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The Somatization Symptoms among Grammar School Students

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Abstract

The present study investigates the somatization symptoms among grammar school students. High school students (N=218) from a convenience sample school were asked to complete The Somatization Scale. Data analysis showed that girls reported somatization symptoms more frequently than boys. The analysis showed that 1.4% of students felt some of the somatic symptoms on a daily basis, while 6.9% of students had such symptoms 2-3 times a week. Other students reported physical symptoms less frequently. 41.3% of students reported having somatic symptoms once a week and 46.8% of the students complained of somatic symptoms once or twice a month. Only 3.2% of students said that they had never experienced such symptoms. The most common somatic symptoms in adolescence are headaches and fatigue, while the rarest physical symptom is abdominal pain. Contemporary authors associated somatization tendencies with stressful situations in school. Therefore, it is important that parents, teachers and school counselors are familiar with the frequency and potential causes of somatic symptoms in adolescence.

Key words: *high school; physical symptoms; stress.*

Introduction

The research (Koić et al., 2002) shows that 37.4% of high school students have somatic reactions to stress, while 9.06% of the students develop a clinical picture of psychosomatic disorders. Physical symptoms with unclear medical explanations are common among children and young people and they present their way to express mental problems through malfunctioning of body system (Majić, 2011). Problems like these are called somatization symptoms and they usually occur in the form of

pain, weakness, lack of energy or gastrointestinal disturbance (Garber, Walker, & Zeman, 1991). Except for the fact that frequent physical symptoms impair adolescents' health, somatic symptoms are associated with negative developmental outcomes and maladaptive children and adolescents' behavior. For example, somatization tendencies are associated with a higher incidence of emotional and behavioral problems, absences from school and school failure (Campo, Jansen-McWilliams, Comer, & Kelleher, 1999). Studies also show that children with somatic symptoms grow up to be people with the same types of problems (Campo et al., 2001; Peršić, Palčevski, & Slavić, 2006), but somatization interferences in adulthood become even more emphasized social issues and a problem of the health care system. Gureje et al. (1997) examined participants from 15 countries and found somatization to be a universal problem in the health systems of all cultures. They also found that somatization is significantly associated with health problems and a feeling of incompetence. According to researchers (Bermingham, Cohen, Hague, & Parsonage, 2010) the total annual burden of somatization among England working-age population is estimated at nearly 18 billion pounds per year. Due the social and economic damage caused by somatization in adulthood, researchers should investigate somatization tendencies at an early age and establish appropriate procedures for preventing somatic symptoms.

Somatic interferences are common in childhood and adolescence, but it is important to distinguish them from somatization disorders (Majić, 2011). Due to the inconsistency in diagnostic criteria in the classification systems, the boundary between somatic symptoms and somatization disorder is not completely clear. Gureje et al. (1997) diagnosed a somatization disorder for 2.8% of participants according to ICD-10 classification, but according to the DSM-IV a classification disorder was diagnosed for only 0.9% of participants. Therefore, some authors (Natvig, Albrektsen, Anderssen, & Qvarnstorm, 1999) suggested that the problematic symptoms are those which occur more than once a month. Whether somatic interferences enter the domain of somatization disorder or they occur less frequently, symptoms like these disturb young people's development and well-being, so it is important to consider them seriously.

A serious approach to somatic interferences is necessary because the most common physical symptom of children and adolescents is pain (Perquin et al., 2000). In a study of several thousand children under the age of 18, Perquin et al. (2000) found that pain usually occurs in the form of headaches, abdominal pain and pain in the extremities. Along with the different types of pain, Garber et al. (1991) also found lack of energy and nausea as the common symptoms in adolescence. Poikolainen, Loonqvist and Kanerva (1995) also found that fatigue, lethargy and headaches often disturbed adolescents. However, the frequency of somatic symptoms is not the same for boys and girls. Studies show that girls have more somatic symptoms than boys (Boey & Yap, 1999), and gender differences in somatization were found for adolescents (Brajša-Žganec et al., 2008; Koić et al., 2002) and college students (Poikolainen et al., 1995). Silber and Pao (2003; as cited in Majić, 2011), however, argue that the prevalence of somatization in preadolescent age is equal for both genders, but during adolescence somatization becomes twice as frequent

among girls. On the other hand, some studies (Vulić-Prtorić & Galić, 2004) did not find gender differences in somatization tendencies. Such inconsistency in the results may be a reflection of the interaction of many risk factors for somatization.

The occurrence of somatic symptoms among children and young people is a product of numerous factors, so the etiology of somatization has been explained by numerous theoretical frameworks. Some authors believe that the vulnerability of organs for somatic symptoms develops in early childhood, when children are not able to express unpleasant experiences verbally, so they express them through physical symptoms (Freud, 1970; as cited in Majić, 2011). Some authors (Kaplan, Sadock, & Grebb, 1994) presented the theory of heritability of somatization tendencies. Contrary to them, other authors (DeMaso & Beasley, 2005; Hurwitz, 2003) suggested that somatic symptoms can be learned through modeling and instrumental conditioning. A third group of authors (Kalebić-Maglica, 2006; Natvig et al., 1999) suggest that somatic symptoms are reactions to a stressful situation. Children and adolescents are more vulnerable to the effects of almost all stressors and their stress reactions appear to have negative outcomes. To support this view Vulić-Prtorić and Galić (2004) showed that somatic symptoms are most common among children and adolescents who are exposed to stressful events, especially the ones that threaten their self-esteem or involve conflicts in relationships. Other researchers (Walker, 2001; as cited in Rieffe et al., 2007) confirmed that children with somatization symptoms experienced more stress in their daily lives, while some contemporary authors (Lohre, Lyedersen, & Vatthen, 2010; Natvig et al., 1999) emphasized that child's health and prevalence of somatic symptoms depend on the stress associated with the school environment. Researchers consistently find association between somatization and exposure to school related stress (Natvig et al., 1999). Class and recess environment can be particularly important for students' health and well-being. It has been noted that learning difficulties, poor academic achievement and emotional stress are associated with poorer child's health (Heath & Ross, 2000; as cited in Lohre et al., 2010). Bullying and loneliness (Arseneault et al., 2010; as cited in Lohre et al., 2010) have the same effects on children's health. On the other hand, having caring teachers and a sense of belonging to the class community have beneficial effects on children's health and well-being (Resnic et al., 1993; as cited in Lohre et al., 2010; Natvig et al., 1999) and also reduce stress and the risk-taking behavior (Bonny et al., 2000; as cited in Lohre et al., 2010).

There are multiple complaints about previous research of somatization symptoms, particularly in defining and measuring the construct of somatization. One of the problems of earlier studies is the unclear and inconsistent terminology. For example, some authors use the term psychosomatic reactions (Koić et al., 2002) or psychosomatic symptoms (Natvig et al., 1999) to describe somatization tendency. Only a few authors (Poikolainen et al., 1995; Boey & Yap, 1999) clearly state that they examine the tendency to somatic symptoms in a healthy population. There is also the problem of measuring somatization symptoms. Crombez, Beirens, Van Damme, Eccleston and Fontaine (2009) claimed that 88% of studies measured somatization by self-estimated questionnaires,

but only 3.4% of studies controlled a possibility for organic cause of physical symptoms. However, the results in the studies with controlled medical conditions are very similar to those in which organic substrates of symptoms were not investigated (Crombez et al., 2009). These results probably reflect the fact that only 5 to 10% of physical symptoms among children and adolescents have an organic cause, while all other somatic symptoms reflect somatization tendencies (Weydert, Ball, & Davis, 2003; as cited in Peršić et al., 2006). For example, there is no doubt that some children with recurrent abdominal pain are affected by Helicobacter pylori which causes abdominal pain (Majić, 2011). However, researchers (Bode et al., 2003; as cited in Majić, 2011) did not find any significant association between abdominal pain and bacterial infection in the sample of healthy school-age children. Besides that, many researchers used parents' and teachers' evaluations for measuring somatic symptoms of younger children (Boey & Yap, 1999). However, these measures should be used with caution. Some authors (Vulić-Prtorić, 2000) found a low correspondence between children's self-estimation of somatic interferences and those estimates by adults, with correlations ranging from 0.2 to 0.3.

The most common measurements of somatic interferences used by Croatian researchers are self-estimated questionnaires. Koić et al. (2002) compiled the questionnaire for measuring somatization among college students, while Brajša-Žganec, Raboteg-Šarić, Šakić and Kotrla-Topić (2008) used a shortened version of Achenbach questionnaire. Besides that, Croatian researchers used the Subjective Health Complaints Questionnaire (Eriksen et al., 2008; as cited in Kalebić-Maglica, 2007) and the Scale of somatic symptoms of anxiety (Vulić-Prtorić, 2000) to measure somatization symptoms.

Due to the discrepancy in the results from earlier studies and the small number of studies dealing with somatic symptoms in adolescence, the purpose of this study is to identify somatization tendencies as reactions to stressful events among high-school students.

Goals and Expectations

1. Determine the frequency of somatization symptoms among high-school students.
2. Examine gender differences of somatization symptoms among high-school students.
3. Examine age differences of somatization symptoms among high-school students.

