The concept of coping strategies is very important in understanding individual reactions to stress. Coping is psychological mechanism, which consist of thoughts and actions that somebody uses to deal with stress. Cognitive theories highlight that our feelings primary depend on our beliefs, coping strategies present cognitive component that mediate our reactions to external and internal stimulus.

The concept of coping was dominant in clinical psychology during the 1940s and 1950s, and in the eighties, it became one of the most important issues in a series of psychotherapy and educational programs aimed to develop coping skills (Lazarus & Folkman, 1984). The classic definition of Lazarus and Folkman described coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984). They defined coping strategies as a set of behavioral and cognitive responses, designed to master, tolerate, or reduce the demands of a stressful situation.

Studying coping strategies has been caused by a variety of inconsistent results about the effects that life events have in the development of psychopathology among children and adolescents. It has been clarified that even very serious stressful events in a child’s life are not able to produce psychopathologic reactions. It has been found that the appearance of mental problems in childhood and adolescence
after stressful life events is in connection with individual and contextual factors which act as mediators in this process (Goodyer, Herbert, Secher & Pearson, 1997). The most important individual factors in these reactions were personality traits, attribution style, irrational beliefs and coping strategies. Stressful life events and their consequences on parents and their capacity to console and help their children were used as contextual variables in the research. The result shows that coping strategies may influence the development of mental health problems and also protect one’s own personality.

The poor capability to generate more varied solutions in stressful situations shows significant correlations with emotional and behavioural problems of children and adolescents (Compas, Malcarne & Fondacaro, 1988). Successful coping is able to reduce the negative effects of stress, while unsuccessful coping is able to increase stress effects on adaptation in one’s life environment (Herman-Stahl, Stemmler & Petersen, 1995).

Coping strategies are people’s reactions to problems that occur in the context of their life. The ways of coping are unlimited in their heterogeneity as they are dependent upon the different demands and contexts in which they exist. Recent studies have demonstrated about 400 coping strategies (Skinner et al. 2003). During past few years, researchers have investigated huge efforts in the conceptualization of hierarchic models of coping, using superior categories or groups to organize simple coping reactions.

The most known model of coping is the Lazarus and Folkman (Lazarus & Folkman, 1984) Two Factor Model, which presents dual coping strategies. Problem-focused coping refers to active, problem oriented strategies, such as problem resolving, logic analysis of events, and searching for information. These forms of coping are used for problem solving and direct stress reduction. Emotion-focused coping refers to passive, avoidant strategies, oriented toward emotional control such as distraction, fantasy, social withdrawal. These forms of coping are used for controlling or reducing emotional tension and anxiety which occur in problematic situations.

Band and Weistz (Band & Weistz, 1988) also suggested a two factor model in which coping strategies are described in a much wider context. They posited the use of primary and secondary control:
primary control includes all those forms of coping that have impact on objective conditions and events (e.g., coping strategies such as direct problem solving, aggression directed to factors that have caused the problem, avoiding stressful situations, etc); secondary control coping is intended to achieve better compliance with conditions as it is (social and spiritual support, aggression directed towards one’s own emotions, cognitive avoidance, etc).

On the other hand, Carver and colleagues (Carver, Scheier & Weintraub, 1989) developed a multi-dimensional approach to the coping strategies. The first dimension was defined by problem-focus strategies (active coping, planning, suppression of competitive activities, calmly coping with the situation, seeking social support in problem solving). The second dimension includes emotion-focus strategies (seeking emotional social support, positive reinterpretation of events, acceptance, denial, turning to religion). Finally, the third dimension consists of strategies that are defined as less useful in overcoming stress (focusing on emotions and the expression of emotions, behavioural withdrawal, and mental withdrawal).

Although there seems to be a dominance of two factor models, there is a tendency for the formation of multi factor models. These models are formed in order to arrive at a model that is more adequate, one that most comprehensively describes a complex reaction of coping. On the other hand, it is evident that many strategies can be reduced, or discuss similar processes, but rather under a different name (for example, problem-focus coping and primary control are very similar in their description and content).

Ayers (Ayers, Sandler, West, & Roos, 1996) in their research on coping strategies in children and adolescents came upon four groups of coping strategies, from the participants answers to the Children's Coping Strategies Checklist (CCSC) (Ayers et al., 1996). Here, briefly, the two theoretical and empirical sources that served for the creation of Ayers’ model shall be shown.

