

## COMMON NEGATIVE EVENTS AND DEPRESSION RELATIONS OF JUNIOR KARATE SPORTSMEN

Miroljub Ivanović<sup>1</sup>, Srđan Milosavljević<sup>2</sup> and Uglješa Ivanović<sup>1</sup>

<sup>1</sup> College for Nursery Teachers and Computer Scientific Education, Sremska Mitrovica, Serbia

<sup>2</sup> College of Sports and Health, Belgrade, Serbia

<sup>1</sup> Sports management college, Alpha University, Belgrade, Serbia

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### Abstract

The basic aim of this paper was to examine the prediction of everyday negative events (unwilling unconscious thoughts, the sense of general self-efficiency, dealing with issues skills and perceived support of family, coach and team peers) and depression symptoms of junior karate sportsman. This research was conducted on the appropriate sample of 187 karate sportsman from Kolubara and Macva district (Serbia), being 14-16 years old. The applied measure instruments were - Adolescent Perceived Events Scale, Automatic Thoughts Questionnaire, General Self-Efficacy Scale, Confrontation with Stressing Situation Questionnaire, Social Support Questionnaire, Children's Depression Rating Scale - demonstrated satisfactory reliability. The data was processed using descriptive parameters, Pearson's correlation coefficient and hierarchy regression analysis. Achieved results didn't show that predictor variables (common automatic thoughts, the sense of general self-efficiency, confrontation strategies and perceived support of family, coach and team peers) are the cause of the common negative events and depression relations of karate sportsmen in the middle period of adolescence. On contrary, the results - with the significance level ( $p < .05$ ) - have emphasized the fact that mutual relations of common negative events and depression of karate sportsmen, in this young category, can be explained using independent variables (unwilling unconscious negative thoughts, confrontation focused on feelings, as well as support of family, coach and team peers).

**Key words:** negative events, self-efficiency, stress, social support, depression, karate

### Introduction

Despite the great importance and contemporary status of everyday negative events and depression in adolescence, which include major changes in cognitive, social, and emotional level, in our country, they have been relatively rarely investigated. This paper tempts to give an answer to the question if there is a correlation between complex everyday negative events and depression in the population of junior karate sportsmen, and what the quality of that correlation would be. According to the available studies, in previous research, this problem was studied in the last few decades by a number of authors. Studies by Croatian authors (Kurtović, 2007; Sesar, Živčić-Bećirević & Sesar, 2008; Subotić, Brajša-Žganec & Merkaš, 2008), emphasize that stress life events, including war events, predict the formation and intensifying of depression symptoms and other problems of adaptation on the sample of adolescents. Moreover, in their research (Adkins et al., 2012; Scott & Dearing, 2012), believe that the accumulation of less significant life events represents better predictor of depression than major life events, as well as the fact that the relationship becomes stronger with the age. In their studies (Alloy, 2001; Ge et al., 2001), concluded that the sensitivity to the effects of life events is more intense in people, resulting from increasing cognitive and emotional maturity, romantic relationships, present and past negative events, complex social situations and stress, which leads to increase of the level of depression during the stressful period of adolescence. According to a study (Thompson et al., 2010), the model of individual factors, such as cognition and coping, social support and environment factor, permanently

become significant in prediction of depressive symptoms. When interpreting depression and its definition, cognitive patterns predict the fundamental function of negative thoughts in generating depressive disorders among athletes. This conclusion has been made by Barinov et al, Beljc i Portnyagin (Баринов et. al, 2011; Бельц, 2007; Портнягин; 2012) in their research on a sample of junior karate athletes. The results of the research conducted by (Abela et al., 2009; Huang et al., 2009), confirmed the hypothesis that negative cognitive tendencies of adolescents, independently or in combination with stress, contribute to their current depression. The research conducted by (Scott et al., 2008), suggests that the depressed persons in adolescence are unable to successfully affect their daily negative events. In their studies (Horwitz Net al., 2010; Thompson et al., 2010), found out that adolescents coping skills with stress contributes to the prediction of depression symptoms and the interpretation of the relation of stress and adaptation. It is assumed that badly developed strategies or predominant use of inadequate skills, individually and interacted with stress, are especially harmful to the mental health of adolescents. Also, according to research (Flynn et al., 2010), social support of parents, peers and teachers, is negatively interrelated with depression symptoms. Apart from doing research on samples from school populations, a number of authors investigated the relation between cognitive dimensions and depression in athletes in youth categories. Research made by Markelov, Markelov and Komarovskaya, Sokolov and Jakovlyev (Маркелов, 2012; Маркелов & Комаровская, 2012; Соколова, 2012; Яковлев, 2010) showed that negative everyday events experienced by karate athletes unequally lead to