Considering the findings of previous studies, it is expected that adolescents will have physical problems as manifestations of psychological problems (Koić et al., 2002). The most frequent expected physical complaints are headache, fatigue and lack of energy (Poikolainen et al., 1995). The results of testing gender and age differences are not consistent. Some authors (Koić et al., 2002) found that girls have expressed more somatization symptoms than boys, while Vulić-Prtorić and Galić (2004) did not find gender differences in somatization. Hurwitz (2003) found that somatization tendency increases with age, but Bartels, Beijsterveldt, Middeldorp and Boomsma (2011) observed a decrease in somatization symptoms with age.

Method

Participants

The study included 218 high school students, 160 girls and 58 boys, from a convenience sample school in the Varaždin County. The sample included students from all four grades of high school. The division of students was the following: 22.9% first graders, 32.1% second graders, 18.8% third graders, and 26.1% of participants attended the fourth grade. The participants were between 14 and 18 years of age, and the average age was 16.38 years with a standard deviation of 1.12.

Measures

Somatization. For measuring somatic symptoms among adolescents, the adapted version of Somatization scale and the subscale of The Youth Self Report (YSR) (Achenbach, 1991) was used. The YSR is designed to measure emotional and behavioral problems among adolescents between the ages of 11 and 18. The somatization scale has seven items and it is used for testing physical difficulties among adolescents. The present study used a shortened version of the Somatization scale (5 items) (Achenbach, 1991; as cited in Brajša-Žganec et al., 2008). Participants answered, on the 6-point scale, how often *(1 - "Never.", 2 - "1-2 times a month.", 3 - "1 time per week.", 4 - "2-times a week.", 5 -"Almost every day.", 6 -"Every day.")* they had some of the physical symptoms (e.g. *"You had a headache")* during the past month. The overall score on the scale was formed by summing the results of all the particles. A higher score indicates a greater somatization tendency (Achenbach, 1991).

Table 1

Descriptive data for Somatization scale results among the sample of adolescents (N = 218)

	The minimum value	The maximum value	*M*	*SD*	*a*
Somatization scale	6	26	12.83	3.46	0.59

The distribution of results on the Somatization scale is normal (KS z = 1.40, p> 0.01), but their reliability is low (Table 1). However, Ebesutani, Bernstein, Martinez, Chorpita and Weisz (2011) found good internal consistency of the somatization scale among a sample of adolescents (a= 0.79) and they provided information about the validity of YSR. A component factor analysis extracted one factor explaining 39.08% of the total variance of somatization. Particle saturations with the extracted factor are shown in Table 2.

Table 2

Particle saturation with the factor extracted from Somatization scale (N = 218)

	Saturation
Feeling sick	0.67
Feeling tired	0.51
Headaches	0.73
Abdominal pain	0.62
Muscles and joints pain	0.57

Demographic variables. A study questionnaire was developed in order to collect demographic data about sex (1 – "Male", 2 – "Female"), age, and class (1 – "First", 2 – "Second", 3 – "Third", 4 – "Fourth").

Procedure

The study used part of the data collected for a graduate work on the subject of somatization tendencies among adolescents and their correlations with shyness and emotional expressiveness. In order to identify clearly the relationship of these constructs, the research included only grammar school students. From a convenience sample of schools in the Varaždin County two classes had been randomly selected from each of the four generations of grammar school students. The study was conducted during February 2012, and its implementation was consistent with the Ethical code of research with children in Croatia (Ajduković & Kolesarić, 2003). Prior to initiating the research, the agreement from the school head teacher, teachers and parents for conducting the research had been obtained. Data were collected during school classes with the help of the school psychologists and the pedagogue. The participants were informed about the anonymity of data and voluntary nature of the test. Their task was to estimate the frequency of their physical symptoms. The purpose of the study was described at the end of the questionnaire.

Results

In order to investigate the general tendency to somatic symptoms among adolescents, an average score on the Somatization scale was calculated for each participant. It was established that 1.4% of students have physical symptoms almost every day. 6.9% of students have somatic interferences 2-3 times a week, 41.3% of students reported physical discomfort once a week and 46.8% of students reported having physical symptoms once or twice a month. Only 3.2% of participants said they never had somatic interferences.

Descriptive analysis shows the frequency of certain physical symptoms in adolescence (Table 3). The most common somatization symptom to be found is fatigue, while abdominal pain is the rarest physical symptom among adolescents. Fatigue occurs two or three times a week on average, but 16.1% of adolescents feel tired every day. The next most common somatic interference is headache. It turned out that 74.3% of adolescents have headaches at least once or twice a month, but only a small percentage of adolescents (1.8%) have a headache every day. Other interferences mentioned in the questionnaire are felt by adolescents once or twice a month. The rarest physical symptom among adolescents is abdominal pain, which 51.8% of adolescents feel once or twice a month.

Table 3

Descriptive data of Somatization scale results (N = 218) and ANOVA results of testing gender differences

		M	sd	F (DF1, DF2)	P
Feeling sick	Male	2.02	1.09		
	Woman	2.27	0.95		
	In total	2.20	0.99	2.68 (1, 215)	0.10
Feeling tired	Male	4.02	1.53		
	Woman	4.06	1.33		
	In total	4.05	1.38	0.05 (1, 214)	0.83
Headaches	Male	2.02	1.13		
	Woman	2.53	1.25		
	In total	2.39	1.24	7.25 (1, 215)	0.00 **
Abdominal pain	Male	1.58	0.68		
	Woman	2.12	0.91		
	In total	1.98	0.88	16.59 (1, 215)	0.00 **
Muscles and joints pain	Male	2.25	1.21		
	Woman	2.18	0.97		
	In total	2.20	1.04	0.16 (1, 215)	0.68

** Significant at the 0.01 level

Table 4

ANOVA results for testing gender and age differences on Somatization scale (N = 218)

	F	*df*	*p*
Gender differences	5.92	1	0.02 *
Age differences	1.21	3	0.31

* Significant at the 0.05 level

Analysis of variance was used in order to examine gender differences in somatization (Table 4). The Levene test shows that the variance of males and females results on the Somatization scale are homogeneous (Levene statistic = 0.91, p> 0.05), so despite the inequality in the number of male and female students, the analyses of variance could be used to examine gender differences. Also, male and female results on each particle of the Somatization scale are homogeneous. The obtained results (Table 4) show that girls have higher total results on the Somatization scale than boys and they are more likely to express emotional distress through physical problems. However, gender differences are identified only for headache and abdominal pain (Table 3, Table 5). The comparison of results among the four generations of students on the Somatization scale did not show age differences in somatization (Table 5). Although somatization has shown a decreasing trend between first (M = 13.56, SD = 4.18) and fourth grade (M = 12.32, SD = 2.82), the observed differences are not statistically significant (F (3214) = 1.21, p> 0.05).

Table 5

Inter-correlations (Pearson coefficients) between particles of the Somatization scale, gender and class (N = 218)

	Feeling sick	Feeling tired	Headaches	Abdominal pain	Muscles and joints pain
Feeling sick		0.18 **	0.35 **	0.25 **	0.22 **
Feeling tired			0.22 **	0.13	0.23 **
Headaches				0.35 **	0.22 **
Abdominal Pain					0.19 **
Class (1-4)	-0.07	-0.04	-0.09	0.00	-0.13 *
Gender	0.11	0.01	0.18 *	0.27 **	-0.02

* Significant at the 0.05 level
** Significant at the 0.01 level

Inter-correlations for particles of the Somatization scale had been calculated to determine physical complaints that often occur together (Table 5). To provide evidence for future meta-analytic studies, the demographic variables were also included in the correlation matrix. The highest correlation was found between headache and feeling sick *(r* (216) = 0.35, p <0.05) as well as between headache and abdominal pain *(r* (216) = 0.35, p <0.05). The Headache particle was found to have the highest correlations with all physical symptoms. These findings suggest that adolescents with headaches often have other physical symptoms, particularly stomachache and general weakness.

Discussion

Frequencies and Types of Somatization Symptoms among Adolescents

The frequency of somatic interferences was researched by numerous authors (Boey & Goh, 2001; Boey & Yap, 1999; Garralda, 1999; Perquin et al., 2000; Poikolainen et al., 1995; Vulić-Prtorić & Galić, 2004). An early investigator of the somatization symptoms among children was John Apley (1975; as cited in Majić, 2011). On a sample of a thousand scholars Apley found that somatic symptoms are extremely common and he noticed that similar symptoms could be found by other members of the child's family. Observing similarities in occurrence and circumstances of recurrent pain in children, Apley concluded that recurrent pain is actually a reflection of a specific reaction to emotional stress. Although children usually complain of one dominant physical symptom, somatic symptoms rarely occur in only one body system (Vulić-Prtorić & Galić, 2004). Carr (1999) argues that the prevalence of somatization among children and adolescents range between 2% and 10%. Another study (Poikolainen et al., 1995) has shown that 44% of female and 28% of male faculty students have had at least one somatic problem without organic explanation in the last 6 months. However, the prevalence of individual somatic symptoms is much higher. Perquin et al. (2000) found that 54% of participants experienced some form of pain in the past three months. In the present study, a small percentage of adolescents reported

the presence of somatic symptoms on a daily basis, but almost half of the students claimed that they felt some of these symptoms at least once a week. It is important to note that it is considered normal to experience some of the physical symptoms once a month, while the more common symptoms with unknown medical explanations have a somatization nature (Natvig et al., 1999). Fatigue and headaches were reported as the most common somatic symptoms among adolescents in the present study, while abdominal pain was the least frequent physical symptom. Similar results were obtained by other researchers of somatic interferences. Poikolainen et al. (1995) found that fatigue, lethargy and headaches are the most common somatic symptoms, while abdominal pain was in their research also identified as a rare symptom in adolescence. Garber et al. (1991) also found a high prevalence of adolescents' somatic symptoms in the last two weeks. The most frequent symptoms were headache (25%) and lack of energy (23%), muscle pain, nausea, abdominal pain and back pain (15%). The most common types of pain in the sample of Perquin et al. (2000) were also headaches, abdominal pain and pain in the extremities.

