Abstract:

Research objective: Attention was devoted to a comparison of participants of school bullying in cognitive strategies of emotion regulation. We posed the question, if actors of school bullying used the same or different strategies of cognitive emotion regulation. The participants of bullying were divided into four groups according to their roles in bullying, these were: bullies (victimizers), bullied (victims), defenders (helpers) and non-involved in bullying (non-concerned). It was hypothesized that differences between participants exist in the applying of strategies of emotion regulation. Concretely, it was expected that defenders use different strategies than bullies and victims. We assumed that defenders mainly use adaptive strategies, such as positive refocusing, reappraisal, acceptance and planning. We also expected that bullies and victims are oriented to similar patterns of applying the strategies. These assumptions are based on different levels of emotional competencies.

Method: Sample consisted of 489 children (254 boys and 235 girls, aged 12-13). Data were collected in twelve schools (25 classes) in Prague (Praha) and Budweis (České Budějovice), which covered areas of mixed socio-economic backgrounds. The Cognitive Emotion Regulation Questionnaire – short version (CERQ-short) was used to measure cognitive strategies of emotion regulation. CERQ-short has 18 items (Garnefski & Kraaij, 2006). Peer nominations were employed to assess bullying, victimization and defend behavior. We used the modified version of the sociometric technique The Guess Who (Janošová et al., 2016). In this technique with 13 items a student is asked to read descriptive statements and then write down the name of the student who best fits that description. We asked children to nominate those classmates that they thought were bullies and victims. Children also had to nominate those classmates who often helped other children. Data processing consisted of determining the number of nominations for each child. In this way, we found 75 bullies (15.3 %), 45 victims (9.2 %), 108 defenders (22.1 %) and 161 non-involved children (32.9 %). A role was therefore attributed to a total of 389 children; the remaining 100 (20.4%) children did not meet the criteria for any role and were therefore not included in the analysis. Data were analyzed in software SPSS 21.0 for Windows. The descriptive statistics, reliability analysis, correlation analysis and MANOVA were used.

Results: Results show that the roles in bullying (Wilks' Lambda=.882, F=1.51, p<.05), gender (Wilks' Lambda=.877, F=4.93, p<.001) and also the interaction of both (bullying and gender) these variables (Wilks' Lambda=.862, F=1.79, p<.01) influence the preferences of different strategies of emotion regulation. In the case of roles in bullying, three significant effects can be observed, namely in positive reappraisal (F=4.27, p<.01), self-blame (F=3.44, p<.05) and refocus on planning (F=2.90, p<.05). Inspection of the means shows that while defenders use all these three strategies more than other groups, victims use self-blame and planning lower than others. The score of bullies was the smallest in positive reappraisal. Boys and girls differ in four strategies. The boys more prefer positive reappraisal (F=4.83, p<.05) and other blame (F=10.54, p<.01), whereas the girls more accentuate two similar strategies; rumination (F=6.23, p<.05) and catastrophizing (F=8.89, p<.01). The interaction of both variables has significant effect in two strategies; acceptance (F=3.78, p<.05) and putting into perspective (F=3.27, p<.05). Girls use acceptance especially as defenders, and the least as victims. Conversely, boys accept
mainly as victims and least as defenders. Boys put into perspective first of all as victims, and least as defenders. Girls prefer this routine as bullies and less use it as non-involved.

Conclusion: The results indicated that participants of school bullying partly differed in the use of cognitive emotion regulation strategies. In the first hypothesis it was supposed that defenders would differ in reappraisal, planning, and also in acceptance and refocusing. This expectation was partly verified. Defenders indicated more frequent positive reappraisal and refocusing on planning in comparison with other groups. It seems that they think about the situations in the classroom and they try to look for the solution to negative events. However, the defenders also scored higher on the scale of self-blame - possibly situations of bullying irritate them and invoke these feelings. It could be supposed that reappraisal and planning are the consequence of a sense of blame. The second hypothesis was formulated as an assumption of a similar pattern of preferences of emotion regulation strategies of victims and bullies. This assumption was essentially verified. Assessment of the answers of victimizers and victims show predominantly similar results. While self-blame is higher for bullies, positive refocusing and putting into perspective are higher for victims. These findings indicate that victims more cognitively elaborate the situations of bullying. Blaming others was more common in victims and attackers than in other participants. The obtained results are similar to the findings of Quintana-Orts et al. (2019).

It can be assumed that the use of some strategies of cognitive emotional regulation may act as a protective factor weakening the incidence of bullying. Positive reappraisal can be mentioned in this regard. Others may have a risky effect, such as self-blame. However, further research is needed in this area, as other authors point out (Kowalski et al., 2014 Zych, Ortega-Ruiz, & Del Rey, 2015). In a similar way, the protective effect of empathy or social competence in the context of bullying and cyberbullying and, conversely, the risk of moral attachment or neuroticism was pointed to (van Noorden et al., 2015). Menesini and Salmivalli (2017) pointed out the importance of bystanders. Observers’ responses are crucial to eliminating bullying. Therefore, it makes sense to focus intervention programs on bystanders. Likewise, the results of our research showed that observers in the role of defenders differed from other participants in the situation.

**Keywords:** School bullying. Participants of bullying. Cognitive emotion regulation. Adaptive and non-adaptive strategies.

**Introduction**

Bullying in schools is a worldwide problem that can have negative, lifelong consequences both for students who bully and for their victims as well as having consequences for the general school climate and for the right of students to learn in a safe environment without fear (Endresen & Olweus, 2003; Hanewinkel, 2004; Limber et al., 2004; Olweus & Limber, 2009; Zych, Ortega-Ruiz, & Del Rey, 2015). Research evidence considers that bullying phenomena are quite widespread and understanding the nature of bullies and bullying is of crucial importance for both theoretical and practical reasons.

