

# THE RELATIONSHIP BETWEEN PARENTAL DIMENSIONS AND PROBLEMATIC INTERNET USE AMONG YOUNG ADOLESCENTS

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## **Abstract:**

*The aim of the study was to investigate the relationship between parental dimensions, estimated by children and problematic Internet use among young adolescents. The study also examined the relationship between parental control of their children's online activities and problematic Internet use. For this purpose, 218 eighth and ninth graders completed a questionnaire composed of general data and data on Internet use, devised by the authors, as well as Internet Addiction Test (IAT) (Young, 1998a), and Children's Reports of parental Behavior Inventory (CRPBI-57) (Keresteš, 1999). The results showed a statistically significant negative connection between the acceptance by mothers and father and problematic Internet use among young adolescents. As predicted, we found a statistically significant positive connection between psychological control by the mother and father and problematic Internet use. We found no positive connection between behavioral control of the mother and father and problematic Internet use. There was no statistical significance in Young's revised Internet Addiction Test scoring in adolescents, pertaining to the degree of controlled Internet use by parents.*

**Keywords:** *parental dimensions, parental Internet activity control, problematic Internet use, younger adolescents.*

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## INTRODUCTION

### *Adolescence*

The authors who explore the adolescence period view it as a transitional developmental period (transition period) from childhood to maturity. Adolescence has its own biological, cognitive, emotional and social aspects and all of them are intertwined. Biological aspects of adolescence today includes the term 'puberty', while the term 'adolescence' is reserved for the psychological, as well as the social aspect of changes at this age (Ćeranić, 2005).

When we talk about adolescence, we must mention Erikson's (Erikson, 2008) 8-stage theory of psychosocial development of identity and personality development. According to Erikson's theory, the process of acquisition of identity takes place throughout life, passing through certain stages of personality development, which are accompanied by crises of identity. From each of them, if successfully overcome, a person comes out with an increased sense of inner unity and with more sense of good judgment. Since the subjects in this study are adolescents, we will pay special attention to the fifth period of psychosocial development, and that is the period of identity formation (12–20 years). Namely, during the fifth stage, the task of a person is to acquire uniqueness, uniqueness of its own personality, establish and strengthen personal identity, and then, in its own way, participate in social groups. This stage is related to *adolescence*, which starts with the end of childhood. An adolescent is in a difficult position, as he is no longer a child (or he is one to a lesser degree), and he is not a grown man either. A young man in this stage of transition, wandering, confusion, in conflict with the environment, searches for his identity to answer the following questions: Who am I? What can I do? What may I do? and What should I become? If identity crisis is negatively, unfavorably solved, that is, if a person does not find a way out of it, he does not know who he is and how is he different from others, ie. then arises the confusion or confusion of identity. Young people are then unsure of their sexual identity, social status, their social roles as well as their own value in the eyes of others.

During adolescence, young people are very obsessed with themselves, they wonder how others see them, how are they evaluated, accepted, especially by their peers. They care about the opinion of their reference group and eagerly want to be accepted by the members of the group, and again, sometimes they want to be isolated, self-sufficient, they withdraw into themselves and their own world. At one point an adolescent passionately wants to join a leader, a guru, as a loyal follower, and then, a little later, disappointed, wants to be completely independent, and becomes suspicious and utterly repulsive to every authority.

During adolescence, a boy/girl is often faced with usually opposing requirements and has to approve of contradictory social roles (e.g. a child or an adult). They are often forced to make fateful decisions regarding choices, partners, etc., without being intellectually and emotionally ready to do so responsibly. These and other important conflicts mark the forming of personal identity and lead to identity confusion, which is accompanied by a sense of confusion, loneliness, anxieties, and sometimes guilt, depression and emptiness (Erikson, 2008).

### *Mutual relationship between parents and children in the period of adolescence*

The topic of many studies in the last few decades is the impact of parents on child development. The relationship between parents and children is the basis for successful socialization of the child and the development of a healthy personality. This is not surprising given the fact that the family is the primary social group in which the child gets his first experience, forms attitudes, develops its personal potentials and ability to establish future interpersonal relations. One of the most important tasks in adolescence, essential in order to move from the period of childhood to maturity period, is psychological detachment from parents.

The main task in the period of adolescence is to gain autonomy and independence. Regardless of whether this process of gaining autonomy represents the termination of early infantile dependence on parents in order to establish new mature heterosexual relationships, as psychoanalysts claim, or it is marked by change and redefinition of social roles, as social psychologists claim, it still represents one of the most important developmental tasks in this period (Vranješević, Trikić, Koruga, Vidović and Dejanović, 2003).

According to some authors (Erikson, 1976; Marcia, 1966, 1967; Vranješević, Trikić, Koruga, Vidović and Dejanović, 2003), existence of a conflict between adolescents and their parents is not only desirable, but also necessary in order to achieve a clear identity. It is necessary and desirable that the adolescent begins to question the system of beliefs and values that is passed from parent in order to submit it to test and criticism.