depression, and Gloria et al (2013) consider that these negative events act as central figures in interpreting depression among junior karate athletes. In addition, Попов, Rybakova and Veshchikov (Попова, 2010; Рыбакова, 2013; Вещиков, 2013) embrace the fact that negative events occurring on a daily basis greatly increase chances of developing hopelessness among junior karate athletes, leading unequivocally to depression. Results from research by Golovihin i Demchenko (Головихин; 2013; Демченко, 2013) proved that everyday negative events are linked to stress, and that the negative particularly affects mental health among junior karate athletes. Moreover, findings made by Szark-Eckard et al (Szark-Eckarda, 2013) in their research point out the fact that negative events occurring on a daily basis, whether being correlated to stress or not, increase chances of depression occurring among karate athletes. An interesting study by Beckman et al (2013), which turns the attention to the interaction between daily negative events and symptoms of depression in German karate athletes, while a study conducted by Kondryatev (Кондратьев, 2012) shows that daily negative events of junior karate athletes affect their mental health. A review of previous research shows obvious lack of research papers on the correlation of negative events, unconscious thoughts, self-efficacy, coping skills and social support on depression of junior karate sportsmen. It is evident that various factors influence the relationship of life events and depressive symptoms among adolescents, i.e. they can absorb or amplify the effects of stress for them. Therefore, it can be assumed that if junior karate sportsmen experience numerous negative events, have low level of self-efficacy, and do not receive suitable social support and do not apply positive successful ways of coping, they feel more depression symptoms. In addition, it can be assumed that the prediction variables of cognition, coping and perceived social support, can be transformed under the influence of stressful life events and act as a set of stress influences on depression variable of karate sportsmen in the middle adolescence. Acceptance or rejection of the hypothesis, and statistical relevance of the obtained coefficients, will be calculated with a critical value and the probability of error of less than 5 %. The above review of relevant references indicates the complexity of the problem. The fact the relationship of phenomenon of daily negative events and depression in adolescents has been investigated worldwide. Due to the fact that correlation regression relationships between everyday negative events and depression in the sports population, have not been found in previous research studies, it is extremely important to empirically investigate this phenomenon, which will lead to its complete understanding. Therefore, in order to obtain new information, i.e. a clear picture of whether the negative repeating day after day can be a predictor depression model, we need to conduct the research on the sample karate sportsmen. Accordingly, the aim of this study was: a) to examine the effects of the interaction of negative events, unconscious thoughts, self-efficacy, coping skills and social support on depression of junior karate sportsmen and b) to investigate if automatic thoughts, self-efficacy, coping skills and social support mediate in the relations of negative events and depression in the adolescent population of karate sportsmen. Finally,

we should emphasize the fact that it is still known about the relationship between the phenomena of everyday negative events and depression in sports, i.e. karate population. Investigation of these problems may have important methodological and theoretical applications. Therefore, this study is very important, since it has been one of the first empirical studies of the given topic in our country on the sample of junior karate sportsmen.

## Methods

### *The sample and survey procedures*

The study involved 187 junior karate sportsmen, aged 14 to 16 years (AM = 15.43 years, SD = 1.09) in the Kolubara and Mačvanski from 10 Serbian clubs KC "Shodan" Valjevo, KC "014 Valjevo" (Valjevo), KC "Kizame" (Valjevo), KC "Mionica" (Mionica), KK "Sveti Sava" (Mionica), KC "Železničar" (Lajkovac), KC "Kaminari" (Osečina), KC "Liig" (Ljig), KC "Ipon" (Koceljeva) and KC "Krupanj" (Krupanj). All subjects had at least two years of systematic and organized karate training and competition. The survey was conducted in June 2014. The examinees had been informed about the aim of the research, before the implementation of survey. They were asked to participate and explained that they have the right to give up whenever they want. Participation in the survey was voluntary. It was conducted by the authors of this paper with the permission of karate clubs. The study was conducted in groups during regular trainings. Group size varied from 20 to 30 examinees. Filling out the questionnaire, on average, took about 60 min. Prior to a survey, the examinees were informed about the research and the way of data safety protection, after which they signed an agreement on participation in the study. Their task was to circle the appropriate number on the scales. After a review of test materials, seven questionnaires which did not conclude answers to all items were discarded, so that the monitoring of the program included the final sample of 387 karate sportsmen.