Most experts in the field of bullying agree that there is considerable debate on a clear definition for the term bullying (Sutton, Smith, & Swettenham, 1999). An exhaustive literature searches on the topic of bullying revealed that this problem of clarity in defining bullying is mentioned in many publications.

Researchers agree that bullying is a common problem, however, very few agree on a widely accepted definition of bullying. Smith and Sharp’s (1994) claim that bullying is “a systematic abuse of power“ (pp. 2). This definition incorporates the repetitive nature or bullying. In addition, it implies an imbalance of power within the interaction. That is, the victim cannot defend him or herself easily for various reasons such as being outnumbered or being physically inferior. This definition also implies that others are obligated to intervene for the rights of the victim to be taken into consideration (Smith & Brain, 2000).

Olweus (1993, 1999), a pioneer in this area of research, defined bullying or victimization “as instances when a child is exposed repeatedly and over time to negative actions on the part of one or more other students” (pp. 10). This definition stressed the direct physical nature of the behavior (hitting, pushing, pulling, etc.), as well as its direct verbal nature (teasing, threatening, calling hurtful names, etc.). Additionally, bullying can sometimes take the form of indirect behavior like social exclusion and rumor spreading. Olweus (1999) described bullying
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with reference to three criteria: 1) it is aggressive behavior or intentional harm doing, 2) it is performed repeatedly and over time, 3) it takes place within the context of an interpersonal relationship characterized by an imbalance of power.

We cannot fully understand academic achievement without knowing about the social environment of children in school. For example, children who have few friends who are actively rejected by the peer group, or who are victims of bullying are unlikely to have the cognitive and emotional resources to be able to do well in school (Juvonen & Graham, 2001). There is a rise of scholars’ interest in understanding the psychosocial and emotional dysfunctions which are caused by traumatic experiences due to an inability to regulate emotions (Bandura, et al., 2003). These traumatic experiences typically happen in elementary school and are sometimes associated with bullying. Children who cannot properly self-regulate, express their volatile emotions in a variety of ways, including screaming if they do not have their way, hitting out with their fists, or bullying other children. The importance of studying emotion regulation is indicated by many authors based on different theoretical perspectives (Gross, 1999). The concept of emotion regulation as a special topic was formulated in the early 1980s (Eisenberg et al., 2000; Gross, 1999). Formerly it was integrated into research on emotion and emotional development. Research evidence indicates that the emotion regulation is crucial for mental health and is shown to be related to many behavioral problems and mental health difficulties (Bridges, Denham, & Ganiban, 2004; Gross & John, 2003; Kun & Demetrovics, 2010; Tull et al., 2007).

According to Gross (2002) emotion regulation is defined as the attempt that the individuals make to maintain, inhibit and enhance their emotional experience and expression. The process model of emotion regulation developed by Gross (1998) emphasizes that strategies that act early in the emotion generative process should have a different profile of consequences than strategies that act later on. He also emphasized that emotion regulation can be controlled or automatic, conscious or unconscious and may have their effect in one or more points of the emotion generative processes (Gross & Thompson, 2006). The model distinguishes between antecedent-focused and response-focused emotion regulation strategies. The antecedent-focused strategies refer to the things that one does before the emotion response has become fully activated and has changed one’s behavioral and physiological response, whereas response-focused strategies refer to things that one does once an emotion is underway, after the response strategies have been generated (Gross, Richards, & John, 2006). According to Gross (2002) the first strategy, reappraisal, comes early in the emotion-generative process. It consists of changing the way a situation is construed so as to decrease its emotional impact. The second, suppression, comes later in the emotion – as a generative process. It consists of inhibiting the outward signs of inner feelings. Findings from the experimental studies conducted by John and Gross (2004) show that reappraisal and suppression have acute consequences on affective, cognitive and social functioning.

The conception of emotion regulation specifically oriented to cognitive aspects was elaborated by Garnefski and her collaborators (Garnefski & Kraaij, 2006; Garnefski & Kraaij, 2014; Garnefski, Kraaij, & Spinhoven, 2001). These authors were grounded in the theory of coping. They state that coping strategies are divided between those related to thinking about situations and those related to behaviors in situations. The first group constitutes cognitive coping. In the opinion of the authors, the concepts of cognitive coping and cognitive emotion regulation are very similar, and they could be treated as synonyms (Garnefski, Kraaij, & Spinhoven, 2001). Conceptions of coping by Carver and Scheier (1990), by Parker and Endler (1992) and by Folkman and Lazarus (1988) are the basis for the determination of cognitive emotion regulation strategies. Garnefski, Kraaij, and Spinhoven (2001) formulated nine strategies: self-blame, blaming others, acceptance, refocusing on planning, positive refocusing, rumination (or focus
on thought), positive reappraisal, putting into perspective and catastrophizing. To measure these strategies, they developed the questionnaire CERQ (which we will detail later).

The study conducted by Camodeca and Goossens (2005) which aimed to understand social information processing and emotions in the bullying situation including reactive and proactive aggression, showed that bullies and victims displayed deficits in processing of social information and responded more emotionally to adverse reactive aggression compared to other children. Both bullies and victims, compared to the other children, scored higher on hostile interpretation, anger, retaliation and ease towards aggression. However, they differed in motivation, which leads to their behavior and final outcomes of their acts.

Following this assumption, Menesini et al. (2003) aimed to understand the role of emotions and reasoning in relation to children’s behavior in bullying situations. The focus of the study was to analyze emotions such as guilt and shame, expressed in the sense of moral responsibility and indifference and pride expressed in an attitude of moral disengagement. The findings from the study showed significant differences between bullies, victims and outsiders regarding moral disengagement, at both the affective and cognitive levels. Bullies showed a higher level of moral disengagement as compared to victims and other children. Moreover, their specific justification revealed that bullies “have a profile of egocentric reasoning and when they think about themselves in this role, personal motives and the advantages of bullying behaviors are sufficient to justify their behaviors” (Menesini et al., 2003, p. 521).