In one such research conducted on a population of Belgrade adolescents, in which they were asked to name the most significant changes in the way they perceive themselves at this period, as well as what is important to them that has not changed, it was found that the most significant change was experience of autonomy from the parents, and that is what has not changed and what is important to them, that they still have a good relationship with their parents. Also, the majority of adolescents would give up autonomy rather than a good relationship with their parents (Vranješević 2001, according to Vranješević, Trikić, Koruga, Vidović and Dejanović, 2003).

### *Dimensions and styles of parental behavior*

Although there are various theoretical and methodological approaches as well as many factors that influence parental behavior, studies indicate a significant stability of individual differences in the behavior of parents towards children over time (Collins & Russell, 1991, according to Vizler, 2004). Regardless of the child's age, studies point to the existence of two fundamental dimensions of parental behavior (Darling & Steinberg, 1993, according to Vizler, 2004), namely: emotionality and control.

The dimension of emotionality refers to the emotions that the parent experiences and shows in the interaction with the child. This is a bipolar dimension. On one end of this dimension is emotional heat, and on the other is emotional coldness. Many authors argue that it is emotional warmth of family environment which that has most effect on children's development (Becker, 1964; Franz, McClelland & Weinberger, 1991; Kandel, 1990; Sears, Maccoby & Levin, 1957, according to Vizler, 2004). Emotionally warm parents accept their children, providing them with support, understanding, attention and care.

Disciplinary techniques include explanations, encouragement and compliments. Emotionally cold parents neglect their children, they are hostile to them, they reject, criticize and punish the child.

The dimension of control refers to those behaviors that parents use to interact with their children in order to modify their behavior and inner states (Peterson & Rollins, 1987, according to Vizler, 2004). This dimension is also bipolar. On one end of the dimensions are the actions of firm control over the child's behavior, and on the other are the weak ones. Parents who adhere to firm control constantly monitor the child's behavior and make sure that the child strictly follows the set rules. Parents with less control of the set rules monitor the child's behavior to a smaller degree, i.e. they give the child a lot of freedom. Studies have shown that parental behavior of both sexes on the control dimensions may act as risk factors on the *child's development*. Too tight control of the child's behavior can lead to dependency, submissive behavior, decreased motivation for achievement and repressed hostility. Too lenient control may result in aggressive and inconsistent behavior (Becker, 1964, according to Vizler, 2004).

Recent studies indicate the existence of two separate and orthogonal dimensions of parental control, namely: psychological and behavioral control (Barber, Olsen & Shag, 1994; Steinberg, Lamborn, Dornbusch & Darling, 1992; Darling & Steinberg, 1993, according to Vizler, 2004). The main difference between these two dimensions is the goals that parents want to achieve with them. *Parents try* to monitor their child's psychological world by using psychological control, and by using behavioral control they are trying to control the child's behavior, particularly undesirable behaviors.

Child development requires a certain degree of psychological autonomy, so that it can develop its independence and autonomy through various social interactions. Excessive psychological control prevents the process of child's individualization and leads to the development of psychological dependence, lack of confidence in its own identity and ideas, so there is a fear of loss of connection with the parents. However, adequate development requires a certain degree of regulation of behavior so that the child can learn that social interaction involves some rules of behavior and has a structure to be followed in order to get included in the social network. So, on the one hand, too much psychological control over poses a risk factor for the child's development, while, on the other hand, the absence of behavioral control has a negative impact on the child's development.

In addition to the level dimension, the parent-child relationship can be observed at the level of parental styles of behavior, which represent a combinations of dimensions of emotionality and control. In the literature, the most frequently mentioned three different parenting styles are: authoritarian, authoritative and permissive style (Diana Baumrind, 1970; Maccoby & Martin, 1983, according to Driscoll, 2013). Later the neglecting parental style was added too.

Many studies have dealt with the issue of influence of different styles of parental behavior on children's behavior and development. It turned out that the authoritative style, which is a combination of high warmth and tight control, can be linked to the most desirable developmental outcomes in children. Authoritative style is associated with children's greater competence, self-confidence, independence, greater academic success and responsible behavior. Children are usually curious, full of energy, creative, friendly to others, and they usually develop positive beliefs about themselves and about their achievement. Authoritarian parenting style is described as a black-and-white style of par-

enting, where the child is expected to follow the rules without questioning or there will be consequences. These parents tend to be strict and demanding, and they do not treat their children as equally worthy of themselves. Children of authoritarian parents often show behavioral problems. They have difficulties in adapting to different social situations, they are distrustful, aggressive, moody, easily upset. They are often withdrawn, in bad mood, scared, unhappy, and they lack spontaneity in behavior. Permissive parents are more reactive, they require less from their children and are usually not consistent in disciplining. They are also communicative and caring. Permissive parents minimize any control over the child. Permissive parenting style leads to aggressive and impulsive behaviors in their children. Children are often immature and less to manage in situations where they meet with the authorities. Permissive parenting style is associated with the least desirable development outcomes in children and it is used by parents who are not reactive and have low requirements for their children (Baumrind, 1970; Maccoby & Martin, 1983, all according to Driscoll, 2013). This style does not encourage healthy social development. The children of neglecting parents do not participate appropriately in games and social interactions, and they are prone to aggressive behavior towards others or social withdrawal (Peterson & Rollins, 1987; Baumrind, 1971; Dornbusch et al., 1985; MacDonald, 1992 according to Vizler, 2004).