One theoretical distinction made by investigators of both adult and children's coping behaviour is between problem-focused and emotion focused coping (Compas, Malcame, & Fondacaro, 1988; Lazarus & Folkman, 1984). Problem-focused coping is aimed at problem solving or doing something to directly alter stress levels.
Emotion-focused coping refers to efforts to manage or reduce emotional distress associated with a problematic situation. Within studies on children's coping, (Compas et al. 1988) found that problem-focused coping was negatively correlated with both maternal and child reports of emotional and behavioural problems, whereas emotion-focused coping was positively related to emotional and behavioural problems. However, Stanton and colleagues (Stanton, Danoff-Burg, Cameron, & Ellis, 1994) have recently suggested that the observed relationships between emotion focused coping and emotional and behavioural problems may be partially spurious due to co-findings in the assessment of these two constructs.

An alternative theoretical framework (Billings & Moos, 1981; Ebata & Moos, 1991) has classified coping efforts as being either active (approach focus) or passive (avoidant focus). They define active or approach coping as responses that are directed towards the problem. Such responses "reflect active cognitive and behavioural efforts to define and understand the situation and to resolve or master a stressor by seeking guidance and engaging in problem solving activities". Passive or avoidant responses are indirect methods and "reflect cognitive or behavioural attempts to avoid thinking about a stressor or its implications, to accept or resign oneself to an existing situation, to seek alternative rewards, or to try to manage tension by expressing it openly". It was found that adolescents who proportionally more rely on active than passive methods have higher levels of well-being and lower levels of distress (Ebata & Moos, 1991).

Although some researches came to encouraging results in the classification of coping strategies by using these two theoretical models, others suggested that these strategies were not predictive and psychologically appropriate. Ayers (Ayers et al., 1996) developed a four-dimensional model of coping, based on reports of children so that they may behave in a way to cope with a problematic situation. The children, aged 9 to 13, answered questions in a semi-structured interview that was constructed as a checklist of children's coping strategies, in other words, a checklist of ways to overcome specific life events (e.g., the divorce of their parents). Children's reports, on the basis of self-assessment of behaviour used in their coping, were conceptually classified in 11 different categories. These categories
include the following strategies: cognitive decision making, direct problem solving, seeking understanding, positive cognitive restructuring, expressing feelings, physical release of emotion, distracting actions, avoidant actions, cognitive avoidance, problem focus support, and emotional focus support. After the authors had operationalized these categories into questionnaire items for the Children's Coping Strategies Checklist (CCSC) (Ayers et al., 1996) and had calculated a statistical analysis of the scores on these items, only the category titled “expressing feelings” was dropped due to its poor internal consistency. Of the other 10 categories, Ayers constructed a four-factor model of coping in children and adolescents. Here is a brief description of the factors.

The first factor, or *Active Coping Strategies*, consists of subscales: cognitive decision making, direct problem solving, seeking understanding, and positive cognitive restructuring. It is composed of the cognitive and behavioural activities with which individuals try to solve their problems. For example, making plans on how to solve problems, making sense of a problematic situation, thinking about it in a positive way and direct involvement in activities to change oneself or the environment where one lives. As the second factor, *Distraction Strategies* consist of two subscales in the physical release of emotions and actions of behavioural distraction. It includes behaviours related to the physical release of stress (e.g., engaging in sport activities), or additional mental activities (for example: playing video games, watching television) to draw one’s thoughts away from the problematic situation. *Avoidance Strategies* are the third factor and include items from subscale avoidant actions and cognitive avoidance. They include the behaviour to avoid problematic situations, as well as the cognitive avoidance of problems through imagination and imagining a positive outcome to the situation. Finally, the fourth factor, *Support Seeking Strategies* with subscale focus support and emotional focus support, includes the ability to seek help from other people in the form of tips on how to solve the problem or in a form of understanding that would reduce anxiety and increased negative emotions.

Ayers (Ayers et al., 1996) stated that it is possible to consider its strategy in light of Lazarus’ and Moos’ model. In fact, Ayers’ coping
strategies such as cognitive decision making, direct problem solving and seeking understanding can be included in the Lazarus problem-focus strategy, while all other strategies that Ayers listed are emotion-focus strategies defined by Lazarus. Similarly, Moos active coping includes Ayers cognitive decision making, direct problem solving, seeking understanding, positive cognitive restructuring, problem focused support and emotion focused support, while Ayers other coping strategies are under Moos passive coping.