### *Instruments*

The following measuring instruments were applied in the research: (a) Adolescent Perceived Events Scale (b) Automatic Thoughts Questionnaire, (c) Scale of general self-efficacy, (d) Coping Inventory for Stressful Situations, (e) Social Support Appraisal Scale and (f) Children's Depression Inventory.

#### • *Adolescent Perceived Events Scale*

The measuring instrument is an adaptation of the Adolescent Perceived Events Scale- Apes, which was made by (Kurtović, 2007). Measuring instrument is composed of 20 negative major life events occurring in adolescence, for example, divorce of parents or death of a family member, disagreements with friends etc. The examinees had answered how often above-mentioned events took place in the last 2 months on five-level Likert's scale (1 - *never*, 2 - *sometimes*, 3 - *relatively often*, 4 - *often* 5 - *all the time*). The total score is calculated by adding the individual answers, so that the range of results ranged from 20 to 100. The obtained coefficient of internal consistency (Cronbach alpha) of the total sample in this study is ( $\alpha = .89$ ).

#### • *Automatic Thoughts Questionnaire*

The measuring instrument (Proroković & Zelić, 2002) is a Croatian translation of the Automatic Thoughts Questionnaire - ČUPAM (Hollon & Kendall, 1980),

which estimates some cognitive aspects of depression. The questionnaire is used as a unidimensional measure of the frequency of negative automatic thoughts, with a possible range of scores from 30 to 150, whereas higher results indicate a higher presence of negative automatic thoughts. The coefficient of internal consistency reliability in our study was quite high ( $\alpha = .97$ ), indicating a satisfactory homogeneity.

- *Scale of general self-efficacy*

The measuring instrument (Ivanov i Penezić, 1998) consists of 10 items for which the examinee assesses the extent to which general and stable sense of their own success in dealing with a variety of stressful situations relates to them. The examinees determined the importance of each value on five-level Likert's scale, ranging from 1 (*absolutely untrue for me*) to 5 (*absolutely true for me*), with the possible range of scores from 10 to 50. Reliability of the scale measured by Cronbach alpha coefficient is ( $\alpha = .87$ ).

- *Coping Inventory for Stressful Situations - CISS (Endler & Parker, 1990)*

The measuring instrument is a modified version of the questionnaire (Sorić i Proroković, 2002), which consists of 48 statements about the styles of coping as stable personality characteristics. The questionnaire consists of three subscales (each consisting of 16 statements), relating to three-dimensions of coping. Coping is focused on feelings, problem and avoidance. The examinees were asked to assess the extent to which they apply some form of behavior when they encounter a difficult, stressful or troubling situation on five-level Likert's scale (1 - not at all, to 5 - completely).

Conducted factor analysis - applying main components analysis (Varimax rotation and the Kaiser-Guttman criterion for factor extraction), confirmed the tri-factor structure, which describes coping directed to: problem ( $\alpha = .88$ ), feelings ( $\alpha = .84$ ) and avoidance  $\alpha = .87$ ).

- *Social Support Appraisal Scale*

The measuring instrument (Hudek-Knežević, 1994) is an adapted version of the *Social Support Appraisal Scale - SS*, by Vaux and associates, which measures three aspects of social support: the support of family, friends and support at work. The questionnaire consists of 24 items, the answers are given at the five-level scale from 1 - *absolutely untrue for me* to 5 - *absolutely true for me*, with the possible range of results from 24 to 120. Applying main components analysis (Varimax rotation and Kaiser-Guttman criterion for factor extraction), three latent dimensions were isolated: support of the family, friends and coaches. The coefficients of internal consistency, Cronbach alpha, for individual subscales are ( $\alpha = .89$ ,  $\alpha = .92$  and  $\alpha = .87$ ), and it can be concluded that certain statements reliably represent overall result of the subscales.

- *Children's Depression Inventory*

Croatian version of this measuring instrument (Vulić-Prtorić, 2003) contains 26 sets of 3 three items covering the visible symptoms of depression (sadness, sleep disorders, appetite loss, suicidal ideas, etc). The strength of a symptom is changed within each set of items, and the examinee selects one of the proposed sentences that describe how he felt in the last two days. Answers are scored with 0, 1 or 2 points, and the results ranges from 0 to 54

points, whereas a higher score indicates greater depression. Total result is calculated as a linear combination of all answers. Cronbach reliability coefficient (Cronbach alpha) was ( $\alpha = .88$ ).