Contrary to popular opinion that parents are more important as a model in childhood than in adolescence, some researches show that parents during this period are the most important models that influence most choices many adolescents make (Coleman & Hendry, 1996, according to Vranješević, Trikić, Koruga, Vidović and Dejanović, 2003). It is only in an accepting parental atmosphere that adolescents can experiment with new roles and values, make important decisions and thus gradually become autonomous in their relationship with their parents. Some studies corroborate this view, showing that maintaining an affective relationship with the parents in order to protect the adolescent's sense of security and balance (Greenwald, 1980, according to Vranješević, Trikić, Koruga, Vidović and Dejanović, 2003), also during late adolescence, more than at any other period, adolescents perceive the connection with parents as a link with most love (Pipp, Jennings, Shaver, Lamborn & Fisher, 1985, according to Vranješević, Trikić, Koruga, Vidović and Dejanović, 2003).

### **Adolescents and the Internet**

The Internet has become an indispensable part of daily life in modern society. It has brought along many benefits. First of all, it allows people to freely communicate with each other, regardless of their mutual distance. Also, it is easier for many tasks, such as shopping, paying bills, attending training courses, conducting business transactions. 'Global Village' is a metaphor used to describe how the Internet shortens the distance between people and facilitates and makes the flow of information easier. However, despite the good side of the Internet, which allows time and money saving, this media carries a large number of hazards with it, which children and adolescents are particularly exposed to.

For children, it has become common to use the Internet to the same extent when they play with their favorite toys. Children and adolescents usually use the Internet for

learning (e.g. search for additional literature), communication (expression of ideas, sharing information and experiences), social interaction with friends and peers for play and fun (playing games, watching movies, listening to music). However, due to their still insufficient capability of risk assessment and decision-making, this population is particularly vulnerable to a wide range of hazards related to privacy and security on the Internet, such as exposure to inappropriate images or content, establishing communication with sexual predators in chat rooms or through other forms of social media, bullying or harassment on social networks, inappropriate disclosure of personal information and data theft, fraud and the like. In addition, it has been demonstrated that adolescents are particularly vulnerable to negative health effects caused by excessive Internet use, since they are going through a period of rapid physical and mental maturation.

### *Problematic Internet use: definition, symptoms and etiological factors*

There is disagreement in the scientific community regarding the adequate terminology for defining the term of problematic Internet use. The most common names that can be found in the literature dealing with this issue are: Internet addiction, problematic Internet use, compulsive Internet use, pathological Internet use. The term Internet addiction is used by authors who generally regard this phenomenon a disorder with serious consequences to physical and mental health of the individual, including their social, academic and work performance. Block (Block, 2008, according to Chang and Hung, 2012) proposed the inclusion of the term ‘Internet addiction disorder’ in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association (DSM-V). Despite the fervent debate in the psychiatric and psychological circles on the matter, the term ‘Internet addiction’ was not included in the classification system of Diagnostic and Statistical Manual of Mental disorder – fifth edition, released in 2013. The manual describes only the term ‘Internet gaming disorder’ as a condition that requires further research before it is officially recognized as a diagnosis (Diagnostic statistical manual of mental disorders, 2013).

American psychologist Kimberly Young (Young, 1998a) is a pioneer in diagnostic defining and research of problematic Internet use. Back in 1996 she described Internet addiction as a disorder of impulse control, which is in its compulsive nature most similar to pathological gambling (Young, 1998a), and includes the following symptoms:

- preoccupation with the Internet (thinking about previous activities on the Internet or anticipating the next ones);
- tolerance to the use of the Internet (the need for using the Internet for a longer period of time to achieve the same level of satisfaction as before);
- negative emotional reactions (anxiety, depression, irritability) in an attempt to reduce the use of the Internet or interruptions made while the Internet is being used;
- unsuccessful attempts to control, reduce or discontinue the use of the Internet;
- use of the Internet for a longer period of time than planned;
- endangerment of important social relations, work or school commitments because of the Internet;
- concealing the degree of involvement in activities related to the Internet;

- use of the Internet as a way to escape problems or alleviate negative emotional states, such as helplessness, guilt, anxiety, depression.

A few years later Shapira et al (Shapira, Lessig & Goldsmith, 2003, according to Aboujaoude, 2010), proposed the term problematic Internet use instead of Internet addiction, taking it to be more adequate and defining it based on the following criteria:

- maladaptive preoccupation with Internet use, seen as an irresistible urge to use it for longer periods of time than planned;
- significant distress or damage of functioning as a result of Internet use and;
- lack of psychiatric disorders that could explain excessive Internet use, such as mania or hypomania.

