boys, and in our study they were more pronounced in girls. Despite the significant expression of maladaptive perfectionism and in the subsample of girls, these are different dimensions, compared to those of boys. The greater expression of Socially Prescribed Perfectionism (SPP), in favor of boys, is in line with the findings of the authors of the Child-Adolescent Perfectionism Scale (CAPS) - (Flett et al. 2000), which we used in our research.

The authors interpret the difference obtained by socialization practice, i.e. persons who represent authorities to children have higher expectations of achievement from boys. Adderholdt and Goldberg (1999) have a similar interpretation, according to which girls are expected to take great care of their appearance and behavior (e.g. politeness and decency), but also to be successful in what they do. Boys are expected to succeed in demonstrating strength and power. Double standards and the complexity of expectations from girls can lead to negative perfectionism (the need for distinct organization and order, concern about mistakes, etc.). In our research, girls achieve significantly higher results on the Satisfaction with Success dimension - assesses pleasant feelings about success and setting high standards. The obtained finding is identical to that obtained in an earlier study in Bosnia and Herzegovina (Ćorluka 2011), in neighboring Croatia (Lauri Korajlija 2010), and in Turkey (Uz-Baş 2011). Taking into account the adaptability of Satisfaction with Success and the already mentioned complex expectations of adults towards girls,

a possible reason why they achieve higher results in this dimension is their adaptation to a situation where they do not receive enough recognition for their efforts. It seems that, in the case of facing the challenges of growing up and accepting (developing) the gender role, and in general, everyday life, perfectionism is a defense mechanism of the personality.

Despite the findings of some researchers, who did not find gender differences in the expression of anger dimensions (Brunner 2004; Hagglund et al. 1994), the finding in our study is

consistent with that obtained by Cox et al. (2000), and Musante et al. (1999). Unlike the Anger Expression-In subscale, which suppresses anger, for example, due to fear of the possible consequences of its manifestation, Anger Control, i.e. the development of internal control over the experience and expression of anger is viewed in a positive or adaptive way, although it may indicate a lower level of awareness of assertive behavior in frustrating situations (Brunner & Spielberger 2009). In examining the dimensions of perfectionism as predictors of anger aspects in girls and boys, the predictor that proved significant in explaining each of the criterion variables of anger is Sensitivity to Mistakes. The contributions of Sensitivity to Mistakes are most pronounced in explaining the Trait Anger (temperament and reaction), which we can interpret by the nature of this aspect of perfectionism, on the one hand, and definitions of anger as personality trait but also emotions, on the other. In a study by Rice and Preusser (2002), Sensitivity to Mistakes was shown to be the most significant characteristic of maladaptive perfectionism. Children and young people, who achieve high results on this subscale, are described as overly sensitive to making mistakes with difficulty in accepting and appreciating work that is less than perfect. The findings are consistent with Hamachek's division into normal or adaptive and neurotic or maladaptive perfectionists, who have an extremely reduced rank of

performance acceptance, with a fear of negative evaluation of others (1978; according to Frost et al. 1990). Adolescents who score high on the anger scale as personality trait may often experience feelings of anger, especially when they feel that others are treating them unfairly (Brunner & Spielberger 2009). Similar interpretations have been cited by some other authors, e.g., anger is an emotion that reflects independence or autonomy, but it is also an emotion whose verbal expression makes people aware of their rights and needs (Markus & Kitayama 1991). Organization and Order stand out as a predictor that has a protective role in predicting the Trait Anger but only on a subsample of boys. According to Lauri Korajlija (2010), Organization and Order represent the positive aspects of perfectionism in children, but also in adults, where it does not refer to neatness and cleanliness, but to the need for things that are important to a person to be successful, to be organized and to have their place. Given all of the above, it seems understandable that difficulties in achieving a goal provoke anger, especially in children and adolescents. This anger can be directed outwards and/or inwards. The structure of the predictors on other anger criteria indicates that the respondents in our study do not have a pronounced tendency to suppress anger, which is in line with their age and the stage of development they go through. Fear of negative evaluation of others is also expected. In a study by Besharat and Shahidi (2010), on a sample of subjects aged 18 to 29 years, a statistically significant positive correlation between trait anger and negative perfectionism, and a significant negative correlation between trait anger and positive perfectionism was obtained. Despite the differences in the age of the respondents, this is in line with the findings that we obtained.

In the explanation of the criterion variable Anger Control, on the subsample of boys, as the only significant and positive predictor, Satisfaction with Success stands out. Its role can be interpreted as protective, mostly due to the interpretations given by the authors of the Anger Inventory (Brunner & Spielberger 2009), who interpret anger control as the development of internal control over the experience and expression of anger, rather than its suppression, because it is generally viewed positively. According to Molnar et al. (2006), it is possible for positive perfectionism to provoke positive affect, which, in turn, has a protective effect on the individual, in situations that provoke anger. In the subsample of girls, in addition to the protective role provided by satisfaction with the achievement, the need for admiration and fear of mistakes were expressed, and the combination of the last two predictors has no protective function, because we found that the pronounced need for admiration was in statistically significant correlations with inward anger expression and with focusing on the expectations of others.

## CONCLUSION

Given the results obtained, our research represents a contribution to the definition of a dimensional diagnostic system to prevent comorbidity of mental disorders and provide more clinically relevant information about each individual. Better knowledge of diagnosing anger and its disorders would improve communication among mental health professionals and would enable better prediction of risky behaviors and the planning of effective interventions.

Due to all the above and in order to prevent the development of psychopathological forms of behavior in children and young people, it is very important that psychological help from experts is available in schools (primary and secondary). In cases when counseling does not help enough, it is necessary to start a longer-term psychotherapeutic treatment.

The instrument which is used to measure anger in this study was for the first time applied in Bosnia and Herzegovina and have satisfactory metric characteristics. The results of this research are a contribution to its validation.

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**Ethical approval:** "All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards."

**Conflict of interest:** None to declare.

### **Contribution of individual authors:**

Vesna Čorluka Čerkez – participated in the design of the study, in the literature search, in the acquisition of data, in the planning and performing of statistical data analysis, in the interpretation of data and manuscript writing.

Mladenka Vukojević – participated in the literature search, in drafting of the article, and in the critical revision of the article.

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