The model just described has proved itself as theoretically and practically more convenient than the previous two-factor models (Ayers et al., 1996). This is why it has been chosen for the purpose of our study.

It is important to note that many models that have described coping strategies in adults have failed when they must explain the coping strategies of children and adolescents. In fact, children and adolescents have their own specific features and it is not enough to rely on measures that are only valid for adults.

For our research, it is of particular importance the findings of the research regard to coping strategies in boys and girls of middle childhood and early adolescence. Romano (Romano, 1997) found that among girls at the age of 10 and boys at the age of 11 the most often coping skill used is problem solving coping strategies in situations when they are exposed to stress. This is in accordance with most studies that have argued that there are no differences in the use of coping strategies among children of the opposite sex (Altshuler & Ruble, 1989; Band & Weisz, 1988; Spirito et al., 1991). On the other hand, De Boo and Wicherts (De Boo & Wicherts, 2007) in checking the inventory of CCSC (Ayers et al., 1996) from a sample of children (from 9 to 12) found a significant difference in regard to gender in using coping strategies. According to their work, girls frequently use coping strategies that include emotion focused support, distracting actions and cognitive avoidance than boys are apt to. Some other studies also indicate that girls often use the strategy of seeking support and problem solving in regard to boys (Causey & Dubow, 1992).

A large number of studies clearly show that among adolescents, girls more frequently use the seeking support strategy than boys
(Ebata & Moos, 1994; Frydenberg & Lewis, 1993; Hampel & Petermann, 2005; Patterson & McCubbin, 1987; Roecker, Dubow, & Donaldson, 1996; Seiffge-Krenke & Shulman, 1990; Stark, Spri- to, Williams, & Guevremont, 1989). However, young men use avoiding coping strategies more often than girls do (Hampel & Petermann, 2005; Roecker et al., 1996, Stark et al., 1989). Some studies indicate that adolescent boys, unlike adolescent girls, use more strategies that include activities of reducing stress by physical or cognitive distraction, and strategies that lead to emotional discharge (Copeland & Hess, 1995; Frydenberg & Lewis, 1993, Herman-Stahl, Stemmler, & Petersen, 1995, Lee & Larson, 1996; Nigro, 1996).

Present Study. The aims of this study were: 1) to investigate gender differences in using coping strategies among children; 2) to investigate psychometric properties of Children's Coping Strategies Checklist (CCSC) in Serbian sample.

Method. Participants. The research was conducted in Belgrade, Serbia in 2009. The sample consists of 240 students of the fourth grades (10 years old) and eighth grades (14 years old) of primary school. Each group is represented by 50% in the entire sample. In regard to gender, the sample consists of 47,9% of male respondents and 52,1% of female respondents.

Instrument and Procedure. The research was conducted in two primary schools. During the testing, subjects were found in their classrooms, and the examination was performed during regular afternoon classes. The students filled out the questionnaire independently, following verbal instructions by the examiners. Completing the questionnaire took an average of 30 minutes.

Assessment of Children's Coping Behaviours. The instrument that was used in our study is the Children's Coping Strategies Checklist- CCSC (Ayers et al., 1996). For the instrument, participants give answers about how often they behave according items described in the checklist, when they find themselves in problematic situations. The questionnaire contains 45 items, where 4-5 items build one of the 10 subscales. Responses were measured by the 4-point Likert scale: never (1), sometimes (2), often (3), and most of the time (4). The median internal consistency (alpha) coefficient for CCSC in our sample was 0,865 (range from 0,860 to 0,866).
**Results.** By using factor analysis, the principal component method; Promax rotation with Kaiser normalization 4 factors of coping strategies were extracted which explains the 33,304 % variance. These factors are Active Coping (15,429 %), Avoidance Strategies (7,209 %), Support Seeking Strategies (5,346 %) and Distraction Strategies (5,320 %). This factor structure is in accordance with model of Ayers, except that orders of these factors are different to his model.

In the analysis of differences among gender in coping strategies, the Canonical Discriminatory Function was used. One significant canonical discriminatory function was found (r=0,442; Wilks’ Lambda=0,804; $\chi^2=51,386; t<0,000$), which consisted of high scores on Support Seeking Strategies, Avoidance Strategies, Active Coping and low scores on Distraction Strategies (Table 1).