## Results

Obtained results are shown in four tables, with the explanations above each table. Kolmogorov-Smirnov test, KS (Max ) was applied for variable distribution testing. The result of this test in Table 1 indicates the fact that the distribution of the results in this test does not deviate significantly from a normal Gaussian distribution ( $p > .20$ ).

Table 1 - Kolmogorov-smirnov test of variable distribution

ITEMS	Max D	K-S p
Negative events	.07	p > .20
Automatic thoughts	.08	p > .20
Self-efficacy	.07	p > .20
Coping directed to a problem	.06	p > .20
Coping focused on emotions	.05	p > .20
Coping by avoidance	.08	p > .20
Family support	.09	p > .20
Friend support	.10	p > .20
Support of a coach	.03	p > .20
Depression	.07	p > .20

Descriptive data on the measured variables in the survey sample are presented in Table 2a, 2b. Based on the distribution of values of arithmetic means and standard deviations, it is evident that the majority of junior karate sportsmen exhibit lower levels of depression, negative events and negative subconscious thoughts without volition.

Table 2a - Descriptive parametres on the subscales of measuring instruments

Items	Minimum	Maximum	AS	SD
Negative events	19.00	75.00	37.98	ruj.28
Automatic thoughts	29.00	145.00	60.02	24.sij
Self-efficacy	9.00	49.00	37.00	svi.99
Coping directed to a problem	15.00	80.00	54.97	kol.72
Coping directed to a problem	15.00	80.00	54.97	kol.72
Coping focused on emotions	17.00	84.00	52.03	11.00
Coping by avoidance	14.00	66.00	44.05	9.stu

Table 2b. Descriptive parametres on the subscales of measuring instruments

Items	Minimum	Maximum	AS	SD
Family support	10.00	75.00	36.00	svi.97
Friend support	9.00	39.00	32.96	svi.44
Support of a coach	7.00	38.00	24.95	svi.99
Depression	.01	49.00	13.vlj	srp.22

Table 3 - Pearson's correlation coefficients between examined variables

Items	1	2	3	4	5	6	7	8	9	10
Negative events	-									
Automatic thoughts	.52									
Self-efficacy	-.05	-.38								
Self-efficacy	-.05	-.38								
Coping directed to a problem	-.05	-.17	.59	-						
Coping focused on emotions	.40	.57	-.21	.13						
Coping by avoidance	.05	-.05	.29	.41	.20	-				
Family support	-.40	-.29	.31	.19	.05	.17	-			
Friend support	-.14	-.19	.29	.30	-.05	.38	.40	-		
Support of a coach	-.29	-.24	.25	.24	.05	.13	.27	.19	-	
Depression	.50	.69	-.41	-.25	.45	.12	-.25	-.26	-.28	

Table 3, shows positive and negative intercorrelations of the measured variables. By examining the table, it was observed that all the tested variables showed a significant linear correlation with depression in the assumed directions. Low and moderate nonzero values of *Pearson's correlation coefficients* were in range of ( $r = -.17$ ) for Coping by avoidance, to ( $r = .67$ ) for negative automatic thoughts. Taking into account the obtained values of the variables, prediction of an examined variable according to the test results of the second variable, with estimation error of ( $p > .95$ ), can be expected. In order to test the interaction of predictor variables (negative events with negative unconscious thoughts without conscious volition, self-efficacy, problem focused coping, emotion and avoidance, as well as the support of family, the karate sportsmen from the club and the coach), and the criterion of depression, in addition to correlation aspect, a series of hierarchical regression analysis was conducted. In the first step of each analysis, the predictors are categorized (Negative events and one of the possible moderators), and in the 2nd step, their mutual influence, in order to check whether it predicts the interaction of criterion variable of depression after controlling the effect of predictor in the first step (Table 4).