In spite of great number of studies in the field of compulsive Internet use, there is a relatively small body of theoretical explanations for the etiology of compulsive Internet use in the professional literature. Davis (Davis, 2001, according to Griffiths, 2008) distinguishes between specific and generalized pathological Internet use. Specific pathological use of the Internet refers to the excessive use of specific functions of the Internet and it is the result of psychopathology that had been presented before, which is associated with the activity on the Internet (e.g. compulsive gamblers who satisfy their need on the Internet). On the other hand, generalized pathological Internet use involves spending a lot of time on the Internet without a specific purpose and determining factor in its development is social context of the individual, especially a lack of social support and/or social isolation.

Drawing upon Davis's theoretical stance, Caplan has proposed the following theoretical assumptions, which also received empirical support (Caplan, 2003):

- people suffering from psychosocial problems (e.g. depression, loneliness) have a more negative perception of their social skills than people who do not suffer from this kind of difficulty;
- such persons develop a tendency towards social interactions on the Internet, because they find it less threatening than a direct 'face to face' form of communication;
- a tendency towards social interactions on the Internet leads to excessive and compulsive use of the Internet, which, in turn, aggravates their problems and creates additional difficulties at work, school, and in family.

Among the most common etiological factors the following were examined: self-esteem, personality, presence of psychological problems, social support, family functioning. Many of these studies were carried out on samples of older school-age children and adolescents. As for our and neighboring countries, according to the available literature research that investigate risk factors of the phenomenon problematic Internet use are very scarce.

In a number of studies that have been carried out on adolescents and young adults, it was found that low self-esteem is associated with problematic Internet use (Aydin & Sari, 2011; Yao, He, Ko & Pang, 2014). Recent studies give evidence to support the assumption that Internet dependence and other types of addictive behavior (such as pathological gambling) have the same psychological background, or that the psychological pro-

file of addicts contains the same features, such as high levels of stress, loneliness and low social support (Dowling & Brown, 2010, according to Flora, 2014). A representative research conducted on a sample of 12,000 adolescents in 11 European countries (Durkee et al., 2012, according to Flora, 2014) has shown that poor parental involvement and parental unemployment, and the lack of emotional and psychological support represent important risk factors for the occurrence of pathological and maladaptive Internet use.

### *The consequences of problematic Internet use – short research overview*

Excessive Internet use in adults is associated with many negative consequences for psychosocial and physical health of its users. Young found (Young, 1998b) that people who are categorized as Internet dependents exhibit a wide range of problems connected with Internet use, such as reduced participation in family and parenting responsibilities, financial difficulties, neglecting business obligations, social withdrawal, sleep deprivation because of late-night hours on the Internet. In the subsample of students 'dependent' on the Internet significant academic problems were found, such as difficulty in completing school assignments and studying for exams, which subsequently led to a decline in academic performance, as well as school dropouts. In addition, it was found that a long-term Internet use in a sitting position can lead to carpal tunnel syndrome and back pain.

A research which was carried out in Serbia points to numerous consequences of excessive Internet use (Hinić, 2008). Based on the interviews with the subjects the authors found that the most dominant symptoms were of physical nature, such as fatigue, exhaustion, lack of sleep, loss of appetite, back pain, vision problems, including affective problems, among which the most dominating ones are: nervousness, apathy, loss of interest in activities that have no direct connection to the Internet. Likewise, they found that people who use the Internet excessively show carelessness and irresponsibility for everyday tasks and social environment.

Some authors argue that the negative side of the Internet is expressed in the form of alienation and lack of real, direct contact with people, while a fake, virtual sociability develops parallelly and the need for establishing closer personal and social relations is inhibited. In one of the few longitudinal studies, reviewed in the Netherlands, on a sample of 169 people of different ages, it was found that excessive Internet use for the purposes of communication, during the first year or two of Internet installation was associated with a decrease in communication among family members, narrowing their social circle and an increase in depression and loneliness (Kraut, Patterson, Lundmark, Kiesler, Mukopadhyay & Scherlies, 1998).

Consequences of excessive Internet use in children and adolescents were particularly tested. Based on a literature review Kuss & Griffiths (2011) concluded that excessive use of social sites on the Internet may have more negative consequences for their younger users. For example, Dutch adolescents aged 10 to 19 years, who received mostly negative feedback messages from peers on their social profile on the Internet, had lower self-esteem, which subsequently led to decreased feelings of well-being (Valkenburg & Peter Schouten, 2006, according to Kuss and Griffiths, 2011). Most of the students shared the opinion that the Internet impacted their lives negatively; this included delays in com-

mitments, distractions and poor organization of time. There was also a negative correlation between the time spent playing games on the Internet and school accomplishments, as well as a positive correlation between playing violent video games and aggressive behavior (Anderson & Dill, 2000, according to Chang & Hung, 2012). However, based on the review of available literature, one cannot draw conclusions about the causal relationship, given the lack of longitudinal studies in this area.