Boey and Goh (2001) found that some of the somatic symptoms often occur in pairs, so they observed a high correlation between abdominal pain and other somatic symptoms. In line with that finding, the results from the present study also showed a correlation between abdominal pain and other somatization symptoms, but the most frequently correlated symptom with other physical complaints was headache. However, it should be noted that Boey and Goh (2001) collected data from elementary school children, who felt abdominal pain more frequently than headaches (Boey & Yap, 1999). Greater frequency of abdominal pain in children compared to adolescents was also established by Fritz, Fritsch and Hagino (1997; as cited in Lohre et al., 2010).

Gender and Age Differences in Somatic Interferences

Although some studies did not find gender differences in somatization (Vulić-Prtorić & Galić, 2004), most studies (Boey & Yap, 1999; Brajša-Žganec et al., 2008; Majić, 2011; Poikolainen et al., 1995; Vulić-Prtorić, 2000) consistently showed that girls have more somatic symptoms than boys, which was also found in the present study. Silber and Pao (2003; as cited in Majić, 2011) suggested that there are no gender difference in somatic symptoms in early childhood, but during adolescence somatization occurs twice as frequently among girls. The present study does not reveal such extreme gender differences in somatization tendencies, but it shows that some somatic interferences are more sensitive to gender differences than others. In accordance with this, significant gender differences were observed only for headache and abdominal pain. Poikolainen et al. (1995) also found that headache and abdominal pain are symptoms with most extreme gender differences. While headache occurs in 22% of girls and 7% of boys, the prevalence of abdominal pain is lower, and it occurs among 13% of girls and 5% of boys. However, most researchers ignored possible reasons for females' greater tendency to somatization symptoms. Poikolainen et al.

(1995) believe that girls have more somatic interferences because females are more likely to complain about their physical and psychical problems as it is more acceptable for girls than for boys to express psychological distress through physical channels. However, other authors (Canary et al., 1997; as cited in Feinauer, Larson, & Harper, 2010) believe that because of the implicit rules in socialization, girls are more likely to complain of their physical and mental health. Therefore, gender differences in somatization represented higher tendency for girls to acknowledge their problems, but they do not reflect differences in the experience of somatic symptoms.

Although the present study did not find age differences in somatization tendencies, researchers have found various results. Hurwitz (2003) believes that the somatization tendency increases with age. In contrast, Bartels et al. (2011) observed a decrease in somatization symptoms, aggression and social and cognitive problems from childhood to adulthood. The results of the present study show falling trend in somatic interferences from the first to fourth grade, but the observed differences were not statistically significant. Age range of adolescents may be too small to reflect real age differences, but the specifically selected sample can also have an influence on the results. It has been shown that somatization occurs more often in individuals with a lower formal education (Gureje et al., 1997), so it is necessary to determine the age effects among students in other types of schools.

Possible Causes of Somatic Interferences

The high incidence of somatic symptoms among students in the present study is alarming. Therefore, it is important that parents, teachers, and professional teams in schools are aware of the frequency of somatic interferences and their possible causes. However, despite the high prevalence of certain somatic symptoms among children and adolescents, few authors have investigated the causes of the occurrence of somatic symptoms in certain physical systems. Some authors (Abbey, 1996; as cited in Majić, 2011) suggested that somatization occurs universally at an early age, when children have not developed verbal and cognitive abilities to inform their environment about unpleasant experiences. When children cannot verbally express their unpleasant feelings, they communicate in the form of disorders of eating, elimination and respiration, or other physical problems. Freud considered (1970; as cited in Majić, 2011) that during that period we developed vulnerability for somatization among different organ systems. However, other authors (Kaplan, Sadock, & Grebb, 1994) believe that we inherit the somatization tendency from our parents, which is supported by findings that somatoform disorders, anxiety, depression, migraine and irritable bowel syndrome are common among mothers of children with somatization symptoms (Campo et al., 2007). Contrary to this theory, some authors (DeMaso & Beasley, 2005) believe that somatization symptoms can be learned. Specifically, it is possible that after the first somatic interference a child accepts the role of the patient as it brings him a secondary gain in the form of parental attention and compliance. In addition

to learning by reinforcement, somatic interferences can be learned by modeling. Supporting this idea, Craig, Boardman, Mills, Daly-Jones and Drake (1993) found that in a group of patients with somatization 55% of them had experienced a serious illness in childhood, 41% had been exposed to the parents' disease and 32% of patients have had a combination of both factors. Thus, children with somatization often have family member with similar somatic symptoms (Boey & Goh, 2001), so it is possible that the child's symptoms are learned by observation or modeling (DeMaso & Beasley, 2005).

In addition to genetic and learning theory, numerous individual and environmental factors play a role in somatization tendencies. Wood (1994; as cited in Vulić-Prtorić, 2000) suggested a *Theory of family systems* by which somatization can be predicted from maladaptive family activities, such as interference or excessive protection. According to this view, in dysfunctional families child's illness becomes a way to avoid interpersonal conflicts, which is why somatization symptoms often occur at a time of tension and conflict among family members (Šprajc-Bilen, 1994; as cited in Vulić-Prtorić, 2000). However, some authors believe that the connection between somatization with all previously mentioned circumstances reflected inadequate strategies to cope with stress (Pennebaker, 1990; Gross & Levenson, 1997; Von Baeyer & Walker, 1999; as cited in Rieffe et al., 2007).

Physical symptoms caused by stress remain unclear. Van Eck, Berkhof, Nicholson and Sulon (1996) considered that the cause of correlation between somatization and stress is cortisol, which weakens the immune system through the braking responses of lymphocytes. On the other hand, it is also necessary to consider that the presence of somatic symptoms can increase stress. Rieffe et al. (2007) argue that somatic symptoms in childhood lead to frequent absences from school and social activities, hinder a child's social and emotional development and cause greater stress. However, regardless of the causes and theoretical views, the relationship between stress and somatization remains consistent. Therefore, some authors (Natvig et al., 1999; Shanon, Bergren, & Matthews, 2010) considered that school related stress may contribute to the high incidence of somatization among adolescents.

Somatization Symptoms and School Related Stress

Adolescents spend a lot of time in school, which is a source of social and academic challenges and psychosocial stress resulting from conflicts with friends, fear of failure, excessive teacher and parent demands, etc. (Frazier & Schauben, 1994; as cited in Kalebić- Maglica, 2007). Sources of stress in school are numerous. Some authors considered school failure as the most common source of stress in adolescence (Halstead et al., 1993; as cited in Anić & Brdar, 2007). Academic achievement can be considered a reflection of a child's abilities, leading to a better status among peers and satisfaction among parents and teachers. On the other hand, low academic achievement suggests that a child is unsuccessful, which is the reason why a child has to deal with parent and teacher dissatisfaction and with bad reputation among

peers (Stojčević & Rijavec, 2008). Other common stressful events related to the school environment are tests, unexpected low success and oversized teachers' demands (Garton & Pratt, 1995). As school stressors De Anda et al. (2000) also recognize conflicts with friends and teachers, pressure of school assignments, fear of failure, fear of evaluation and conflicts with parents about school performance. Sometimes teachers can be stressors with their inappropriate behaviors, such as insults, mocking, humiliation and threats (Piekarski, 2000; as cited in Kalebić-Maglica, 2006). It is also important to emphasize that the transition from primary to secondary school is an extremely stressful experience for students. In that period students feel insecure and unhappy, they are faced with overloaded school schedule, school obligations, demanding learning material and multiple homework. Besides that, they need to make new friends and adjust to new teachers and the new school environment (Boekaerts et al., 1993; as cited in Kalebić-Maglica, 2006). Under such circumstances students also have to deal with the typical adolescent developmental fears, such as fear of evaluation and criticism, fear of losing friends and rejection by peers, fear of the unknown and fear of failure (Byrne, 2000).