After examining the significant nonzero beta coefficients beta in the cells of the matrix, at the level of significance ( $p < .05$ ), it is obvious that none mutual effect showed significant effects on the criterion variable *depression*, except marginally significant effect of mutual influence of negative events, family support, and karate sportsmen from the club. It did not confirm the hypothesis that these factors adjust effects of negative events on *depression* criteria. In order to define if the individual variable represents a mediator between the predictor and criterion, (Baron & Kenny, 1986) consider it is necessary to fulfill three conditions: (1) a predictor must predict the mediator, (2), the mediator must predict the criterion variable after the verification of the predictor, and (3) the mediator must be introduced in the final step of the hierarchical regression analysis. The effect of the independent variables in the interpretation of the variance of criterion variable should not be statistically significant. Thus, if the impact of the predictor is greater than zero, but not statistically significant, then it comes to a complete mediator, and if the effect of predictors fell to a lower level, but it is still statistically significant, then it comes to a partial mediator.

Table 5 shows the results of the regression analyses used to investigate the first precondition, i.e. whether the predictor - negative events - predicts criterion variables: unconscious thoughts without conscious volition, self-efficacy, the occurrence of observance and support of the family, karate sportsmen from club and the coach.

Table 4 - Hierarchical regression analysis for depression criterion variable

<i>T</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>β</i>
<i>Automatic thoughts</i>			
1. step Negative events	.69	.57	.19
Automatic thoughts			.59
2. step Negative events x Automatic thoughts			
	.69	.57	.03
<i>Self-efficacy</i>			
1. step Negative events	.60	.36	.52
Self-efficacy			-.29
2. step Negative events x Self-efficacy			
	.60	.36	.01
<i>Coping focused on a problem</i>			
1. step Negative events	.49	.29	.51
Coping focused on a problem			-.19
2. step Negative events x Coping focused on a problem	.49	.29	.02
<i>Coping focused on emotions</i>			
1. step Negative events	.60	.29	.28
Coping focused on emotions			.29
2. step Negative events x Coping focused on emotions	.60	.29	.05
<i>Coping by avoidance</i>			
1. step Negative events	.52	.26	.50
Coping by avoidance			-.15
2. step Negative events x Coping by avoidance	.52	.26	.05
<i>Family support</i>			
1. step Negative events	.56	.31	.39
Family support			-.19
2. step Negative events x Family support	.56	.31	.05
<i>Friend support</i>			
1. step Negative events	.53	.26	.47
Friend support			-.20
2. step Negative events x Friend support			
	.53	.26	.05
<i>Support of a coach</i>			
1. step Negative events	.49	.30	.41
Support of a coach			.30
2. step Negative events x Support of a coach			
	.49	.07	.05

(*R* = Coefficient of multiple correlation, *R*<sup>2</sup> = Coefficient of determination (total contribution to explained variable) *β* = value of standardized partial beta-coefficient. \*\*\* $p < .05$ )

Bearing in mind the established fact that negative events predicted unconscious thoughts without conscious volition, coping focused on emotions and social support, further analysis in the second step was carried out at the level of significance ( $p < .05$ ) only with the unconscious thoughts, coping directed to feelings, family support, support of karate sportsmen from the club and the coach.

Table 5 - Contribution of a predictor (unconscious thought without conscious volition) to the criterion (unconscious thought without conscious volition, self-efficacy, the occurrence of observance, family support, support of sportsmen from the club and the coach)

items	R	R <sup>2</sup>	B	p
Automatic thoughts	.51	.19	.50	.05
Self-efficacy	.05	.01	-.7	.17
Coping focused on a problem	.03	.01	-.03	.12
Coping focused on emotions	.40	.12	.41	-.05
Coping by avoidance	.08	.03	.07	.13
Family support	.43	.16	-.40	.05
Friend support	.15	.00	-.15	.05
Support of a coach	.35	.09	-0,36	.05

Table 6 - Contribution of unconscious thoughts, confrontations that target feelings, family support, of karate athletes from the team and coach on negative events and depression

Predictors	R	R <sup>2</sup>	B	p
1. step				
Negative events	.50	.26	.50***	.50***
2. step				
Negative events			.03	.08
Automatic thoughts			.48***	.41***
Coping focused on emotions	.80	.08	-.20***	.19**
Family support			-.18***	.16***
Friend support			-.09*	-.07*
Support of a coach			-.22***	.20***

(\*p < .05, \*\*\*p < .01)