Similarly, in the study conducted by Ahmed and Braithwaite (2004) they found out that shame acknowledgment reduces the occurrence of bullying, whereas shame displacement increases it. Furthermore, study conducted by Menesini and Camodeca (2008) aimed to understand intentional and non-intentional situations eliciting shame and guilt in relation to children’s involvement in bullying, victimization and prosocial behaviors. The findings from this study showed that in shame and guilt situations, prosocial children reported to more feelings of shame and guilt than bullies and non-involved children.

Quintana-Orts et al. (2019) studied differences of cognitive emotion regulation strategies in relation to the involvement in bullying roles (i.e. perpetrators, victims, bully-victims and uninvolved students). The routines of emotion regulation were the pursued strategies as according to Garnefski and Kraaij (2006). The results revealed that the significant predictors of victim and bully-victim roles are otherblaming and selfblaming. Otherblaming also predicts the bully role. As the authors claim, the findings affirmed the relevance of cognitive emotion regulation strategies in bullying roles (Quintana-Orts et al., 2019).

Similarly, in our research the attention was devoted to a comparison of participants of school bullying in cognitive strategies of emotion regulation. We posed the question of whether actors of school bullying used the same or different strategies of cognitive emotion regulation. The participants of bullying were divided into four groups according to the roles in bullying, and these were: bullies (victimizers), bullied (victims), defenders (helpers) and non-involved in bullying (non-concerned). It was hypothesized that differences between participants exist in applying strategies of emotion regulation. Especially, it was expected that defenders use different strategies to bullies and victims. We assumed that defenders mainly use adaptive strategies, such as positive refocusing, reappraisal, acceptance and planning. We also expected that bullies and victims are oriented to similar patterns of applying the strategies. These assumptions are based on different levels of emotional competencies.

**Method**

**Sample**

489 children took part in the study (254 boys and 235 girls, aged 12-13). Data were collected in twelve schools (25 classes) in Prague (Praha) and Budweis (České Budějovice), which
covered areas of mixed socio-economic backgrounds. The selection of the sample was intentional and non-random. The sample was obtained intentionally, according to the possibilities and willingness of the schools. The children attended the sixth grade of a primary school. A letter was sent to the children’s parents in order to obtain their consent for their children’s participation. Consent was given by 100% of the families. Children were tested collectively by researchers in classrooms in their own school. Research was part of the project Czech Science Foundation “School bullying as a process – a social-cognitive analysis of classroom bullying” (P407/12/2325, investigator P. Janošová).

**Measures and procedure**

Cognitive Emotion Regulation Questionnaire – short version (CERQ-short). The CERQ can be used to measure cognitive strategies of emotion regulation. It is a self-report questionnaire that can be administered to subjects aged 12 years and older. The short version of this scale was used with 18 items (Garnefski & Kraaij, 2006). The CERQ-short is divided into 9 subscales, each consisting of two items and each referring to different strategies of emotion regulation: i.e., Self-blame, Other-blame, Rumination, Catastrophizing, Putting into Perspective, Positive Refocusing, Positive Reappraisal, Acceptance and Planning. Items are measured on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always). Subscale scores are obtained by summing up the scores belonging to the particular subscale (ranging from 2 to 10). The higher the subscale score, the more a specific strategy is used. Garnefski and Kraaij (2006) state that CERQ has good psychometric properties. In the present study the Cronbach’s alpha of the whole scale is 0.74. Alphas of individual subscales range from 0.49 (Positive Reappraisal) to 0.79 (Catastrophizing).

Peer nominations were employed to assess bullying, victimization and defending behavior. Many authors (e.g. Österman et al., 1994; Pellegrini, 2001; Menesin & Camodeca, 2008) asserted that peer reports are more reliable than self-reports, especially in the case of bullying. They provide a higher number of judgments, minimizing bias due to individual raters. Furthermore, peer reports avoid the risk of social desirability, which can be quite common when self-reports are used. Peer reports may be biased by prejudice and friendship. In all they seem the most reliable measure to uncover bullying.

For peer nominations we applied the sociometric technique The Guess Who (Keislar, 1957). In this technique a student is asked to read descriptive statements and then write down the name of the student who best fits that description. The student may write more than one name against each statement. We used the modified version, which consisted of 13 items (Janošová et al. 2016). Three of them related to the specification of roles in bullying. We asked children to nominate those classmates that they thought were bullies and victims. Children also had to nominate those classmates who often helped other children. The items we read to the children and they then wrote down their answers. The question for detecting attackers was: Who in your class is hurting other children who do not know or cannot defend themselves? It was also explained to the children what is considered hurting. We emphasized the recurrence of this behavior. The question for finding the victim was: Who does your class often hurt and he or she cannot defend themselves? Again, this was defined in more detail. The question for identifying defenders was: Who in your class most often stands up to those who are being harmed by others? Also in this case, it was specified what is meant by this. Other questions concerned socio-preferential relationships in the classroom.