<table>
<thead>
<tr>
<th>Coping strategies</th>
<th>Function 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support Seeking Strategies</td>
<td>0,78</td>
</tr>
<tr>
<td>Avoidance Strategies</td>
<td>0,38</td>
</tr>
<tr>
<td>Distraction Strategies</td>
<td>-0,33</td>
</tr>
<tr>
<td>Active Coping</td>
<td>0,25</td>
</tr>
</tbody>
</table>

The values of group centroids showed that boys and girls differentiate from each other in this function for almost 1 standard deviation (0,983); this value for boys is -0,512 and for girls is 0,471. Our results shows that girls generally use more Support Seeking Strategies, Avoidant Strategies and Active Coping than boys do. On the other hand, boys use more Distraction Strategies than other groups of strategies than girls do. Using this Canonical Discriminatory Function of Coping Strategies 71,7 % of the original data was correctly classified according to gender: 74,8 % of male participants and 68,8 % of female participants were correctly classified (Table 2).

**Table 1**

<table>
<thead>
<tr>
<th>Structure Matrix of CCSC Factors with Regression Factor Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coping strategies</td>
</tr>
<tr>
<td>--------------------</td>
</tr>
<tr>
<td>Support Seeking Strategies</td>
</tr>
<tr>
<td>Avoidance Strategies</td>
</tr>
<tr>
<td>Distraction Strategies</td>
</tr>
<tr>
<td>Active Coping</td>
</tr>
</tbody>
</table>

**Table 2**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Boys (%)</th>
<th>Girls (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>74,8</td>
<td>25,2</td>
<td>100</td>
</tr>
<tr>
<td>Girls</td>
<td>31,2</td>
<td>68,8</td>
<td>100</td>
</tr>
</tbody>
</table>
Analyzing subscales of CCSC it was found that girls scored significantly higher on the following coping strategies: Cognitive Decision Making, Seeking Understanding, Positive Cognitive Restructuring, Problem Focus Support and Emotion Focus Support (Table 3).

<table>
<thead>
<tr>
<th></th>
<th>Male Mean</th>
<th>Male SD</th>
<th>Female Mean</th>
<th>Female SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Decision Making</td>
<td>2.89</td>
<td>0.61</td>
<td>3.05</td>
<td>0.60</td>
<td>-2.07</td>
<td>0.04</td>
</tr>
<tr>
<td>Direct Problem Solving</td>
<td>2.73</td>
<td>0.64</td>
<td>2.84</td>
<td>0.57</td>
<td>-1.42</td>
<td>0.15</td>
</tr>
<tr>
<td>Seeking Understanding</td>
<td>2.48</td>
<td>0.59</td>
<td>2.67</td>
<td>0.56</td>
<td>-2.57</td>
<td>0.01</td>
</tr>
<tr>
<td>Positive Cognitive</td>
<td>2.35</td>
<td>0.60</td>
<td>2.51</td>
<td>0.57</td>
<td>2.12</td>
<td>0.03</td>
</tr>
<tr>
<td>Restructuring</td>
<td>Physical</td>
<td>Release</td>
<td>2.07</td>
<td>0.69</td>
<td>1.44</td>
<td>0.15</td>
</tr>
<tr>
<td>Emotions</td>
<td>Distracting</td>
<td>Actions</td>
<td>2.45</td>
<td>0.66</td>
<td>-0.56</td>
<td>0.57</td>
</tr>
<tr>
<td></td>
<td>Avoidant</td>
<td>Actions</td>
<td>2.59</td>
<td>0.72</td>
<td>-0.70</td>
<td>0.48</td>
</tr>
<tr>
<td></td>
<td>Cognitive</td>
<td>Avoidance</td>
<td>2.61</td>
<td>0.65</td>
<td>-1.55</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td>Problem</td>
<td>Focus</td>
<td>2.10</td>
<td>0.65</td>
<td>-2.41</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Support</td>
<td></td>
<td>1.94</td>
<td>0.62</td>
<td>-4.48</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Discussion. Our findings suggest that girls use more Support Seeking Strategies than boys do. A large number of studies (Ebata & Moos, 1994; Frydenberg & Lewis, 1993; Hampel & Petermann, 2005; Patterson & McCubbin, 1987; Roecker, Dubow & Donaldson, 1996; Seiffge-Krenke & Shulman, 1990; Stark, Spirito, Williams & Guvevremont, 1989; De Boo & Wicherts, 2009) have come to similar findings. The explanation for this behavior could be in the ways expressing emotions among girls and boys. One study showed that parents discuss about emotional experiences much more with their daughters than with their sons, using a variety of terms to describe different emotional states (Brody, 1993). Parents tend to focus on the task, highlight the activity and skill when they are in contact with their sons, but emphasize more the expression of emotion while in communication with their daughters (Block, 1973). In accordance to our results are also the findings of one study regarding the seeking support from one’s significant others (Rueger, Malecki & Demaray,
Girls reported the greatest degree of support from the friends and close friends, while boys showed no difference in the degree of support between friends, parents and teachers. Lever (1976) examined the interaction between adolescents of the opposite sex and found that boys perform certain activities together, engaged in sports or competitive games and that their talks focus mostly on the achievements of famous athletes and sports clubs or on the achievements of their peers in sports or in school. According to this, it is clear that seeking support from others when problems occur is a natural path for girls.