In order to control the second and the third step, (Baron & Kenny, 1986) claim that applied hierarchical regression analysis represents the precondition for defining if a certain variable represents a mediator in relation to a predictor and criterion, whereas negative events belong to the first step and Coping focused on emotions, and social support belong to the second step in order to control if relations of negative events and depression are completely caused by these variables. Depression is actually caused by multiple agents, whereas it is assumed that incomplete agents for particular mediators would be obtained. In addition, due to the mutual dependency between the mediators, there is greater possibility of false mutual relationships between variables. Thus, in the second step of hierarchical regression analysis partial variables that represent important predictors of depression are noticed, which draws attention to their intermediate effects (Table 6). A review of statistically significant nonzero beta coefficients, in the second step of hierarchical regression analysis of

predictor variables (the unconscious mind without conscious volition, coping focused on feelings, family support, support of karate sportsmen from the club and the coach) indicated a significant partial effects in the interpretation of the variance of depression. At the same time, the impact of negative events in explaining the variance of depression after the introduction of additional independent variables (unconscious thoughts without conscious volition, coping directed to feelings and social support) in the analysis, is not statistically significant for the whole karate players population. From the point of view of the regression analysis, the results are reliable suggested that the linear correlation between the variables of negative events and depression, on the examined sample, was mediated by independent variables (unconscious thoughts without conscious volition, coping focused on feelings, family support, support of karate sportsmen from the club and the coach).

## Discussion

These findings do not confirm the hypothesis that the unconscious thoughts, a sense of general self-efficacy, coping skills and support of family, karate sportsmen from the club and the coach, coordinate relations between daily negative events and depression of karate sportsmen in middle adolescence. On the contrary, the results hypothetically draw attention to the fact that the dependence of negative events and depression that occur every day is achieved by negative thoughts, coping focused on feelings, family support, support from the karate sportsmen from the club and the coach. However, we could be cautious in the interpretation of this new information, since we investigated frequency of everyday psychological discomfort which is typical for the middle period of adolescence in a population of athletes.

Having considered that experienced verification of such events was not investigated, it can be complex to come to a conclusion whether the amount and frequency of negative events predict depression in junior karate sportsmen and whether these relations can be interpreted by the main characteristics of the analyzed events. Therefore, the hypothesis in this study that the negative automatic thoughts and inactive forms of coping with stress will be intensified, and that self-efficacy, active forms of coping and social support will alleviate the negative effects of the depression on karate sportsmen, is not confirmed, since there were no significant effects of mutual effects, although it turned out that the aforementioned factors predict depressive marks. Fraizer et al., (2004) point out the fact that the intermediate effects are best manifested when the agent is not significantly associated with the predictor and criterion. Given the fact that all possible mediators are in a significant correlation with the depression and automatic thoughts, coping focused on emotions and social support with negative events, it is likely that this can explain the lack of expected related effects.

These authors consider it is likely that the unconscious mind without conscious volition, self-efficacy, coping strategies and social support, directly affect the depression, regardless of the level of negative events. Therefore, it is assumed that in the adolescent period of learning, coping and social support are not yet developed enough in order to stimulate the effects of stress, although to a certain extent they influence the development of depression. The first important finding relates to the fact that the relations of negative events and depression are mostly caused by negative thoughts, feelings caused by coping and insufficient support of family, karate sportsmen from the club and the coach. According to a study (Rose & Abramson, 1992), when negative events occur (disappointment, loss, failure, etc.) people are trying to understand the causes and consequences, and by reproducing the thoughts that are specific to these events, general cognitive style is formed. In their research (Garber & Flynn, 2001), argue that particularly unpleasant events can cause a comprehensive sense of hopelessness and despair, and individuals who believe they are subjects to these events, presumably develop the sense of hopelessness and lack of self-esteem. In a study (Parker et al., 2000), it was found that chronic negative experiences in adolescence contribute to the formation of negative cognition and depression in later life. In their study (Wadsworth et al., 2005) state that: a) adolescents form abilities to apply coping skills during the period of maturing, b) under the influence of experience, their style of coping is subject to transformations, c) responds to stress mediate between stress and psychopathological symptoms and, therefore, later in life, they mitigate the effects of chronic stress conditioned by unfavorable socio-economic situation. However, these findings did not determine whether the greater amount of everyday psychological discomfort increases an individual's susceptibility to depression in the way it influences their coping skills. Therefore, if adolescent often experiences negative arousal, he will apply the skills that would reduce it, and not the skills that would adequately affect these negative events, particularly if there is not enough control over these events. To some extent it explains the interdependence between large amounts of stress and higher levels of depression. These findings have made clearer the fact that the mutual relationship of negative events and depression is caused by of lower perceived social support of parents, the karate sportsmen from the club and the coach. Interpersonal stressful events have the most intense effects on mental health and emotional reactions, as it is proved in the research (Scott et al., 2008). Results that were obtained in this study allude that negative events are one of the factors that contribute to defects in perception of social support among karate juniors. The scale of perceived events for adolescents, made by author Kurtovic (2007), is measured by frequency of experiencing unpleasant everyday events, such as problems with friends and in school, conflicts