Data processing consisted of determining the number of nominations for each child. A similar peer nomination procedure was used in the research by Menesini and Canodeca (2008). We used the same procedure as these authors for data processing. We averaged the scores for bullying, victimization and defending behavior, dividing the nominations received by each
child by N, where N was the number of classmates. Then we standardized the scales for the whole sample using z scores. On this basis, we considered as bullies those children who scored higher than 0.50 (half of standard deviation) on the standardized bullying scale and higher in the bullying scale than in the victimization scale. As victims we considered those who scored higher than 0.50 on the victimization scale and higher in the victimization than in the bullying scale. Those children who scored higher than 0.50 on the defend scale and lower than 0.50 on both the bullying and the victimization scales were considered as the defenders. In accordance with Menesini and Canodeca (2008) was chosen a cut-off of 0.50, which allowed us to have more clear-cut groups. Finally, in order to have a group of non-involved, we considered those children who scored lower than 0.50 on the bullying, victimization and defending scales. In this way, we found 75 bullies (15.3 %), 45 victims (9.2 %), 108 defenders (22.1 %) and 161 non-involved children (32.9 %). A role was therefore attributed to a total of 389 children; the remaining 100 (20.4 %) children did not meet the criteria for any role and were therefore not included in the analysis.

Statistical analysis

Data were analyzed on software SPSS 21.0 for Windows. The descriptive statistics, reliability analysis, correlation analysis and MANOVA were used.

Results

Table 1 presents the descriptive statistics and correlations among nine routines of cognitive emotion regulation. Means for the measures were in the moderate to strong range. The highest value was reached for refocus on planning, while the smallest one was for other-blame. When observing the correlations, we find significant associations between majorities of variables. The strongest linkage is between rumination and catastrophizing. Usually, stronger correlations are found between maladaptive strategies and between adaptive strategies. But refocus on planning, classified as adaptive procedures, correlates moderately with maladaptive procedures (self-blame, rumination, catastrophizing). The values of internal consistency are at about 0.7, excluding positive reappraisal with Cronbach’s alpha only 0.49. It should be noted that the scales consist of only two items.

| Variables                  | M   | SD  | alpha | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |
|----------------------------|-----|-----|-------|------|------|------|------|------|------|------|------|
| 1. Acceptance              | 6.35| 2.10|       | .71  |      |      |      |      |      |      |      |
| 2. Rumination              | 7.33| 2.06|       | .68  | .21**|      |      |      |      |      |      |
| 3. Positive reappraisal    | 5.57| 2.02| .49   | .30**| .14**|     |      |      |      |      |      |
| 4. Self-blame              | 6.12| 1.93| .69   | .30**| .41**| .18**|      |      |      |      |      |
| 5. Positive refocusing     | 6.05| 2.35| .71   | .18**| -.04 | .27**| -.06 |      |      |      |      |
| 6. Catastrophizing         | 6.28| 2.40| .79   | .05  | .57**| .08  | .38**| -.13*|      |      |      |
| 7. Other-blame             | 4.75| 1.94| .75   | -.11*| -.02 | .04  | .18**| .01  |      |      |      |

Table 1: Descriptive statistics, Cronbach’s alpha and correlations among all variables (emotion regulation strategies).
To assess the impact of the different roles in school bullying (bully, victim, defender, non-involved) and gender on applying of emotion regulation routines, two-way analysis of variance (MANOVA) were conducted. Its results are presented in tables 2a, 2b and 2c.

**Table 2a**
Two-way analysis of variance: Effect of role in bullying (bully, victim, defender, non-involved) on the strategies of cognitive emotion regulation.

| Variables               | Bully M | Bully SD | Victim M | Victim SD | Defender M | Defender SD | Non-involved M | Non-involved SD | df | F     | p     |
|-------------------------|---------|----------|----------|-----------|------------|-------------|----------------|----------------|----|-------|-------|
| Acceptance              | 6.12    | 2.17     | 6.32     | 2.14      | 6.57       | 1.88        | 6.36           | 2.14           | 3, 326 | 2.063 | .152  |
| Ruminating              | 7.32    | 2.32     | 7.30     | 2.41      | 7.80       | 1.92        | 7.16           | 2.05           | 3, 326 | 6.233 | .013  |
| Positive reappraisal    | 5.03    | 1.90     | 5.29     | 2.18      | 6.07       | 2.00        | 5.49           | 1.99           | 3, 326 | 4.06  | .006  |
| Self-blame              | 6.07    | 2.06     | 5.66     | 2.01      | 6.47       | 1.80        | 5.90           | 1.89           | 3, 326 | 3.438 | .117  |
| Positive refocusing     | 5.64    | 2.51     | 6.17     | 2.39      | 6.22       | 2.39        | 6.15           | 2.30           | 3, 326 | 1.17  | .541  |
| Catastrophizing         | 6.12    | 2.55     | 6.39     | 2.56      | 6.48       | 2.36        | 6.10           | 2.28           | 3, 326 | .720  | .152  |
| Other-blame             | 5.10    | 2.23     | 5.18     | 1.92      | 4.34       | 1.78        | 4.60           | 1.77           | 3, 326 | .644  | .587  |
| Refocus on planning     | 7.49    | 2.25     | 7.20     | 2.17      | 8.20       | 1.69        | 7.44           | 1.94           | 3, 326 | 2.90  | .035  |
| Putting into perspective| 6.47    | 2.16     | 7.06     | 2.03      | 6.65       | 2.12        | 6.24           | 2.17           | 3, 326 | 1.285 | .280  |

**Table 2b**
Two-way analysis of variance: Effect of gender (boys, girls) on the strategies of cognitive emotion regulation.