These stressors can have a negative impact on students' health and some authors (Murberg & Bru, 2007) show their connection with frequent somatic interferences. Lask (1986; as cited in Garralda, 1999) argues that large empirical studies consistently show that children with somatization interferences are often insecure, anxious and have high academic achievement. It is possible that their anxiety is a reflection of high academic and behavioral standards which students can no longer satisfy, so they find a relief in the illness symptom. To support this, Brajša-Žganec et al. (2008) found that students with greater fear of school have more somatic complaints.

Due to the frequency of somatic interferences in adolescence, it is necessary to consider possible interventions. If a student seeks help because of physical symptoms without an organic cause, physicians may consider the somatization nature of interferences. As a possible approach to this problem Majić (2011) proposed individual psychotherapy, group and family psychotherapy, cognitive-behavioral therapy, a variety of relaxation methods, and in some cases medication therapy. The essential parts in the treatment of children's somatization are informing and providing psychological support for the family. Teaching the child and parents about the nature of somatic symptoms contributes to the child's faster return to his usual activities. If there can be found adverse psychosocial circumstances in which a child or an adolescent with somatic interferences grows, then the major part of the effort focuses on solving these problems as potential sources of the child's somatizations (Majić, 2011). However, such approach is recommended only in situations where somatic interferences significantly impair daily functioning and normal adolescents' life. In other cases, somatic interferences could be accessed within the professional team in schools, through the detection of sources of stress and teaching students some successful coping strategies. Introducing students with successful coping strategies can help

them to identify stressful situations more easily and increase their ability to resolve problems in school and life environment more effectively (Stojčević & Rijavec, 2008).

Recommendations for Future Research

Interpretation of the results from the present study is limited by the choice of the convenient student sample. It has been shown (Boey & Yap, 1999; Fink et al., 1999; as cited in Mai, 2004; Hurwitz, 2003) that somatization is more frequent among people with lower levels of education, so it could be assumed that students of technical schools show different somatization tendencies, which is why the results cannot be generalized to other populations of students. To correct the shortcomings of this study, future researchers should examine a random sample of adolescents. It is also important to control the effects of health status of participants. Some studies showed that somatization is associated with parenting styles (Woodbury, 1999; as cited in Majić, 2011) and it can be predicted by self-esteem and social skills (Brajša-Žganec et al., 2008). If all of the above findings are considered, it is clear that a numerous factors contribute to the phenomenon of somatization. Therefore, there is a need for additional research that would clarify the causes of inconsistencies in the results thus providing a better view of the causes of somatization among children and adolescents.

Conclusion

The study conducted shows that Croatian adolescents manifest their psychological distress through physical symptoms. It was established that 1.4% of students feel physical symptoms almost every day, 6.9% of students have such symptoms 2-3 times a week, 41.3% of students have somatization symptoms once a week. Also, among 46.8% of the students these symptoms were observed once or twice a month, while only 3.2% of adolescents claimed that they have never had somatic interferences. Fatigue and headaches were found to be the most common somatization problems of adolescents, while the least present somatic interference was abdominal pain. Furthermore, the study showed that girls reported somatization symptoms more than boys ($F(1,213) = 5.92$, $p < 0.05$). Another finding was that somatization symptoms are not determined by age, which is not consistent with the studies which established a decrease in somatic symptoms with age (Bartels et al., 2011). Such results could be accredited to the small age range of adolescents for detecting the age differences. Many researchers believe that a high incidence of somatization among adolescents is contributed by school-stress (Lohre et al., 2010; Natvig et al., 1999; Vulić-Prtorić & Galić, 2004; Walker, 2001; as cited in Rieffe et al., 2007). Therefore, it is important to inform teachers and school counselors about the frequency of somatic interferences in adolescence, their potential causes, consequences, interventions and preventive procedures.

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Učestalost simptoma somatizacije kod gimnazijalaca

Sažetak

Istraživanje je provedeno s ciljem utvrđivanja učestalosti simptoma somatizacije kod učenika gimnazije. Učenici gimnazije (N=218) iz prigodno odabrane škole su tijekom nastave ispunjavali Skalu somatizacije. Obradom podataka utvrđeno je kako djevojke češće od mladića izvještavaju o somatizacijskim tegobama. Pokazalo se kako 1.4% učenika osjeća neku od somatskih tegoba svakodnevno, a kod 6.9% učenika su takve tegobe prisutne 2-3 puta tjedno. U ostalih se učenika tjelesne tegobe javljaju rjeđe, pa 41.3% učenika ima somatizacijske smetnje jednom tjedno, 46.8% ih primjećuje jednom do dva puta mjesečno. Samo 3.2% učenika tvrdi da ih ne osjeća nikada. Kao najučestalije somatske smetnje istaknute su glavobolja i osjećaj umora, a abdominalni bolovi najrjeđe su prisutna tjelesna tegoba u adolescenata. Budući da suvremeni autori povezuju sklonost somatizaciji s izloženošću stresnim situacijama u školi, važno je da roditelji, učitelji i stručni suradnici budu upoznati s učestalošću i potencijalnim uzrocima somatskih tegoba kod adolescenata.

Ključne riječi: *tjelesni simptomi; srednja škola; stres.*

Uvod

Nalazi istraživanja (Koić i sur., 2002) pokazuju kako 37.4% srednjoškolaca na stres reagira somatskim reakcijama, a čak 9.06% ih razvija kliničku sliku psihosomatskog poremećaja. Tjelesne tegobe koje nemaju jasno medicinsko objašnjenje česte su u djece i mladih te se smatraju načinom ekspresije psihičkog nemira putem smetnji u radu nekog od tjelesnih sustava (Majić, 2011). Takve tegobe nazivaju se somatizacijama, a najčešće se javljaju u obliku bolova, osjećaja slabosti, manjka energije i gastrointestinalnih tegoba (Garber, Walker i Zeman, 1991). Izuzev činjenice da učestale tjelesne smetnje narušavaju zdravlje adolescenata, problematika somatizacije leži i u njezinoj povezanosti s nepovoljnim razvojnim ishodima i maladaptivnim ponašanjima djece i mladih. Sklonost tjelesnim tegobama tako se povezuje s većom učestalošću emocionalno-ponašajnih smetnji, s izostancima iz škole i školskim neuspjehom (Campo, Jansen-McWilliams, Comer i Kelleher, 1999). Pokazalo se i kako djeca sa somatizacijama odrastaju u osobe s istovrsnim tegobama (Campo i sur., 2001; prema Peršić, Palčevski i Slavić, 2006), a somatizacijske smetnje u odrasloj dobi postaju još izraženiji društveni

problem i opterećenje zdravstvenog sustava. Gureje i suradnici (1997) su na uzorku od 15 zemalja iz cijeloga svijeta utvrdili kako je somatizacija univerzalni problem u zdravstvenim sustavima svih kultura i kako je značajno povezana s problemima zdravlja i osjećajem nesposobnosti. Prema procjenama istraživača (Bermingham, Cohen, Hague i Parsonage, 2010) troškovi zdravstvenog sustava na račun somatizacije u radno sposobnoj populaciji Velike Britanije rastu i do 18 milijuna funti godišnje. Uzmemo li u obzir društvenu i ekonomsku štetu uzrokovanu somatizacijom u odrasloj populaciji, jasna je potreba za istraživanjem sklonosti somatizaciji u ranijoj dobi i utvrđivanjem adekvatnih postupaka za njezinu pravodobnu prevenciju.

Somatske tegobe koje su predmet ovog istraživanja česta su pojava u djetinjstvu i adolescenciji, no važno ih je razlikovati od somatizacijskog poremećaja (Majić, 2011). Ipak, zbog neujednačenih kriterija u dijagnostičkim klasifikacijskim sustavima granica između somatizacijskih smetnji i somatizacijskog poremećaja nije potpuno jasna. Tako su Gureje i suradnici (1997) utvrdili prisutnost somatizacijskog poremećaja kod 2.8% ispitanika prema MKB-10 klasifikaciji, a prema DSM-IV klasifikaciji navedeni je poremećaj dijagnosticiran u 0.9% ispitanika. Zbog navedenog neki su se istraživači (Natvig, Albrektsen, Anderssen i Qvarnstorm, 1999) somatizacijskih smetnji poveli kriterijem da su problematične one somatske tegobe koje se javljaju češće od jednom mjesečno. No neovisno o tome ulaze li somatske tegobe učenika u domenu somatizacijskog poremećaja ili se javljaju kao manje frekventni načini ekspresije psihičkog nemira, takve tegobe ometaju razvoj i psihičku dobrobit mladih pa ih je važno ozbiljno razmotriti.