with parents, etc., and it can be concluded that most events are interpersonal in nature. Since results from certain research, for ex Beljc (Бельц, 2007) and Rybakova (Рыбакова, 2007), point out the fact that the most intensive effect on mental well being and the emotional response of a karate athlete organism are regarding interpersonal stress events, and it seems that these events contribute to minimizing the amount of support noticed by the karate athlete, which is given by the environment. It is important to note the fact that the support of parents and coaches were stronger than those of friends, and it is in correlation to the results which show that the wellbeing of karate athletes is more closely linked to parents than with fellow athletes in practice. The influence of parents on their children is not declining when athletes reach junior category, according to research by Rybakov, Veshchikov, and Golovihin (Рыбакова, 2013; Вещиков, 2013; Головихин, 2013). Some authors, for ex. Demchenko, but also Popova (Демченко, 2013; Попова, 2010), turn the attention to the disproportion of support by parents and friends in terms of quality. They believe that support given by friends encompasses mainly social skills and that it is more intensely connected to social competence than parent support. They consider that sparring partners are second-hand generators of support, and that karate athletes ask for support from them only in situations when the most important generators fail (parents). Regardless of the relatively small number of research that have examined the support of coaches and its success, there are results indicating that for the emotional well-being of junior karate athletes, the support of the people that handle their training process is very important, such as the results that were obtained in research by Portnyagin, Gloria et al, and Szark-Eckard et al (Портнягин, 2012; Gloria et al., 2013; Szark-Eckardt et al., 2013).. Considering the fact that karate is a fighting sport where young athletes are faced with a large number of invites for competition, and can experience both victory and defeat, it is clear that support of a coach can have a protective effect on depression. Identical findings were obtained by Koskan et al (Coşkun et al., 2014), and they proved that lack of social support, and especially emotional, is a dangerous factor of depression among karate athletes. A particular role of coaches as keepers of mental health at a younger age is expressed by these authors. The results of correlation and hierarchical regression analysis in this study emphasize the fact that in the mid-adolescence of karate sportsmen, direct and indirect relationships of negative events and depression should be analyzed. Although there are many findings that draw attention to the fact that depression may be the answer to major negative events, it is assumed that the dependence of everyday psychological discomfort with depression is caused by negative experience, inactive coping and insufficient social support. In fact, our findings especially emphasize the fact that daily negative

life events in youthful age of karate sportsmen can lead to depression. Obtained results on the predictive function of negative events, automatic thoughts, coping and social support may contribute to the assessment of risk for development of depressive symptoms, as well as in the planning of therapeutic and preventive procedures for junior karate sportsmen. At the same time, the hypothetical findings about the possible ways in which negative events affect depression, give valuable information about the latent dimensions that should be taken into account with karate sportsmen who are under the stress. However, it is important to draw attention to the fact that the negative events variable in our research is only one of the factors that can help in the prediction of negative experience, coping and the perception of social support with karate sportsmen in the middle adolescence. The main limitation of our study is the investigation of exclusively male examinees and the impossibility of comparing the relations of analyzed variables and depression in female adolescent karate players. Also, intersection draft of our study does not allow drawing conclusions on cause-and-effect relationships, as well as the comparison of the levels of depression and negative events with the senior karate sportsmen population. From theoretical point of view, this correlation-regression study enabled initial insight into the complex interrelationships of different predictor variables (as the cause), which may affect various components of depression (as a result). In addition to scientific testing of theoretical models, this work made possible a reliable comparison with the results obtained in other European countries, because a unique methodology that provides a starting point for further quantitative analysis and prediction of everyday negative events and depressive symptoms in the population of athletes, was applied. From a practical point of view, findings of the conducted research could be particularly important in the diagnosis of depressive symptoms in junior karate sportsmen. It is important to emphasize the fact that our transversal study had several methodological limitations (relatively homogeneous sample, the lack of a theoretical frame of reference and research in this area, the collection of data in a very short period of time, the demographic characteristics of the samples, specific sample of junior sportsmen). Therefore, the possibility of interpretation and generalization of the obtained results is partly limited, which reduces its validity. Limitation is also applied to the sample selection

and the cooperation with them. Additional limitation was related to the use of only questionnaires and self-assessment scales, so that in future studies it would be necessary to include other measuring instruments, with different types of stimuli, as well as techniques such as assessment by peers and karate coach. Despite the methodological limitations of this study and the impossibility of explaining and generalization to the entire population of karate sportsmen in Serbia, the obtained results are indicative and indicate the need for more extensive research in this area for a unique insight into this issue.