| Variables               | Boys M | Boys SD | Girls M | Girls SD | df | F     | p     |
|-------------------------|--------|---------|---------|----------|-----|-------|-------|
| Acceptance              | 6.39   | 2.05    | 6.36    | 2.10     | 1, 326 | 2.063 | .152  |
| Ruminating              | 7.03   | 2.22    | 7.78    | 1.93     | 1, 326 | 6.233 | .013  |
| Positive reappraisal    | 5.66   | 2.02    | 5.43    | 2.04     | 1, 326 | 4.833 | .029  |
| Self-blame              | 5.92   | 1.98    | 6.22    | 1.85     | 1, 326 | .162  | .687  |
| Positive refocusing     | 6.02   | 2.39    | 6.16    | 2.36     | 1, 326 | .363  | .547  |
| Catastrophizing         | 5.82   | 2.42    | 6.72    | 2.26     | 1, 326 | 8.886 | .003  |
| Other-blame             | 5.05   | 1.99    | 4.29    | 1.71     | 1, 326 | 10.537 | .001 |
| Refocus on planning     | 7.47   | 2.13    | 7.82    | 1.81     | 1, 326 | 2.746 | .098  |
| Putting into perspective| 6.66   | 2.21    | 6.33    | 2.07     | 1, 326 | 2.746 | .738  |
Table 2c
Two-way analysis of variance: Effect of interaction of role in bullying x gender on the strategies of cognitive emotion regulation.

| Variables               | Boys | Girls |         | M     | SD |         | M     | SD |         | M     | SD |         | df | F    | p    |
|-------------------------|------|-------|---------|-------|----|---------|-------|----|---------|-------|----|---------|----|------|------|
| Acceptance              |      |       |         | 6.25  | 5.55| 2.29    | 1.51  |     |         | 5.79  | 5.17| 2.14    | 1.70| 5.85 | 6.85| 1.32 | 2.00| 6.51 | 6.20| 2.06 | 2.23| 3.326 | 3.780 | .011 |
| Rumination              | 7.12 | 8.18  | 2.42    | 1.60  |     | 7.14    | 7.71  | 2.43| 2.40    | 7.52  | 7.91| 1.97    | 1.91| 6.72 | 7.61| 2.08 | 1.93| 3.326 | .322 | .810 |
| Positive Reappraisal    | 5.19 | 4.36  | 1.95    | 1.57  |     | 5.52    | 4.75  | 2.18| 2.18    | 6.15  | 6.04| 1.85    | 2.06| 5.86 | 5.12| 2.02 | 1.91| 3.326 | .514 | .673 |
| Self-blame              | 5.85 | 7.00  | 2.02    | 2.05  |     | 5.93    | 5.00  | 2.22| 2.12    | 6.67  | 6.40| 1.98    | 1.73| 5.66 | 6.14| 1.82 | 1.94| 3.326 | 2.392 | .069 |
| Positive Refocusing     | 5.52 | 6.18  | 2.41    | 2.96  |     | 6.14    | 6.25  | 2.34| 2.60    | 5.93  | 6.34| 2.40    | 2.40| 6.34 | 5.96| 2.37 | 2.22| 3.326 | .733 | .533 |
| Catastrophizing         | 5.85 | 7.27  | 2.602.00| 6.107 | 0.8  | 2.61    | 2.39  | 6.30| 6.56    | 2.22  | 2.43| 5.49    | 6.72| 2.28 | 2.11| 3.326 | .845 | .470 |
| Other-blame             | 5.40 | 3.82  | 2.25    | 1.66  |     | 5.38    | 4.71  | 2.18| 1.01    | 5.00  | 4.07| 2.00    | 1.63| 4.69 | 4.51| 1.68 | 1.86| 3.326 | 1.628 | .183 |
| Refocus on planning     | 7.27 | 8.45  | 2.39    | 1.21  |     | 6.97    | 7.75  | 2.47| 1.06    | 8.19  | 8.21| 1.69    | 1.71| 7.53 | 7.35| 1.90 | 1.98| 3.326 | 1.484 | .219 |
| Putting into perspective| 6.35 | 7.00  | 2.24    | 1.79  |     | 7.21    | 6.71  | 2.14| 1.74    | 6.26  | 6.81| 2.25    | 2.06| 6.79 | 5.70| 2.19 | 2.02| 3.326 | 3.266 | .022 |

Results show that the roles in bullying (Wilks' Lambda=.882, F=1.51, p<.05), gender (Wilks' Lambda=.877, F=4.93, p<.001) and also the interaction of both (bullying and gender) these variables (Wilks' Lambda=.862, F=1.79, p<.01) influence the preferences of different strategies of emotion regulation. In the case of roles in bullying, three significant effects can be observed; (Table 2a), namely in positive reappraisal (F=4.27, p<.01), self-blame (F=3.44, p<.05) and refocus on planning (F=2.90, p<.05). Inspection of the means shows that defenders use all these three strategies more than other groups. In contrast, victims use self-blame and planning lower than others. The score of bullies was the smallest in positive reappraisal. Boys and girls differ in four strategies (Table 2b). The boys more prefer the positive reappraisal (F=4.83, p<.05) and other blame (F=10.54, p<.01), whereas the girls more accentuate two similar strategies,
rumination (F=6.23, p<.05) and catastrophizing (F=8.89, p<.01). The interaction of both variables (Table 2c) has significant effect in two strategies, acceptance (F=3.78, p<.05) and putting into perspective (F=3.27, p<.05). Girls use acceptance especially as defenders, and the least as victims. In contrast, boys accept mainly as victims and at least as defenders. Boys put into perspective first of all as victims, and last as defenders. Girls prefer this routine as bullies and less use it as non-involved.

**Discussion**

The results indicated that participants of school bullying partly differed in use of cognitive emotion regulation strategies. In the first hypothesis it was supposed that defenders would differ in reappraisal, planning, and in acceptance and refocusing too. This expectation was partly verified. Defenders indicated as more frequent positive reappraisal and refocus on planning in comparison with other groups. It seems that they think about the situations in the classroom and they try to look for the solution of negative events. However, the defenders also scored higher on the scale of self-blame. Maybe situations of bullying irritate them and invoke these feelings. It could be supposed that reappraisal and planning are the consequence of a sense of blame. The defenders scored higher also in acceptance and rumination, but the differences in comparison with other groups were not significant. The second hypothesis was formulated as an assumption of similar pattern of preferences of emotion regulation strategies at victims and bullies. This assumption was essentially verified. Assessment of the answers of victimizers and victims show predominantly similar results. While self-blame is higher in bullies, positive refocusing and putting into perspective are higher in victims. These findings indicate that victims more cognitively elaborate the situations of bullying. Blaming others was more common in victims and attackers than in other participants. The obtained results are similar to the findings of Quintana-Orts et al. (2019).