Važnosti ozbiljnog pristupa somatskim tegobama pridonosi i činjenica da su najučestalija somatizacijska smetnja u djece i adolescenata bolovi (Perquin i sur., 2000). U studiji na nekoliko tisuća djece u dobi do 18 godina Perquin i suradnici (2000) su utvrdili da se bolovi najčešće javljaju u obliku glavobolja, bolova u trbuhu i bolova u ekstremitetima. Uz različite vrste bolova, Garber i suradnici (1991) su kao najčešće prisutne smetnje adolescenata izdvojili manjak energije i mučninu. Poikolainen, Kanerva i Loonqvist (1995) također nalaze da su umor, letargija i glavobolje najčešće somatske smetnje prisutne u adolescenata. Ipak, učestalost somatskih tegoba nije jednaka kod oba spola. Brojna istraživanja pokazuju kako su djevojčice sklonije somatskim tegobama nego dječaci (Boey i Yap, 1999), a spolna razlika u somatizaciji utvrđena je i na uzorku učenika (Brajša-Žganec i sur., 2008, Koić i sur., 2002) i studenata (Poikolainen i sur., 1995). Silber i Pao (2003; prema Majić, 2011) pak tvrde da je prevalencija somatizacije u preadolescentnom razdoblju podjednaka u oba spola, no tijekom adolescencije somatizacija postaje dva puta prisutnija kod djevojaka. S druge strane, neka istraživanja (Vulić-Prtorić i Galić, 2004) nisu utvrdila spolne razlike u sklonosti somatizaciji. Takva neujednačenost rezultata može biti odraz međudjelovanja brojnih rizičnih faktora na sklonost somatizaciji.

Pojavi somatskih tegoba u djece i mladih doprinose mnogobrojni čimbenici, a etiologija somatizacije nastoji se protumačiti u različitim teorijskim okvirima. Neki

autori smatraju kako se vulnerabilnost organa na somatske tegobe razvija još u ranom djetinjstvu, kada dijete nije u stanju izraziti neugodne doživljaje verbalno, pa se javljaju preko tjelesnih tegoba (Freud, 1970; prema Majić, 2011). Dio autora (Kaplan, Sadock i Grebb, 1994) smatra da je sklonost somatizaciji naslijeđena. Tome suprotno stajalište pak nudi dokaze u prilog naučenosti reagiranja na somatske tegobe putem procesa modeliranja i potkrepljivanja (DeMaso i Beasley, 2005; Hurwitz, 2003). Ipak, brojni istraživači (Kalebić-Maglica, 2006; Natvig i sur., 1999) smatraju kako je somatizacija zapravo reakcija na stresnu situaciju. Djeca i mladi osjetljiviji su na djelovanje gotovo svih stresora, a stresne reakcije kod njih su jače i imaju nepovoljniji ishod. U prilog tome idu nalazi Vulić-Prtorić i Galić (2004) koji pokazuju kako su somatski simptomi najučestaliji u djece i adolescenata koji su izloženi stresnim događajima, posebno oni koji ugrožavaju njihovo samopoštovanje ili uključuju konflikte u odnosima. I drugi istraživači (Walker, 2001; prema Rieffe i sur., 2007) potvrđuju da djeca sa somatizacijskim smetnjama doživljavaju više stresa u svakodnevnom životu, a neki suvremeni autori (Lohre, Lyedersen i Vatthen, 2010; Natvig i sur., 1999) naglašavaju kako pojavnost somatskih tegoba i cjelokupno djetetovo zdravlje značajno ovise o stresorima vezanim uz školsko okruženje. Istraživači dosljedno nalaze povezanost između somatizacije i izloženosti stresu u školi (Natvig i sur, 1999). Okolnosti u kojima se učenik nalazi tijekom nastave i tijekom školskog odmora mogu biti važne za njegovo zdravlje i dobrobit. Naime, pokazalo se kako su poteškoće u učenju, loše akademsko postignuće i emocionalni stres povezani s lošijim zdravljem djeteta (Heath i Ross, 2000; prema Lohre i sur., 2010), a nepovoljne efekte na zdravlje imaju i nasilje od vršnjaka i prateći osjećaj usamljenosti (Arseneault i sur., 2010; prema Lohre i sur., 2010). S druge strane, iskustvo brižnog učitelja i osjećaj pripadnosti razrednoj zajednici povoljno djeluju na zdravlje i psihološku dobrobit učenika (Resnic i sur., 1993; prema Lohre i sur., 2010; Natvig i sur., 1999), umanjuju stres i sklonost rizičnom ponašanju (Bonny i sur., 2000; prema Lohre i sur., 2010).

Dosadašnja istraživanja somatizacije podliježu višestrukim prigovorima, osobito u području definiranja i mjerenja tog konstrukta. Jedan od nedostataka dosadašnjih studija je i nejasna i nedosljedna terminologija istraživača. Primjerice, neki autori ispituju sklonost somatizaciji pod terminom psihosomatskih reakcija (Koić i sur., 2002) ili psihosomatskih tegoba (Natvig i sur., 1999). Samo dio autora (Poikolainen i sur., 1995; Boey i Yap, 1999) jasno navodi da ispituje sklonost somatskim tegobama u zdravoj populaciji. Problematičan je i način mjerenja somatskih smetnji. Crombez, Beirens, Van Damme, Eccleston i Fontaine (2009) utvrđuju kako je u 88% istraživanja somatizacija mjerena upitnicima samoprocjene, no samo 3.4% studija kontrolira mogući organski uzrok prisutnih tjelesnih tegoba. Ipak, pokazalo se (Crombez i sur., 2009) kako se u istraživanjima koja kontroliraju medicinska stanja sudionika dobivaju nalazi vrlo slični onima u kojima organska podloga simptoma nije ispitivana. Takvi rezultati vjerojatno su odraz činjenice da je tek 5 do 10% tjelesnih tegoba djece i adolescenata uzrokovano organski, a da su sve ostale tegobe somatizacijske

prirode (Weydert, Ball i Davis, 2003; prema Peršić i sur., 2006). Tako je, primjerice, nedvojbeno da je kod neke djece s recidivirajućom abdominalnom boli prisutna infekcija bakterijom Helicobacterpylori koja uzrokuje bolove u abdomenu (Majić, 2011). No istraživači somatizacije (Bodea i sur., 2003; prema Majić, 2011) ne nalaze statistički značajnu povezanost bolova u trbuhu i prisutnosti navedene infekcije kada u uzorak obuhvaćaju populaciju zdrave, školske djece. Za utvrđivanje somatskih tegoba mlađe djece koriste se procjene učitelja i roditelja (Boey i Yap, 1999). No takvim mjerama za procjenu dječjih somatizacija potrebno se koristiti s oprezom. Istraživanja (Vulić-Prtorić, 2000) pokazuju nisko podudaranje djetetovih samoprocjena somatskih tegoba s procjenama koje daju odraslih, pri čemu se korelacije kreću od 0.2 do 0.3.

Istraživači u Hrvatskoj najčešće upotrebljavaju upitnike samoprocjene za utvrđivanje somatskih tegoba. Koić i suradnici (2002) sastavljaju takav upitnik za potrebe istraživanja somatizacije kod srednjoškolaca, a Brajša-Žganec, Raboteg-Šarić, Šakić i Kotrla Topić (2008) koriste se skraćenom verzijom Achenbachova upitnika somatizacijskih smetnji. Uz to, u Hrvatskoj se kao mjere somatskih smetnji koriste i Upitnik subjektivnih zdravstvenih tegoba (Eriksen i sur., 2008; prema Kalebić-Maglica, 2007) i Skala somatskih simptoma anksioznosti (Vulić-Prtorić, 2000).

S obzirom na neusklađenost nalaza dosadašnjih studija i malen broj istraživanja koja se bave somatskim smetnjama adolescenata, svrha ovog istraživanja je utvrditi u kojoj su mjeri srednjoškolci skloni somatskim tegobama kao načinu manifestiranja psihičkog nemira.

Ciljevi i očekivanja:

1. Utvrditi učestalost simptoma somatizacije na uzorku adolescenata.
2. Ispitati spolne razlike u simptomima somatizacije na uzorku adolescenata.
3. Ispitati dobne razlike u simptomima somatizacije na uzorku adolescenata.

S obzirom na nalaze prethodnih istraživača očekuje se da će adolescenti iz uzorka biti skloni tjelesnim tegobama kao načinu manifestiranja psihičkog nemira (Koić i sur., 2002). Očekuje se da će najfrekventnije tjelesne tegobe biti glavobolja, umor i manjak energije (Poikolainen i sur., 1995). Radi neusklađenosti nalaza istraživača ispitan je i trend spolnih i dobnih razlika u sklonosti somatizaciji. Dio autora (Koić i sur., 2002) nalazi kako su djevojke sklonije somatizacijskim tegobama od mladića, a Vulić-Prtorić i Galić (2004) ne nalaze spolne razlike u somatizaciji. Hurwitz (2003) nalazi da sklonost somatizaciji raste s dobi, a Bartels, Beijsterveldt, Middeldorp i Boomsma (2011) uočavaju pad somatizacije s dobi.

Metoda

Sudionici

U istraživanju je sudjelovalo 218 učenika opće gimnazije. Radi se o 160 učenica i 58 učenika iz prigodno odabrane škole na području Varaždinske županije. Uzorkom su obuhvaćeni učenici sva četiri razreda gimnazije, pri čemu je 22.9% sudionika

pohađalo prvi razred, 32.1% drugi razred, 18.8% treći razred, a 26.1% četvrti razred. Raspon dobi sudionika kretao se od 14 do 18 godina, a prosječna dob je 16.38 godina uz standardnu devijaciju od 1.12 godina.