*Pedagogic styles, dimensions of parental behaviour and the problematic use of the Internet*

The family plays a key role in the development of a child and an adolescent. A parent who is physically and emotionally available is a necessary factor for the healthy development of a young individual. A positive family interaction can protect young people, while a dysfunctional family, with poor parental guidance, and punishing, forced and inconsistent pedagogic practice, increases the risk of emotional difficulties and various forms of addictive disorders. This is confirmed by the results of numerous studies (Cummings & Davies, 2011; Formoso et al., 2000; Chilcoat et al., 1995, according to Preyde & Adams, 2008; Terres-Trindade & Mosmann, 2015).

A special focus has been given to the influence of the dimensions of parental behaviour -control and warmth – on the development of children and adolescents, as well as on inappropriate behaviour, as aforementioned. In our paper, we draw attention to the relationship between these dimensions and problematic use of the Internet. First, we will look into previous studies that have dealt with this issue.

A research conducted in Iran on a sample of university students found that parental warmth has a negative impact on problematic Internet use, while the impact of control was found neutral (Moazedian, Taqavi, HosseiniAlmadani, Mohammadyfar & Sabetiman, 2014). Based on these results, the authors conclude that the dimension of warmth serves as a preventive factor in the development of Internet addiction.

Studies conducted in several countries have given contradictory results about the relationship between parental control and problematic Internet use. Lin and associates (Lin, Lin & Wu, 2009) found that parental control has a significantly negative impact on problematic Internet use. Similar results were obtained in the study of San and his associates (Sun et al., 2005; according to Li, Li & Newman., 2013), who found that higher levels of parental control are negatively correlated with the use of e-mails, chat rooms and the Internet. They mainly focused on the elements of behavioural control, which is related to the adjustment of children's behaviour through solid, but reasonable discipline, and control over children's behaviour. On the other hand, psychological control includes the attempts to influence the behaviour of a child or an adolescent with psychological resources such as withholding love and inducing guilt or shame, which hinders development of a child's identity and constitution of his sense of autonomy. Giles and Price (Giles & Price, 2008, according to Li, Li & Newman, 2013) found that maternal psychological control is positively associated with problematic Internet use.

Multiple studies have shown that behavioural control has a positive impact on the development of adolescents and a negative impact on the expression of deviant behaviour, while psychological control compromises the sense of autonomy and competence in adolescents, which can lead to psychosocial problems such as emotional distress

and internalized problems. In their study, with 694 participating adolescents, aged 12 to 17, Li, Li and Newman (Li, Li and Newman, 2013) found that restrictions imposed by parents (one of the aspects of the behavioural control) are negatively associated with problematic use of the Internet, while denial of love (the psychological aspect of control) is positively associated with the problematic use of the Internet. The authors also found that parental control has its impact on the problematic use of the Internet through the mediating role of self-control.

A large number of studies that have dealt with the problem of compulsive Internet use were conducted in Asian countries, where there were recorded the highest rates of adolescents prone to problematic Internet use. A study conducted in China, on a sample of 304 respondents aged 16 to 20, (Xiuqin, Huimin, Mengchen, Jinan & Ron, 2010), showed that younger people, categorized as – ‘addicted to the Internet’, had lower scores on a dimension of parental emotional warmth and higher scores on a dimension of the high parental demands. Based on the results, the authors concluded that authoritarian and rejecting parents, prone to punishment, can encourage problematic Internet use in children.

Another study conducted in China, on a representative sample of 2,095 students, found that father’s rejection and excessive control, as well as mother’s excessive control, increase the risk of Internet addiction (Yao, He, Ko & Pang, 2014).

Having in mind that the Internet has become an important part of the lives of young people, who exercise numerous and significant social interaction through it, it is natural that parents are trying to establish some degree of control over the use of this type of media. Parental control over Internet use mainly involves two strategies: dialogue with their child about the Internet and setting limits and rules related to Internet use. The results of some studies show that good communication between parents and children about Internet use can prevent the development of compulsive use of the Internet (Eijnden, 2010, according to Smailbegović and Kokić, 2011). The research which was carried out in Bosnia and Herzegovina, Sarajevo Canton, on a sample of 1,941 fifth to eighth graders, has shown that children whose parents do not pay enough attention to their Internet activities are frequently confronted with pornographic content, are more often subjected to the violence on the Internet and show more signs of Internet addiction (Smailbegović and Kokić, 2011).

## METHODS

### *The problem and the subject of the study*

A healthy relationship between parents and children is the basis for successful socialization of a child and the development of a healthy personality, while poor parental guidance with punishing, forced and inconsistent pedagogic practices, increases the risk of developing emotional difficulties and various forms of addictive disorders. In our paper, we draw attention to the relationship between the dimensions of parental behaviour and problematic Internet use among students in upper elementary grades.

Having formulated the research problem we established the subject of the research, and that is the relationship of parental dimensions of behaviour and problematic Internet use among upper elementary students.