The dynamics of bullying is of great importance for the development of bullying in the classroom, and the mechanism of bullying confirms that bullying is not an individual problem of bullying and its victims, but a problem of the whole class (Šimegová, 2007a). As a problem, Šimegová (2007b) states that the reactions of schoolchildren sometimes express reconciliation, denial, or justification of bullying by "getting stuck"; or the perception of bullying as entertainment. (Šimegová, 2007b). The forms of bullying used by respondents in our research are the same as the conclusions of some other surveys (Kováčová, 2011; Serafinová, 2011), which indicate that the most frequent forms of bullying include verbal attacks (defamation, smirking, humiliation and defamation) and physical attacks (shouting, kicking, punching).

The comparison of results of girls and boys showed the differences in four strategies. The girls more used two similar strategies, namely rumination and catastrophizing. For boys the higher score in blaming others and in reappraisal were found. We supposed that a bigger sensitivity of girls and rather rational approach of boys were expressed. Some small differences between both groups were revealed regarding roles in aggression.

Garnefski, Kraaij, and Spinhoven (2001) split the strategies of emotion regulation into two groups, more and less adaptive. Positive refocusing, positive reappraisal, putting into perspective, refocus on planning and acceptance belong to more adaptive strategies. Rumination, self-blame, blaming others, and catastrophizing are characterized as less adaptive. Preferences of cognitive emotion regulation considering the roles of bullies and victims do not show any salient uniqueness. From the more adaptive strategies, bullies accomplished a little bit lower score in reappraisal and refocusing. Among the less adaptive strategies bullies and victims scored higher in blaming others. However, in general the preferences of emotion regulation strategies did not allow for the possibility of accurate identification of expected
deficits in emotional competencies of bullies and victims. In this sense it could be assessed that the above-mentioned findings considering the defenders were more effective. It can be assumed that the use of some strategies of cognitive emotional regulation may act as a protective factor weakening the incidence of bullying. Positive reappraisal can be mentioned in this regard. Others may have a risky effect, such as self-blame. However, further research is needed in this area, as other authors point out (Kowalski et al., 2014; Zych, Ortega-Ruiz, & Del Rey, 2015). In a similar way, the protective effect of empathy or social competence in the context of bullying and cyberbullying and, conversely, the risk of moral attachment or neuroticism was pointed out (van Noorden et al., 2015). Menesini and Salmivalli (2017) pointed out the importance of bystanders. Observers’ responses are crucial to eliminating bullying. Therefore, it makes sense to focus intervention programs on bystanders. Likewise, the results of our research showed that observers in the role of defenders differed from other participants in the situation.

The limitation of research is the assessment of strategies in the virtue of self-statements, which can lead to underestimation or contrariwise to an overestimation of the extent of using cognitive emotion regulation strategies. Another limitation could be fact that strategies were found at the general level. Significant knowledge could be found by research in concrete situations because applying the strategies of emotion regulation according to situational circumstances could be expected. This approach simultaneously gives a possibility to include the study of process of school bullying, which many authors especially accentuate (e.g. Frisén, Jonsson, & Persson, 2007, Hamarus & Kaikkonen, 2008, Spears, 2009). A weakness can be seen that besides emotion regulation other emotional competencies were not studied (e.g. understanding of emotions or emotional intelligence as a complex ability). The perspectives of future research lie in the inclusion of these aspects (Lomas et al., 2012). Additionally, the limitations of the research are the use of only one method (i.e. peer nomination) of identifying roles in bullying. Because of this, the results need to be considered carefully.

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References

Ahmed, E., & Braithwaite, V. (2004). What, me ashamed? Shame management and school bullying. *Criminology and Penology, 41*(3), 269–294.

Bandura, A., Caprara, G. V., Barbaranelli, C., Gerbino, M. G., & Pastorelli, C. (2003). Role of Affective Self-Regulatory Efficacy in Diverse Spheres of Psychosocial Functioning. *Child Development, 74*(3), 769–782. [https://doi.org/10.1111/1467-8624.00567](https://doi.org/10.1111/1467-8624.00567)

Bridges, L.J., Denham, S.A, & Ganiban, J. M. (2004). Definitional issues in emotion regulation research. *Child Development, 75*(2), 340–345. [https://doi.org/10.1111/j.1467-8624.2004.00675.x](https://doi.org/10.1111/j.1467-8624.2004.00675.x)

Camodeca, M., & Goossens, F. A. (2005). Aggression, social cognitions, anger and sadness in bullies and victims. *Journal of Child Psychology and Psychiatry, 46*(2), 186–197. [https://doi.org/10.1111/j.1469-7610.2004.00347.x](https://doi.org/10.1111/j.1469-7610.2004.00347.x)

Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control-process view. *Psychological Review, 97*(1), 19–35. [https://doi.org/10.1037/0033-295X.97.1.19](https://doi.org/10.1037/0033-295X.97.1.19)

Endresen, I., & Olweus, D. (2003). Participation in power sports and antisocial involvement in pre-adolescent and adolescent boys. *Journal of Child Psychology and Psychiatry, 46*(5), 468–478. [https://doi.org/10.1111/j.1469-7610.2005.00414.x](https://doi.org/10.1111/j.1469-7610.2005.00414.x)

Eisenberg, N., Fabes, R.A., Guthrie, I.K., & Reiser, M. (2000). Dispositional Emotionality and Regulation: Their Role in Predicting Quality of Social Functioning. *Journal of Personality and Social Psychology, 78*(1), 136–157.