Instrument

Somatizacija. Za ispitivanje somatskih smetnji adolescenata korištena je prilagođena verzija Skale somatizacije, subskale iz The Youth Self Report (YSR) (Achenbach, 1991). YSR je namijenjen kako bi mjerio emocionalne i bihevioralne probleme adolescenata u odbi od 11 do 18 godina. Subskala somatizacije iz navedenog upitnika ima 7 čestica i namijenjena je ispitivanju tjelesnih tegoba adolescenata. U ovom je istraživanju korištena skraćena verzija te subskale sastavljena od 5 čestica (Achenbach, 1991; prema Brajša-Žganec i sur., 2008). Svaki sudionik je na skali od 6 uporišnih točaka procjenjivao koliko je često tijekom posljednjih mjesec dana (*1 – „Nikad.", 2 – „1-2 puta mjesečno.", 3 – „1 put tjedno.", 4 – „2-3 puta tjedno.", 5 – „Gotovo svaki dan.", 6 – „Svaki dan.*") imao neku on navedenih smetnji (npr. *„Imao si glavobolju"*). Ukupan rezultat na skali oblikovan je kao zbroj rezultata na svim česticama, a viši rezultat upućuje na veću sklonost somatizaciji (Achenbach, 1991).

Tablica 1.

Raspodjela rezultata sudionika na skali somatizacije je normalna (K-S z=1.40, p>0.01), no pouzdanost skale je snižena (Tablica 1). Ipak Ebesutani, Bernstein, Martinez, Chorpita i Weisz (2011) nalaze zadovoljavajuću pouzdanost subskale somatizacija na uzorku adolescenata (a=0.79) te nude podatke o valjanosti cijelog YSR. Provedbom komponentne faktorske analize skraćene Skale somatizacija izdvojen je jedan faktor koji objašnjava 39.08% varijance rezultata. Saturacije čestica dobivenim faktorom prikazane su u Tablici 2.

Tablica 2.

Demografske varijable. Za prikupljanje demografskih podataka o sudionicima sastavljen je kratak upitnik kojim su prikupljene informacije o spolu (*1 – „Muško", 2 – „Žensko*"), dobi sudionika i razredu koji pohađaju (*1 – „Prvi", 2 – „Drugi", 3 – „Treći", 4 – „Četvrti*").

Postupak

U istraživanju je korišten dio podataka prikupljenih s ciljem izrade diplomskog rada na temu povezanosti somatizacije s emocionalnom izražajnosti i sramežljivosti kod adolescenata. Kako bi se što jasnije odredila veza među navedenim konstruktima, u istraživanje su uključeni samo učenici gimnazije. Iz prigodno odabrane škole na području Varaždinske županije odabrana su po dva razreda svake od četiri generacije učenika gimnazije. Istraživanje je provedeno tijekom veljače 2012. godine, a njegova je provedba usklađena s Etičkim kodeksom istraživanja s djecom u Hrvatskoj (Ajduković i Kolesarić, 2003). Prije provedbe istraživanja pribavljena je suglasnost

ravnatelja škole i učitelja. Također je dobiven i pasivan pristanak roditelja sudionika. Podaci su prikupljeni grupno, za vrijeme nastave, uz pomoć školskog psihologa i pedagoga. Sudionici su bili informirani o anonimnosti podataka i dobrovoljnom karakteru ispitivanja. Prije podjele upitnika sudionicima je objašnjeno kako je njihov zadatak da procijene svoje slaganje sa svakom od ponuđenih tvrdnji. Nakon završetka ispunjavanja učenicima je objašnjena svrha istraživanja.

Rezultati

S ciljem utvrđivanja generalne sklonosti adolescenata somatskim tegobama izračunati su prosječni rezultati sudionika na Skali somatizacije. Na taj je način utvrđeno kako su tjelesne smetnje prisutne u 1.4% učenika gotovo svaki dan. U 6.9% učenika somatske tegobe prisutne su 2-3 puta tjedno, 41.3% učenika osjeća tjelesne tegobe jednom tjedno, a 46.8% ih primjećuje jednom do dva puta mjesečno. Samo 3.2% sudionika je izjavilo da somatske tegobe iz upitnika ne osjeća nikada.

Tablica 3.

Analiza deskriptivnih podataka Skale somatizacije pokazuje učestalost pojedinih tjelesnih tegoba u adolescenata (Tablica 3). Kao najučestalija somatizacijska smetnja istaknut je osjećaj umora, a najrjeđe su prisutna smetnja adolescenata abdominalni bolovi. Osjećaj umora javlja se u adolescenata prosječno dva do tri puta tjedno, a čak 16.1% adolescenata izjavljuje da se osjeća umorno svakodnevno. Kao učestala somatska tegoba istaknute su i glavobolje. Pokazalo se kako 74.3% adolescenata ima glavobolje najmanje jednom do dva puta mjesečno, a samo malen postotak adolescenata (1.8%) ima glavobolje svaki dan. Ostale tegobe iz upitnika većina ispitanih adolescenata osjeća u prosjeku jednom do dva puta mjesečno. Najrjeđe prisutna tjelesna smetnja adolescenata su bolovi u trbuhu, koje 51.8% adolescenata osjeća najviše jednom do dva puta mjesečno.

Tablica 4.

Radi ispitivanja spolnih razlika u somatizaciji je proveden postupak analize varijance. Provedba Levenova testa pokazuje kako su varijance ukupnih rezultata muškog i ženskog spola na Skali somatizacije homogene (Levene statistic=0.91, $p>0.05$), zbog čega je unatoč nejednakosti broja sudionika muškog i ženskog spola moguće testirati postojanje spolnih razlika. Homogenost varijanci s obzirom na spol utvrđena je i na rezultatima svake čestice Skale somatizacije. Dobiveni rezultati (Tablica 4) pokazuju kako u ukupnom rezultatu na Skali somatizacije djevojke postižu više rezultate od mladića, što znači da su sklonije od mladića u izražavanju emocionalnog distresa putem tjelesnih tegoba. Ipak, spolne razlike prisutne su samo u području glavobolja i bolova u trbuhu (Tablica 3, Tablica 5). Usporedba rezultata četiri generacije gimnazijskih razreda na skali somatizacije nije pokazala postojanje dobnih razlika u somatizaciji (Tablica 5). Iako somatizacija pokazuje trend opadanja

od prvog (M=13.56, sd=4.18) do četvrtog razreda (M=12.32, sd=2.82), nije zabilježena statistička značajnost tih razlika ($F(3.214)=1.21$, $p>0.05$).

Tablica 5.

Da bismo utvrdili koje se tjelesne smetnje adolescenata često javljaju zajedno, izračunate su interkorelacije čestica na skali somatizacije (Tablica 5). Radi budućih metaanalitičkih studija u matricu korelacija uključene su i demografske varijable. Pokazalo se da su korelacije najviše između glavobolja i osjećaja bolesti ($r(216)=0.35$, $p<0.05$), zatim glavobolja i bolova u trbuhu ($r(216)=0.35$, $p<0.05$). Uz to glavobolja je čestica koja je najviše korelirana sa svim ostalim tjelesnim tegobama. Takvi nalazi sugeriraju da su adolescenti s glavoboljama često skloni i ostalim tjelesnim tegobama, najčešće bolovima u trbuhu i osjećaju narušenog zdravlja.

Rasprava

Frekventnost i vrste simptoma somatizacije kod adolescenata

Pitanjem učestalosti somatizacijskih tegoba bavili su se brojni istraživači (Boey i Goh, 2001; Boey i Yap, 1999; Garralda, 1999; Perquin i sur., 2000; Poikolainen i sur., 1995; Vulić-Prtorić i Galić, 2004). Među ranim istraživačima somatizacijskih smetnji u djece je John Apley (1975; prema Majić, 2011) koji je na uzorku od tisuću školaraca uočio da su somatske smetnje iznimno česta pojava, kao i da su iste ili slične somatske tegobe učestalije i kod drugih članova djetetove obitelji. Promatrajući sličnosti u nastanku i okolnostima pojave rekurentnih bolova u djece, Apley je zaključio da su boli neorganskog podrijetla zapravo odraz specifičnog obrasca reakcije na emocionalni stres. Iako se dijete obično žali na jedan dominantan tjelesni simptom, somatske tegobe rijetko se javljaju samo u jednom tjelesnom sustavu (Vulić-Prtorić i Galić, 2004). Carr (1999) smatra da se prevalencija somatizacije u djece i adolescenata kreće između 2 i 10%. Na populaciji studenata pokazalo se kako je 44% studentica i 28% studenata u posljednjih 6 mjeseci doživljavalo neku od somatskih tegoba bez organskog objašnjenja (Poikolainen i sur., 1995). No pri razmatranju učestalosti pojedinačnih somatskih tegoba uočavaju se još više prevalencije. Perquin i suradnici (2000) su u svom istraživanju utvrdili da je u tri mjeseca neki oblik boli bio prisutan u 54% sudionika. U ovom istraživanju malen postotak adolescenata izvještava o prisutnosti somatskih tegoba na svakodnevnom planu, no gotovo polovina učenika izjavljuje kako osjeća neki od somatskih simptoma barem jednom tjedno. Pri tome je važno napomenuti kako se smatra uobičajenim iskusiti neke od tjelesnih simptoma jednom mjesečno, a učestalije su tegobe bez medicinskog objašnjenja somatizacijske prirode (Natvig i sur., 1999). Kao najučestalije somatske smetnje zabilježene među adolescentima iz ovog istraživanja mogu se istaknuti osjećaj umora i glavobolje, a bolovi u trbuhu prisutni su najrjeđe. Slične rezultate dobivaju i ostali istraživači somatskih tegoba. Poikolainen i suradnici (1995) nalaze da su umor, letargija i glavobolja najučestalije somatske smetnje, a bolovi u trbuhu i u njihovu su istraživanju

također prepoznati kao rijetka smetnja prisutna u adolescenata. Garber i suradnici (1991) također su uočili visoku učestalost somatskih smetnji učenika prisutnih u protekla dva tjedna, pri čemu su se najučestalijima pokazale glavobolje (25%) i manjak energije (23%), potom bolovi u mišićima, mučnina, bolovi u trbuhu i bolovi u leđima (15%). Najčešće vrste boli prisutne u mladih iz uzorka Perquina i suradnika (2000) također su bili glavobolja i bolovi u trbuhu i ekstremitetima.