## Conclusion

The present study investigated the relationship of predictor variables (negative events with the unconscious thoughts without conscious volition, self-efficacy, coping skills and social support) on depression of junior karate sportsmen (as criterion). The analysis of the obtained values of Cronbach alpha coefficients of internal consistency, it was concluded that the applied questionnaires and scales in this study showed satisfactory homogeneity, and can be considered a valid measuring instruments for further use and standardization in future theoretical and practical research of athletes in our environment. Applied correlation and regression models showed with certainty level of 95% that on the one hand, the predictors (automatic thoughts, feelings of general self-efficacy, coping strategies, and support of parents, peers and the coach) affect the variability of the relations of daily negative events and depression of junior karate sportsmen. On the other hand, the results emphasize, with a probability of error ( $p < 0.05$ ), that linear mutual dependence of everyday negative events and depression of karate sportsmen, aged 16-18 years, are generated by independent variables of automatic thoughts, emotion-oriented coping, family support, support of karate sportsmen from the club and the coach. Summarizing basic facts, it can be concluded that the following longitudinal researches should be conducted on a larger and more representative sample of examinees of different gender and ages, and in other sports, with additional statistical procedures, with the increasing number of questionnaires and scales, which would, by including new variables examine indicative correlations between daily negative events and depression, which would lay the foundation for new research of athletes population.

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## RELACIJE SVAKIDAŠNJIH NEGATIVNIH DOGAĐAJA I DEPRESIVNOSTI KARATISTA JUNIORA

### Sažetak

Osnovni cilj u ovom radu bio je ispitivanje predikcija svakodnevnih negativnih događaja (nesvjesne misli bez učešća volje, osjećaj opće samoučinkovitosti, vještine sučeljavanja i opažena potpora porodice, vršnjaka iz kluba i trenera) i depresivnih simptoma kod karatista juniora. Ovo istraživanje, provedeno je na odgovarajućem uzorku od 187 karatista iz Kolubarskog i Mačvanskog okruga, uzrasta 14 do 16 godina. Primjenjeni mjerni instrumenti: Skala percipiranih događaja za adolescente, Upitnik automatskih misli, Skala opće samoučinkovitosti, Upitnik sučeljavanja sa stresnim situacijama, Skala procjene socijalne potpore i Skala depresivnosti za djecu i adolescente, pokazali su zadovoljavajuću pouzdanost. Obrada podataka izvršena pomoću deskriptivnih parametara, Pirsonovog koeficijenta korelacije i hijerarhijske regresijske analize. Dobiveni rezultati nisu pokazali da su prediktorske varijable (svakidašnje automatske misli, osjećaj opće samoučinkovitosti, strategije sučeljavanja i percipirana potpora roditelja, karatista iz kluba i trenera) uzročnik u relacijama svakidašnjih negativnih događaja i depresivnosti karatista u srednjem razdoblju adolescencije. Naprotiv, rezultati, na razini značajnosti ( $p < .05$ ), naglasili su činjenicu da se uzajamna veza svakidašnjih negativnih događaja i depresivnosti kod karatista u mlađoj kategoriji može objasniti nezavisnim varijablama (negativnim nesvjesnim mislima bez učešća volje, sučeljavanjem usredotočenim na osjećaje, kao i potporom porodice, vršnjaka iz kluba i trenera). O rezultatima i njihovom značaju za dalje analize, raspravljano je u okvirima koje postavljaju suvremena shvaćanja i istraživanja empirijske i teorijske građe u populaciji sportaša.

**Ključne riječi:** negativni događaji, samoučinkovitost, stres, društvena potpora, karate

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Correspondence to:

Prof. Mirosljub Ivanović, PhD

Colege for Nursery Teachers and Computer Scientific Education

22000 Sremska Mitrovica, Zmaj Jovina 29, Serbia

Tel.: +381 (0)22 621 864

E-mail: mirosljub.ivanovic@gmail.com