Frisén, A., Jonsson, A.-K., & Persson, C. (2007). Adolescents’ perception of bullying: Who is the victim? Who is the bully? What can be done to stop bullying? *Adolescence, 42*(168), 749–761.

Folkman, S., & Lazarus, R.S. (1988). The relationship between coping and emotion: Implications for theory and research. *Social Science Medicine, 26*(3), 309–317. [https://doi.org/10.1016/0277-9536(88)90395-4](https://doi.org/10.1016/0277-9536(88)90395-4)

Garnefski, N., & Kraaij, V. (2006). Cognitive emotion regulation questionnaire – development of a short 18-item vision (CERQ-short). *Personality and Individual Differences, 41*(6), 1045–1053. [https://doi.org/10.1016/j.paid.2006.04.010](https://doi.org/10.1016/j.paid.2006.04.010)

Garnefski, N., & Kraaij, V. (2014). Bully victimization and emotional problems in adolescents: moderation by specific cognitive coping strategies?. *Journal of Adolescence, 37*(7), 1153–1160. [https://doi.org/10.1016/j.adolescence.2014.07.005](https://doi.org/10.1016/j.adolescence.2014.07.005)

Garnefski, N., Kraaj, V., & Spinhoven, Ph. (2001). Negative life events, cognitive emotion regulation and depression. *Personality and Individual Differences, 30*(8), 1311–1327. [https://doi.org/10.1016/S0191-8869(00)00113-6](https://doi.org/10.1016/S0191-8869(00)00113-6)

Gross, J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2*(3), 271–299. [https://doi.org/10.1037/1089-2680.2.3.271](https://doi.org/10.1037/1089-2680.2.3.271)
Gross, J.J. (1999). Emotion regulation: Past, present, future. *Cognition & Emotion, 13*(5), 551–573. https://doi.org/10.1080/026999399379186

Gross, J.J. (2002). Emotion regulation: Affective, cognitive, and social consequences. *Psychophysiology, 39*(3), 281–291. https://doi.org/10.1017/s0048577201393198

Gross, J.J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*(2), 348–362. https://doi.org/10.1037/0022-3514.85.2.348

Gross, J.J, & Thompson, R.A. (2006). Emotion regulation: conceptual foundations. In J.J. Gross (Ed.), *Handbook of emotion regulation*. New York: Guilford Press.

Gross, J.J., Richards, J.M., & John, O.P. (2006). Emotion regulation in everyday life. In D.K. Snyder, J.A. Simpson, & J.N. Hughes (Eds.), *Emotion regulation in families: Pathways to dysfunction and health* (pp. 13–35). Washington DC: American Psychological Association.

Hamarus, P., & Kaikkonen, P (2008). School bullying as a creator of pupil peer pressure. *Educational Research, 50*(4), 333–345. https://doi.org/10.1080/00131880802499779

Hanewinkel, R. (2004). Prevention of bullying in German schools: An evaluation of an anti-bullying approach. In P. K. Smith, D. Pepler, & K. Rigby (Eds.), *Bullying in schools: How successful can interventions be?* (pp. 81–97). Cambridge: Cambridge University Press.

Janošová, P., Kollerová, L., Zábrodková, K., Kressa, J., & Dědová, M. (2016). *Psychologie školní šikany*. Praha: Grada Publishing.

John, O. P., & Gross, J. J. (2004). Healthy and unhealthy emotion regulation: Personality processes, individual differences, and life span development. *Journal of Personality, 72*(6), 1301–1333. https://doi.org/10.1111/j.1467-6494.2004.00298.x

Juvonen, J., & Graham, S. (Eds.). (2001). *Peer harassment in school: The plight of the vulnerable and victimized*. New York: Guilford Press.

Keislar, E. R. (1957). The Validity of the Guess-Who technique with large adolescent population. *The Journal of Genetic Psychology, 91*(1), 131–135. https://doi.org/10.1080/00221325.1957.10533037

Kováčová, B. (2011). Výskumy v oblasti šikanovania na Slovensku. In *Šikanovanie v prostredí školy. Možnosti prevencie a zvládania*. Trnava: Typi Universitatis Tyrnaviensis, 2011.

Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological Bulletin, 140*(4), 1073–1137. https://doi.org/10.1037/a0035618

Kun, B., Balázs, H., Kapitány, M., Urbán, R., & Demetrovics, Z. (2010). Confirmation of the Three-factor Model of Assessing Emotions Scale (AES): Verification of the Theoretical Starting Point. *Behavior Research Methods, 42*(2), 596–606. https://doi.org/10.3758/BRM.42.2.596

Limber, S. P., Nation, M., Tracy, A. J., Melton, G. B., & Flerx, V. (2004). Implementation of the Olweus Bullying Prevention Program in the Southeastern United States. In P. K. Smith, D.
Pepler, & K. Rigby (Eds.), *Bullying in schools: How successful can interventions be?* (pp. 55–79). Cambridge, England: Cambridge University Press.