## *Research goals*

The theoretical goal – Based on the findings of numerous studies (conducted mainly on a sample of adult subjects and older adolescents), which were presented earlier, positive family interactions proved to be a preventive factor in the development of different forms of addictive disorders, and in this study we will try to confirm the link between dimensions of parental behaviour and problematic Internet use among upper elementary students.

The practical goal of this research is to promote the mental health of young adolescents and prevent psychosocial problems of this population.

## *Hypotheses*

In our research we started from the following hypothesis:

1. There is a statistically significant correlation between the dimensions of parental behaviour and problematic Internet use among children.

This hypothesis can be divided into six sub-hypotheses:

- a) Acceptance by the mother will be negatively associated with problematic Internet use in adolescents.
- b) Acceptance by the father will be negatively associated with problematic Internet use in adolescents.
- c) Psychological control by the mother will be positively correlated with problematic Internet use in adolescents.
- d) Psychological control by the father will be positively correlated with problematic Internet use in adolescents.
- e) Behavioural control by the mother will be negatively associated with problematic Internet use in adolescents.
- f) Behavioural control by the father will be negatively associated with problematic Internet use in adolescents.

2. There are statistically significant differences in scores on Young's revised Internet Addiction Test in adolescents, given the degree of control of Internet use by their parents.

This hypothesis can be divided into several sub-hypotheses.

- a) Adolescents whose parents limit their time spent on the Internet will have significantly lower scores on Young's revised Internet Addiction Test than the adolescents whose parents do not limit the amount of time they spend on the Internet.
- b) Adolescents whose parents are always present when they use the Internet will achieve significantly lower scores on Young's revised Internet Addiction Test than the adolescents whose parents are sometimes or never present.
- c) Adolescents whose parents point at potential dangers associated with the Internet use will achieve significantly lower scores on Young's revised Internet Addiction Test than the adolescents whose parents do not point out at risks of the Internet use.

## *Sample*

The sample of the study was adequate. It comprised of 218 students eighth and ninth graders, of these 115 boys and 103 girls. The survey was conducted in November and December 2015 in two elementary schools in the city of Banja Luka – *Georgi Stojkov Rakovski* and *Aleksa Šantic* as well as in a village school of Kotor Varoš municipality – *Petar Petrović Njegoš Maslovarc*, with the prior approval of the school administration.

## *Instruments*

The following instruments were used:

1. General information questionnaire including data on Internet use, designed by the authors.
2. Variable problematic Internet use was measured by Young's revised Internet Addiction Test (Lai, Mak, Watanabe, Ang, Pang & Ho, 2013). It has 18 items with multiple choice answers on the Likert scale, where 1 means never, 2 – rarely, 3 – sometimes, 4 – often 5 – always. The range of possible points in the test ranges from 18 to 90.

Kimberly Young first developed a diagnostic interview for assessing Internet addiction, based on the DSM-IV diagnostic criteria which are used for pathological gambling (Young, 1998b). It has eight items. Subjects are classified as being 'Internet addicts' if they answer positively to five or more items on the test. Subsequently, Young extended the questionnaire with 12 additional items and it was renamed as Internet Addiction Test (IAT; Young, 1998b), in which participants answer the questions using a five-point Likert scale and their results can be classified into several categories: 'average Internet users' (they have complete control over Internet use), 'frequent Internet users' (with occasional or frequent problems because of the Internet) and 'Internet addicts' (have significant problems due to Internet use).

Young's Internet Addiction Test is the most commonly used instrument for the assessment of problematic Internet use. It has been translated into several languages: Italian, French, Finnish, Korean, Malay and Chinese and it has shown satisfactory psychometric properties in students and adults (Lai, Mak, Watanabe, Ang, Pang & Ho, 2013). We found only one study that examined the psychometric properties of this instrument on a sample of young adolescents. In a study by Lai and associates, on a sample of 844 students from seventh to thirteenth class in Hong Kong (Lai, Mak, Watanabe, Ang, Pang & Ho, 2013), Internet Addiction Test showed satisfactory characteristics, with some minor modifications which were related to the number of items (items 7 and 11 were excluded, while some items were adapted in order to be adjusted to the adolescent population). In a study of Lai and associates, as well as in several other studies that dealt with the population of adolescents, it was shown that the instrument had high reliability (Bayraktar & Gün, 2007; Milani, Osualdella & Di Blasio, 2009; Wang et al., 2011, according to Lai, Mak, Watanabe, Ang, Pang & Ho, 2013), where the coefficient of reliability in all studies was  $\alpha > 0.80$ .