Boey i Goh (2001) su utvrdili kako se neki od somatskih simptoma često javljaju u paru i uočavaju visoku povezanost bolova u trbuhu s ostalim somatskim smetnjama. Rezultati te studije također ukazuju na koreliranost abdominalnih bolova s ostalim somatizacijskim tegobama, no kao smetnja u najvišim korelacijama s ostalim tjelesnim tegobama ipak se istaknula glavobolja. No potrebno je uzeti u obzir kako su Boey i Goh (2001) podatke prikupili na uzorku djece osnovnoškolske dobi, među kojima su abdominalni bolovi učestaliji od glavobolje (Boey i Yap, 1999). Veću frekventnost bolova u trbuhu kod djece u odnosu na adolescente uočavaju i Fritz, Fritsch i Hagino (1997; prema Lohre i sur., 2010).

Spolne i dobne razlike u sklonosti somatskim tegobama

Iako pojedina istraživanja ne nalaze spolne razlike u somatizaciji (Vulić-Prtorić i Galić, 2004), većina istraživanja (Boey i Yap, 1999; Brajša-Žganec i sur., 2008; Majić, 2011; Poikolainen i sur., 1995; Silber i Pao, 2003; prema Majić, 2011; Vulić-Prtorić, 2000) ipak dosljedno pokazuje kako su djevojke sklonije somatskim tegobama od mladića, što potvrđuju i nalazi ove studije. Silber i Pao (2003; prema Majić, 2011) smatraju kako nema spolne razlike u somatskim tegobama u ranoj dobi, no tijekom adolescencije somatizacija postaje dva puta prisutnija kod ženskog spola. Iako u ovom istraživanju nisu zabilježene toliko ekstremne spolne razlike u sklonosti somatizaciji, pokazalo se kako su pojedine somatske tegobe osjetljivije na spol od ostalih, pa su spolne razlike značajne jedino u području glavobolje i bolova u trbuhu. Poikolainen i suradnici (1995) također nailaze na najekstremnije spolne razlike u području glavobolje i abdominalnih bolova. Dok su glavobolje prisutne u 22% djevojaka i 7% mladića, prevalencija abdominalnih bolova je nešto niža, pa se oni javljaju u 13% djevojaka i 5% mladića. Ipak, većina istraživača zanemaruje moguća objašnjenja veće sklonosti ženskog spola somatizacijskim smetnjama. Poikolainen i suradnici (1995), primjerice, smatraju da su djevojke sklonije somatskim tegobama jer je za ženski spol prihvatljivije da psihički distres izražava kroz tjelesne kanale. Drugi autori (Canary i sur., 1997; prema Feinauer, Larson i Harper, 2010) pak smatraju da su radi implicitnih socijalizacijskih pravila djevojke sklonije od mladića požaliti se na svoje tjelesne i psihičke tegobe, pa su spolne razlike u somatizaciji odraz veće sklonosti djevojaka da priznaju svoje tegobe, ali ne i odraz stvarnih razlika u doživljavanju somatskih smetnji.

Iako u ovom istraživanju nisu zabilježene dobne razlike u sklonosti somatizaciji, istraživači u tom području bilježe neusklađene rezultate. Hurwitz (2003) smatra da sklonost somatizaciji raste s dobi. Suprotno tome, Bartels i suradnici (2011) uočavaju

kako od djetinjstva do odrasle dobi opadaju somatizacijske tegobe, agresija, socijalni i kognitivni problemi. U ovoj studiji uočen je trend opadanja somatskih tegoba od prvog do četvrtog razreda, iako se navedene razlike nisu pokazale statistički značajnima. Razlog tome može biti premalen raspon dobi adolescenata iz uzorka za detektiranje dobnih razlika, ali i specifičnost odabranog uzorka učenika. Naime, pokazalo se kako je somatizacija prisutnija kod pojedinaca s nižim formalnim obrazovanjem (Gureje i sur., 1997), stoga je potrebno utvrditi efekte dobi kod učenika trogodišnjih škola.

Mogući uzroci sklonosti somatskim tegobama

Visoka zastupljenost somatskih tegoba kod gimnazijalaca iz ovog istraživanja je zabrinjavajuća. Zbog toga je važno da su roditelji, profesori i stručni timovi u školama svjesni frekventnosti somatskih tegoba, ali i njihovih potencijalnih uzroka. Ipak, unatoč visokoj učestalosti pojedinih somatskih smetnji u djece i adolescenata, rijetki su se autori bavili pitanjem uzroka javljanja tih tegoba baš u određenim tjelesnim sustavima. Neki autori (Abbey, 1996; prema Majić, 2011) smatraju da se somatizacija javlja univerzalno u ranoj dobi kada dijete još nema dovoljno razvijene verbalne i kognitivne sposobnosti da bi okolinu obavijestilo o neugodnim doživljajima. Budući da osjećaj neugodnih ekscitacija dijete ne može izraziti verbalno, one nalaze svoj izraz u obliku poremećaja uzimanja hrane, eliminacije, disanja ili drugih tjelesnih problema. Freud smatra (1970; prema Majić, 2011) da iz tog razdoblja potječe vulnerabilnost pojedinih organskih sustava na somatizaciju. Drugi autori (Kaplan, Sadock i Grebb, 1994) pak smatraju da je sklonost somatizaciji naslijeđena od roditelja, što potkrepljuju nalazima o čestoj prisutnosti somatoformnog poremećaja, anksioznosti, depresije, migrene i sindroma iritabilnog crijeva u majki djece sa somatizacijama (Campo i sur., 2007). Suprotno toj teoriji neki autori (DeMaso i Beasley, 2005) smatraju da su somatizacijske tegobe naučene. Naime, moguće je da dijete nakon pojave prvih somatskih tegoba prihvati ulogu bolesnika jer mu ona donosi sekundarnu dobit u obliku roditeljske pažnje i popustljivosti. Osim učenja potkrepljenjem, somatske tegobe mogu biti naučene i modeliranjem. U prilog toj ideji idu i nalazi Craiga, Boardmana, Millsa, Daly-Jones i Drake (1993) koji su utvrdili da je u skupini pacijenata sa somatizacijama čak 55% pacijenata preboljelo ozbiljnu bolest u djetinjstvu, 41% ih je bilo izloženo bolesti roditelja, a u 32% pacijenata je bila prisutna kombinacija oba faktora. Dakle, djeca sa somatizacijama često imaju člana obitelji sa sličnim somatskim simptomima (Boey i Goh, 2001), stoga je moguće da je djetetova tegoba naučena opažanjem ili modeliranjem (DeMaso i Beasley, 2005).

Osim genetike i učenja brojni drugi individualni i okolinski čimbenici imaju ulogu u sklonosti somatizaciji. Wood (1994; prema Vulić Prtorić, 2000) predlaže teoriju obiteljskih sustava prema kojoj su prediktori somatizacije maladaptivni obiteljski procesi, poput upletanja ili pretjeranog zaštićivanja. Prema takvom shvaćanju, u disfunkcionalnim obiteljima djetetova bolest postaje način odvraćanja pažnje od međuljudskih sukoba, zbog čega se simptomi somatizacije često javljaju u vrijeme

napetosti i konflikata među članovima obitelji (Šprajc-Bilen, 1994; prema Vulić-Prtorić, 2000). No dio autora smatra da u podlozi povezanosti somatizacije sa svim prije navedenim nepovoljnim okolnostima leži činjenica da se somatizacija javlja kao odraz neadekvatnog suočavanja sa stresom (Pennebaker, 1990; Gross i Levenson, 1997; VonBaeyer i Walker, 1999; prema Rieffe i sur., 2007).