Lomas, J., Stough, C., Hansen, K., & Downey, L. A. (2012). Brief report: Emotional intelligence, victimisation and bullying in adolescents. *Journal of Adolescence, 35*(1), 207–211. [https://doi.org/10.1016/j.adolescence.2011.03.002](https://doi.org/10.1016/j.adolescence.2011.03.002)

Menesini, E., & Camodeca, M. (2008). Shame and guilt as behaviors regulators: Relationship with bullying, victimization and pro-social behavior. *British Journal of Developmental Psychology, 26*(2), 183–196. [https://doi.org/10.1016/j.bjdp.2007.05.002](https://doi.org/10.1016/j.bjdp.2007.05.002)

Menesini, E., & Salmivalli, C. (2017). Bullying in schools: the state of knowledge and effective interventions. *Psychology, Health & Medicine, 22*(1), 240–253. [https://doi.org/10.1080/13548506.2017.1279740](https://doi.org/10.1080/13548506.2017.1279740)

Menesini, E., Sanchez, V., Fonzi, A., Ortega, P., Costabile, A., & Feudo, G. (2003). Moral emotions and bullying: A cross national comparison of differences between bullies, victims and outsiders. *Aggressive Behavior, 29*(6), 515–530. [https://doi.org/10.1002/ab.10060](https://doi.org/10.1002/ab.10060)

Olweus, D. (1993). *Bullies at school*. Cambridge, MA: Blackwell.

Olweus, D. (1999). Norway. In Smith, P. K., Morita, Y., Junger-Tas, J., Olweus, D., Catalano, R., & Slee, P. (Eds.), *The Nature of School Bullying. A Cross-National Perspective* (pp. 28–48). London: Routledge.

Olweus, D., & Limber, S. P. (2009). The Olweus Bullying Prevention Program: Implementation and Evaluation over Two Decades. In S. R. Jimerson, S. M. Swearer, and D. L. Espelage (Eds.), *Handbook of Bullying in Schools* (pp. 377–402). New York: Routledge.

Österman, K., Bjorkqvist, K., Lagerspetz, K. M., Kaukiainen, A., Huesmann, L.R., & Fraczek, A. (1994). Peer and self-estimated aggression and victimization in 8-year-old children from five ethnic groups. *Aggressive Behavior, 20*(6), 411–428. [https://doi.org/10.1002/1098-2337(1994)20:6<411::AID-AB2480200602>3.0.CO;2-4](https://doi.org/10.1002/1098-2337(1994)20:6<411::AID-AB2480200602>3.0.CO;2-4)

Parker, J. D. A., & Endler, N. S. (1992). Coping with coping assessment: A critical review, *European Journal of Personality, 6*(5), 321–344. [https://doi.org/10.1002/per.2410060502](https://doi.org/10.1002/per.2410060502)

Pellegrini, A. D. (2001). Sampling Instances of Victimization in Middle School: A Methodological Comparison. In J. Juvonen & S. Graham (Eds.), *Peer Harassment in School: The Plight of the Vulnerable and Victimized* (pp. 125–144). New York/London: The Guilford Press.

Quintana-Orts, C., Rey, L., Mérida-López, S., Sánchez-Álvarez, N., & Extremera, N. (2019). *Cognitive emotion regulation strategies in adolescence: Are there differences in traditional bullying roles?* ISSID Conference, Florence, 2019. [https://doi.org/10.13140/RG.2.2.35711.56486](https://doi.org/10.13140/RG.2.2.35711.56486)

Serafinová, Š et al. (2011). *Prieskum výskytu šikanovania v rámci projektu zdravie v školách.* [online]. Kudlov: ZŠ s MŠ Skalitě. [http://zskskalite.edupage.org/files/PRIE SKUM_VYSKYTU_SIKANOVANIA_V_RaMCI_PROJEKTU__NIE_SME_ZLI__1O_kluckov_k_tolerancii.pdf](http://zskskalite.edupage.org/files/PRIE%20SKUM%20VY%20SKYT% E%20SIKANOVANIA%20V%20RaMCI%20P ROJEKTU%20NIE_SME_ZLI%20%201O_kluckov%20k_tolerancii.pdf)
Bullying at School and Cognitive Emotion Regulation

Smith, P. K., & Sharp, S. (1994). *School bullying: insights and perspectives*. London: Routledge.

Smith, P. K., & Brain, P. (2000). Bullying in schools: Lessons from two decades of research. *Aggressive Behavior, 26*(1), 1–9. https://doi.org/10.1002/(SICI)1098-2337(2000)26:1<1::AID-AB1>3.0.CO;2-7

Spears, B. A. (2009). International perspectives on cyberbullying. Part 1. *Education Technology Solutions*. Issue 33, pp. 80–82. Invited Report of the COST Action ISO801 Cyberbullying Workshop. Vilnius, Lithuania: August 22–23.

Sutton, J., Smith, P.K., & Swettenham, J. (1999). Bullying and “Theory of Mind”: A critique of the “Social Skills Deficit” view of anti-social behavior. *Social Development, 8*(1), 118–126. https://doi.org/10.1111/1467-9507.00083

Šimegová, M. (2007a). *Šikanovanie v školskom prostredí*. Banská Bystrica: Pedagogická fakulta UMB.

Šimegová, M. (2007b). Šikanujúci žiak v prostredí školskej triedy SOU. In *Prevencia – informačný bulletin zameraný na prevenciu sociálno-patologických javov v rezorte školstva. 4/2007*, pp. 12–17.

Tull, M.T., Barrett, H. M., McMillan, E. S., & Roemer, L. (2007). A preliminary investigation of the relationship between emotion regulation difficulties and post-traumatic stress symptoms. *Behavior Therapy, 38*(3), 303–313. https://doi.org/10.1016/j.beth.2006.10.001

van Noorden, T.H.J., Haselager, G.J.T., Cillessen, A.H.N., & Bukowski, W.M. (2015). Empathy and involvement in bullying in children and adolescents: a systematic review. *Journal of Youth and Adolescence, 44*(3), 637–657. https://doi.org/10.1007/s10964-014-0135-6.

Zych, I., Ortega-Ruiz, R., & Del Rey, R. (2015). Systematic review of theoretical studies on bullying and cyberbullying: Facts, knowledge, prevention and intervention. *Aggression and Violent Behavior, 23*(1), 1–21. https://doi.org/10.1016/j.avb.2015.10.001.