3. The variables of pedagogic dimensions of the father and mother were tested by the CRPBI-57 questionnaire, design by Gordana Keresteš (Keresteš, 1999 – in: Vizler, 2004), which represents a shortened version of the CRPBI questionnaire (Children's Re-

ports of Parental Behaviour Inventory) designed by Schaefer in 1965 (Schaefer, 1965- seen in: Vizler, 2004). A shortened form of the questionnaire that was used in this study consists of 57 items distributed into nine scales. These nine scales measure three basic dimensions of parental behaviour: parental acceptance / rejection (including scales of acceptance, focus on the child, acceptance of individuation and hostile distance), psychological control / psychological autonomy (scales of intrusiveness, hostile control and anxiety) and weak / strong behavioural control (scales of poor discipline and extreme autonomy). The task of the participants was to mark each item with the degree to which particular behaviour refers to their mother and father, where 1 means – false, 2 – partially true and 3 – absolutely true. The result on each scale is calculated as the sum of the results on all items divided by the total number of items, and a score on each dimension as the sum of the results of the corresponding scales divided by the number of scales. The inverse result is calculated for scales of hostile distance, poor discipline and extreme autonomy. Accordingly, the lowest total score is 1 and the highest is 3. A higher score indicates greater parental acceptance and a greater parental psychological and behavioural control. Reliability coefficients for the dimensions range from 0.57 for the father’s behavioural control to 0.84 for the father’s acceptance (Vizler, 2004).

## RESULTS AND DISCUSSION

The results were processed with the statistical software SPSS Statistica for Windows (version 16). Prior to processing, the reliability check of the questionnaires IAT, CRPBI (the mother) and CRPBI (father) was carried out. The value of individual Cronbach alpha coefficients points out to satisfactory reliability of these instruments, as is shown in Table 1.

*Table 1. The values of Cronbach alpha coefficients for used instruments*

Name of the instrument	Cronbach alpha coefficient ( $\alpha$ )	Number of items
IAT	.870	18
CRPBI (for mother)	.733	57
CRPBI (for father)	.724	57

Kolmogorov-Smirnov test was used to check the regularity of the distribution of received data for all three questionnaires. It was found that the data on the Young’s revised Internet Addiction Test significantly deviated from regular distribution, which is why non-parametric tests were used to process the test results.

Spearman’s rank correlation coefficient was used ( $\rho$ ) to determine the extent of the correlation between numerical variables, whereas Mann-Whitney U and Kruskal-Wallis Test were applied to discover the significance of differences between arithmetic means, considering they are non-parametric tests and they do not have requirements in terms of the regularity of distribution of the results.

### *Children and Internet-descriptive data*

Most of the children who took part in our research use the Internet (98.2%). Also, 50.9% of our respondents have a computer with Internet access, while 38.1% have Internet access only on the computers they share with family members.

The following table (Table 2) shows the data related to the amount of time children spend on the Internet during the day.

*Table 2. The amount of time spent on the internet expressed in frequencies and percentages*

The amount of time spent on the Internet	frequencies (f)	percentages (p)
more than two hours	61	28.0
between one and two hours	73	33.5
every day	64	29.4
one or two times per week	10	4.6
once or twice per month	2	0.9
rarely	8	3.7
in total	218	100.0

As it can be seen in Table 2, 28% of students spend more than two hours on the Internet, while 33.5% of students spend between one and two hours during the day. Only 4.6% of children use the Internet once or twice a week, while 0.9% of students use the Internet once or twice a month.

As it was expected, most of eighth and ninth graders use some form of social networking sites on the Internet (92.2%).

The questionnaire of general data and data on Internet use includes items related to the exposure of children to the dangers related to safety Internet. Most children (83.5%) said that they were not disturbed or insulted on the Internet. 5% of students said that they were disturbed or harassed on the Internet only two or three times throughout the past year, while 4.6% of the students said that this happened on multiple occasions. Most students (92.7%) said that they did not insult anyone on the Internet in the past year. A large percentage of students (68.8%) claimed that they did not find certain content on the Internet that upset them, while 19.3% of the children experienced it only once in the past year. The disturbing content on the Internet (two, three times) was found in 5% of students, while 6.9% of the students said that this happened several times. Most students (85.3%) said that they had no experience of being proposed meeting in person by an unknown person on a social network in the past year.

### *The relationship between the dimensions of parental behaviour and problematic Internet use in children*

The first hypothesis in our research was partially confirmed, since we found a correlation between individual dimensions of parental behaviour and problematic Internet use in upper elementary students.

Table 3. The relationship between problematic Internet use and acceptance by the mother and father (Spearman's rank correlation coefficient)

	Acceptance (mother)	Acceptance (father)
Problematic internet use	$r_s = -.349^{**}$	$r_s = -.243^{**}$

\*\* Correlation significant at 0.01

As it was hypothesised, a statistically significant negative correlation between the acceptance by mothers and problematic Internet use among adolescents was found (Table 3).

We found a statistically significant negative correlation between the acceptance by father and problematic Internet use (Table 3).

The dimension of parental acceptance refers to granting attention and emotional warmth to a child, as well as to the acceptance of his individuality. Several studies have shown that this dimension of parental behaviour has a positive impact on the proper emotional development of adolescents and the prevention of risky behaviour.

It was found that there is a statistically significant positive correlation between psychological control by mother and problematic Internet use, as shown in Table 4.