Uzroci javljanja tjelesnih simptoma kao odgovora na stres nisu sasvim jasni. Van Eck, Berkhof, Nicholson i Sulon (1996) smatraju kako je uzrok povezanosti somatizacije i stresa kortizol, koji oslabljuje imunološki sustav kočenjem odgovora limfocita. S druge strane, potrebno je razmotriti mogućnost da somatski simptomi zapravo pojačavaju stres. Rieffe i suradnici (2007) smatraju kako somatske smetnje kod djece vode do češćeg izostajanje iz školskih i društvenih aktivnosti, zbog čega koče djetetov socijalni i emocionalni razvoj, čime izazivaju i veći stres. No neovisno o uzrocima i o kutu promatranja, veza somatizacije i stresa je dosljedna. U tom kontekstu neki autori (Natvig i sur., 1999; Shanon, Bergren i Matthews, 2010) smatraju da visokoj pojavnosti somatizacije kod adolescenata može pridonositi stres zbog školskih obaveza.

Simptomi somatizacije i stres u školi

Adolescenti provode puno vremena u školi koja je izvor socijalnih, akademskih izazova i psihosocijalnoga stresa, koji proizlazi iz sukoba s prijateljima, straha od neuspjeha, prevelikih zahtjeva učitelja i roditelja i sl. (Frazier i Schauben, 1994; prema Kalebić Maglica, 2007). Izvori stresa u školi su mnogobrojni. Neuspjeh u školi neki autori smatraju najčešćim izvorom stresa kod adolescenata (Halstead i sur., 1993; prema Anić i Brdar, 2007). Dobra ocjena smatra se odrazom djetetovih sposobnosti, pridonosi boljem statusu među vršnjacima i zadovoljava roditelje i učitelje. S druge strane, loša ocjena djetetu sugerira da je neuspješno, a uz to se mora suočiti s nezadovoljstvom roditelja i učitelja, potencijalnom kaznom i pokazivanjem u negativnom svjetlu pred vršnjacima (Stojčević i Rijavec, 2008). Ostali stresni događaji vezani uz školsko okruženje najčešće su testiranja, uspjeh lošiji od očekivanog i preveliki zahtjevi učitelja (Garton i Pratt, 1995). De Anda i suradnici (2000) kao stresore u školi prepoznaju i konflikte s prijateljima i učiteljima, pritisak zbog školskih obaveza, strah od neuspjeha, strah od ocjenjivanja, ali i konflikte s roditeljima u vezi sa školskim uspjehom i ulaganjem napora. Ponekad i učitelji izazivaju stres kod učenika svojim neprikladnim ponašanjima, poput vrijeđanja, ismijavanja, prijetnji i ponižavanja (Piekarska, 2000; prema Kalebić-Maglica, 2006). Također, važno je istaknuti kako je prijelaz iz osnovne u srednju školu za učenike iznimno stresno iskustvo. U tom se razdoblju osjećaju nesigurnima i nesretnima, preopterećeni su nastavom, brojnim obavezama u školi, težim gradivom i većim brojem domaćih zadaća. Osim toga, učenici se moraju privikavati na nove nastavnike i školsko okruženje te stječu nove prijatelje (Boekaerts i sur., 1993; prema Kalebić-Maglica, 2006). Dodatno, uz takve okolnosti učenici se moraju nositi i sa strahovima koji su tipični za razdoblje

adolescencije, poput straha od evaluacije i kritike, straha zbog gubitaka prijatelja i neprihvaćanja od vršnjaka, straha od nepoznatog i straha od neuspjeha (Byrne, 2000).

Ti stresori mogu imati negativan utjecaj na zdravlje učenika, a istraživanja (Murberg i Bru, 2007) pokazuju i kako su povezani s učestalijim somatskim tegobama. Lask (1986; prema Garralda 1999) navodi da velike empirijske studije dosljedno pokazuju kako su djeca sklona somatizaciji često nesigurna i anksiozna te imaju visoka akademska postignuća. Moguće je da je njihova anksioznost odraz toga što si postavljaju visoke standarde u području ponašanja i akademskih uspjeha, a kada ih više ne mogu zadovoljiti, javlja se bolest kao opravdanje za rasterećenje. U prilog tome idu i nalazi (Brajša-Žganec i sur., 2008) prema kojima učenici s izraženijim strahom od škole imaju više somatizacijskih pritužbi od onih s manjim strahom od škole.

S obzirom na frekventnost somatskih tegoba adolescenata, potrebno je razmotriti moguće intervencije. Kada se utvrdi da tjelesne tegobe zbog kojih učenik traži pomoć liječnika nisu organskog podrijetla, liječnici mogu posumnjati u somatizacijsku prirodu njegovih pritužbi. Majić (2011) kao neke od mogućih pristupa toj problematici predlaže individualnu psihoterapiju, grupnu i obiteljsku psihoterapija, kognitivno-bihevioralnu terapiju, različite metode relaksacije, a u nekim slučajevima i medikamentoznu terapiju. U pristupu dječjim somatizacijama neizostavan dio tretmana su informiranje i psihološka podrška obitelji. Na taj se način podučava dijete i roditelja o prirodi somatskih simptoma, što pridonosi bržem povratku djeteta u njegove uobičajene aktivnosti. Ako se utvrde nepovoljne psihosocijalne okolnosti u kojima dijete ili adolescent sa somatskim tegobama odrasta, tada se velik dio napora usmjerava na rješavanje tih problema kao potencijalnog izvora djetetovih somatizacija (Majić, 2011). Ipak, takvi pristupi predlažu se u situacijama kada somatske smetnje značajno ometaju svakodnevno funkcioniranje i normalan život adolescenta. U ostalim slučajevima somatskim tegobama može se pristupiti u okviru stručnog tima u školama, putem detektiranja izvora stresa i podučavanja učenika uspješnim strategijama suočavanja sa stresom. Upoznavanje učenika s uspješnim strategijama suočavanja sa stresom može pridonijeti tome da učenici lakše prepoznaju stresne situacije i povećaju mogućnost njihova djelotvornijeg rješavanja u školskim, ali i životnim situacijama (Stojčević i Rijavec, 2008).

Preporuke za buduća istraživanja

Tumačenje nalaza ovog istraživanja ograničeno je korištenjem prigodnog uzorka. Budući da se pokazalo (Boey i Yap, 1999; Fink i sur., 1999; prema Mai, 2004; Hurwitz, 2003) kako je somatizacija češća kod osoba s nižim stupnjem obrazovanja, moglo bi se pretpostaviti da učenici trogodišnjih, strukovnih škola pokazuju drugačiju sklonost somatizacijskim smetnjama. S obzirom na navedeno, dobivene rezultate nije moguće generalizirati na druge populacije učenika. Kako bi ispravili nedostatke ove studije, budući istraživači bi trebali ispitivati slučajno odabran uzorak adolescenata, a pokazala se i potreba za kontroliranjem efekata zdravstvenog stanja sudionika. U

nekim se studijama pokazalo kako je somatizacija povezana s roditeljskim stilovima odgoja (Woodbury, 1999; prema Majić, 2011) i kako se somatizacijske smetnje mogu predvidjeti na temelju samopoštovanja i socijalnih vještina (Brajša-Žganec i sur., 2008). Uzmemo li u obzir navedene nalaze, jasno je kako je somatizacija fenomen čijem nastanku doprinose mnogobrojni čimbenici. Zbog toga su potrebna dodatna istraživanja kojima bi se razjasnili uzroci nekonzistentnosti nalaza i kako bi se stekla jasnija slika o čimbenicima koji doprinose pojavi somatskih tegoba u djece i mladih.

Zaključak

U provedenom istraživanju pokazalo se kako su hrvatski adolescenti skloni manifestiranju psihičkog distresa putem tjelesnih tegoba. Utvrđeno je kako 1.4% učenika osjeća tjelesne tegobe gotovo svaki dan, u 6.9% učenika su one prisutne 2-3 puta tjedno, 41.3% učenika ima somatizacijske smetnje jednom tjedno, 46.8% ih primjećuje jednom do dva puta mjesečno, a samo 3.2% adolescenata izjavljuje kako tjelesne tegobe ne osjeća nikada. Kao najučestalije somatizacijske tegobe adolescenata istaknuti su osjećaj umora i glavobolje, a najrjeđe su prisutna somatska tegoba abdominalni bolovi. Nadalje, utvrđeno je kako je ženski spol skloniji somatizacijskim tegobama od mladića ($F(1.213)=5.92$, $p<0.05$). Rezultati na Skali somatizacije nisu se pokazali ovisnima o dobi, što nije u skladu s istraživanjima koja svjedoče o padu somatizacijskih tegoba (Bartels i sur., 2011) kako osoba sazrijeva. Takvi rezultati mogu biti odraz premalenog raspona dobi adolescenata iz uzorka za detektiranje dobnih razlika. Brojni istraživači smatraju da visokoj pojavnosti somatizacije kod adolescenata pridonosi stres vezan uz školske obaveze (Lohre i sur., 2010; Natvig i sur., 1999; Vulić-Prtorić i Galić, 2004; Walker, 2001; prema Rieffe i sur., 2007). Zbog toga je važno informirati učitelje i stručne suradnike u školama o učestalosti somatskih tegoba u adolescenata, o njihovim uzrocima i posljedicama, intervencijama, a posebno o postupcima prevencije.