Further results shows that girls use Avoidance Strategies more in comparison with their male peers. There are different studies that have suggested the same (De Boo & Wicherts, 2009; Frydenberg & Lewis, 1993; Griffith et al., 2000) or opposite (Hampel & Petermann, 2005; Roecker et al., 1996; Stark et al., 1989; Winkler, Metzke & Steinhausen, 2002, according to Eschenbeck et al. 2007). Our results can be interpreted by the specific role that males and females have in our society. It is expected for males to be active and to fight in problem situations. For males acting passive is socially undesirable behavior contrary to females.

Additionally, our study has found that girls contrast to the boys significantly more in the use of Active Coping Strategies. This is in line with the findings of various authors (Frydenberg & Lewis, 1993; Griffith, Dubow & Ippolito, 2000; Herman-Stahl, Stemmler & Petersen, 1995; Winkler, Metzke & Steinhausen, 2002). The explanation to these results could be in the slightly higher cognitive ability among adolescent girls, compared to their male peers. Girls are consistently superior in verbal tests, such as knowledge of words, analogies and memorizing words, while boys show a distinct advantage in tasks involving spatial and mechanical skills and solving mathematical problems (Djordjević, 1988) (Therein, boys solve problems, but such problems tend to be mathematical). However, problematic life situations that include other functions besides merely cognitive ones require a different approach to the problem and girls show a general superiority.

On the other hand, it is possible that girls, through their well-developed verbal functions can easily verbalize situations and emo-
tional states in which they are and can easily become aware of their own negative emotions and possible constructive solutions to them.

Boys significantly use Distraction Strategies more when faced with problematic situations, according to our results. This is also in line with some research that came to similar results (Copeland & Hess, 1995; Frydenberg & Lewis, 1993, Herman-Stahl, Stemmler & Petersen, 1995, Lee & Larson, 1996; Nigro, 1996). This result can be explained by the fact that boys, from their childhood, are supported to express negative emotions of anger or aggression through outside activities (O'Kearney & Dadds, 2004). Thus, any anger that is able to occur in a problematic situation can easily be worked off through physical exercise. Rosenfield stated (Rosenfield, 1999) that boys’ socialization of emotion is not allowed to openly express feelings such as helplessness, sadness and uncertainty (which are a reflection of weakness and femininity). They are expected to hide these feelings, remove, shorten, or ignore them, which can lead to abuse of alcohol and various psychoactive substances in adulthood. This also speaks in favor of the fact that young men tend to choose this kind of coping strategy, which often includes efforts to distract feelings whether through physical or mental occupation.

As has been mentioned at the beginning of this article, the importance of choosing the right coping strategies can influence the development of mental problems. One recent study has shown that one’s poorer well-being and greater distress correlates to the avoidant coping strategies and active coping correlates positively with one’s greater well-being among adolescent girls (Frydenberg & Lewis, 2009). Also, it has been found that avoidance strategies in youth can be predictors of PTSD and anxiety, while support seeking could reduce these symptoms (Pina et al., 2008). These findings are important for some further research and have further implications. If the right coping strategies are able to reduce stress, then it is important to find out how to use these strategies in order to overcome life problems.

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