It was found that there is a statistically significant positive correlation between psychological control by father and problematic Internet use among adolescents (Table 4).

Table 4. The relationship between problematic Internet use and psychological control by the mother and father (Spearman's rank correlation coefficient)

	Psychological control (mother)	Psychological control (father)
Problematic internet use	$r_s = .191^{**}$	$r_s = .183^{**}$

\*\* Correlation significant at 0.01

The dimension of psychological control is associated with negative aspects of the psychological development of adolescents, such as the lack of self-confidence and underdeveloped sense of autonomy, due to the fact that parents use pedagogic means, denial of love and attention, which cause the feelings of guilt and shame, adversely affecting the development of a child's identity. This can lead to problematic behaviour. Additional research indicates to a positive relationship between psychological control and compulsive use of the Internet (Li, Li & Newman, 2013; Giles & Price, 2008, according to Li, Li & Newman, 2013). This relationship was found in our study.

We found that there is a significant positive correlation between behavioural control by parents and problematic Internet use in adolescents.

Behavioural control refers to those parental actions that seek to model the behaviour of a child. A certain degree of discipline and behaviour control is needed so that a child can adopt rules of conduct and adapt to the social environment adequately. A child has a need for structured and clear rules, particularly within a family, in order for him to have normal social and emotional development. On the other hand, some research suggests that too tight control may have a negative impact on the child's development and

lead to excessive dependency, low self-confidence, reduced motivation for achievement and suppressed hostility.

### *The relationship between parental control of online activities and problematic Internet use*

Research, both in our region and beyond, consistently indicate that the way parents behave toward their children's Internet activities and the control they exercise have a great influence on the tendency of children's compulsive Internet use. Scientific studies show that parents who communicate with their children about Internet use can prevent the compulsive use of this media (Eijnden, 2010, according to Smailbegović and Kokić, 2011). Also, Smailbegović and Kokić's (2011) research has shown that children whose parents do not pay enough attention to their Internet activities, manifest several characteristics of Internet addiction.

However, our study showed no statistical differences in scores on the Young's revised Internet Addiction Test between the adolescents whose parents limit the time they spend on the Internet and the adolescents whose parents do not limit the time they spend on the Internet. Also, no differences were found regarding compulsive Internet use in adolescents whose parents are always present, sometimes present or never present when children use the Internet. We found that adolescents whose parents point to the possible negative consequences of Internet use did not achieve significantly lower scores on the Young's revised Internet Addiction Test.

Our results were not expected taking into account the results of other studies that we have found in the literature. However, we would like to point out to the fact that most children of this age have smartphones that enable Internet access at any time of day or night, at home and outside, which makes it even more difficult for parents to control their Internet activity. This was confirmed by the data obtained in the study. As many as 64.7% of adolescents said that their parents did not limit the time they spent on the Internet. In addition, 40.8% of children reported that their parents were never present when they used the Internet, while 54.1% of children said that they were sometimes present. In only 5% of the children parents were always present while they were on the Internet. What is admirable and encouraging is the fact that quite a high percentage of parents (85.3%) warns adolescents on the possible dangers of Internet use.

## **CONCLUSION**

Adolescence is a turbulent period in the life of an individual with an increased risk for maladaptive behaviour. Among other things, a peer group is given a bigger importance and young adolescents often evaluate themselves based on how they are accepted by their peers. Along with the strengthening of the role of a peer group, grows the interest of children to use the Internet, which they use to communicate among themselves, share their opinions and views. However, as studies have shown, excessive Internet use can

have significant consequences on the work and social capabilities of individuals, and even on their physical health.

Adolescence is a period when desire for independence and resistance to any authority emerges. However, parents continue to represent significant, emotionally-invested figures, which influence the development of adolescents through their attitude, and the manner of education and communication. Although it is common that children question the parental system of values during this period critically, it is still very important for them to have a good relationship with parents. Parents are very important as a support in overcoming the challenges imposed by adolescence.

In we found our research a relationship between certain dimensions of parental behaviour and problematic Internet use among young adolescents. The dimension of emotional warmth, that is, the acceptance by parents, being focused on a child and accepting his individuality, proved to be associated with problematic Internet use. Children who feel accepted by their father and mother achieve lower scores on tests which assess Internet addiction. The dimension of psychological control, which involves parents' attempts to have a full control over the child's behaviour, both at home and outside, as well as their exaggerated emphasis of a child's bad behaviour, proven to be, as we assumed, positively correlated to problematic use Internet. We found no statistically significant positive correlation between behavioural control by parents and problematic Internet use among young adolescents.

Our study showed no significant correlation between parental control of Internet activities and problematic Internet use in children. However, we found that parents exercise insufficient control over what their children are doing on the Internet and how much time they spend on-line.

The results obtained in our study might represent a stimulation and basis to establish and develop prevention programs for problematic Internet use in children, which would be primarily aimed at educating parents and raising their awareness about the role they have in the prevention of risky behaviours.

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