

ASSOCIATION BETWEEN PSYCHOSOMATIC AND TRAUMATIC SYMPTOMS IN EARLY ADOLESCENCE

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SUMMARY

Introduction: This study investigates association between psychosomatic and traumatic symptoms among adolescents.

Subjects and Methods: This cross-sectional survey using self-completion questionnaires was conducted among 868 adolescent in grade 6th, 7th and 8th of primary schools in Mostar (Bosnia and Herzegovina).

Results: Psychosomatic symptoms are strongly associated with traumatic symptoms, with exception of symptom of anger. The association is the highest between anxiety, depression and PTS symptoms on the one side and cardiovascular symptoms on the other side.

Conclusion: According to our results, psychosomatic symptoms are strongly associated with psychosomatic symptoms in early adolescence.

Key words: psychosomatic - traumatic symptoms

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INTRODUCTION

Psychosomatic symptoms are by definition clinical symptoms with no underlying organic pathology. Common symptoms seen in pediatric and adolescent age group include abdominal pain, headaches, chest pain, fatigue, limb pain, back pain, worry about health and difficulty breathing. These, more frequently seen symptoms should be differentiated from somatoform or neurotic disorders seen mainly in adults. The prevalence of psychosomatic complaints in children and adolescents has been reported to be between 10 and 25%. These symptoms are theorized to be a response to stress. Potential sources of stress and trauma in children and adolescents are more or less stressful life events such as natural disasters, hard schoolwork, family problems and peer pressure. Traumatic symptoms that can appear in adolescent are: depression, anxiety, anger, posttraumatic stress (PTS) and dissociation (Hjern et al. 2008, Lien et al. 2009, Čavarović Gabor 2008).

Our hypothesis is that psychosomatic symptoms are significantly associated with traumatic symptoms in adolescents.

In this study our aim is to investigate:

- traumatic symptoms among adolescents according to sex.
- traumatic symptoms in adolescents according to school achievement

- association between psychosomatic and traumatic symptoms among adolescents.

SUBJECTS AND METHODS

This cross-sectional survey using self-completion questionnaires was conducted among 868 adolescent in grade 6th, 7th and 8th of primary schools in Mostar (Bosnia and Herzegovina). All pupils in this range participated in the study. For traumatic symptoms we used Traumatic Symptoms Check List for Children (TSCC-A) questionnaire (Briere 1996) and for psychosomatic symptoms – the questions for 6 group of psychosomatic symptoms: pseudoneurological, gastrointestinal, respiratory, cardiovascular and symptoms of pain. The pupils filled in the anonymous questionnaire during a regularly school class.

The results are presented as absolute and relative frequencies. Statistical analysis was performed with SPSS for Windows, version 9.0 (SPSS Inc, Chicago, IL, USA). The difference between the observed frequencies of nominal and ordinal variables was assessed with χ^2 test for unpaired samples or with Fisher exact test for low rates. The level of statistical significance was set at $P < 0.05$. The Spearman's range test is used for analyzing of correlation.

RESULTS

Table 1. Number of boys and girls who have psychosomatic symptoms

Psychosomatic symptoms	Boys N(%)	Girls N(%)	P
Pseudoneurological	20 (4.8)	25 (5.7)	0.540
Gastrointestinal	33 (7.9)	46 (10.6)	0.184
Pain	46 (11.0)	72 (16.5)	0.020
Respiratory	24 (5.8)	26 (6.0)	0.897
Cardiovascular	47 (11.3)	55 (12.6)	0.545

There were no differences in psychosomatic symptoms between boys and girls except in symptoms of pain (hedeake) $P=0.02$.

Table 2. Number of adolescents who have psychosomatic symptoms according to school achievement (marks)

Psychosomatic symptoms	> Good N(%)	< Good N(%)	P
Pseudoneurological	44 (5.3)	1 (4.2)	0.635*
Gastrointestinal	76 (9.2)	3 (12.5)	0.481*
Pain	115 (13.9)	3 (12.5)	0.570*
Respiratory	49 (5.9)	1 (4.2)	0.584*
Cardiovascular	96 (11.6)	6 (25.0)	0.056*

*Fisher's exact test

We found no statistically significant differences between psychosomatic symptoms and school achievement (marks).

Table 3. Traumatic symptoms among adolescents according to sex

Traumatic symptoms	Boys				Girls				P
	Median	IKR	Min	Max	Median	IKR	Min	Max	
Anxiety	3	4	0	20	4	5	0	19	<0.001
Depression	3	4	0	23	4	4	0	23	<0.001
Anger	4	5	0	27	3	4	0	24	<0.001
PTS	5	6	0	27	5	6	0	22	0.030
Dissociation	3	4	0	23	4	4	0	21	<0.001

The girls in our sample have more traumatic symptoms than the boys ($P<0.001$)

Table 4. Correlation between traumatic symptoms and psychosomatic symptoms among adolescents in Mostar.

		Anxiety	Depression	Anger	PTS	Dissociation
Pseudoneurological	r	.172**	.156**	0.05	.139**	.143**
	P	<0.001	<0.001	0.099	<0.001	<0.001
Gastrointestinal	r	.208**	.193**	0.05	.153**	.143**
	P	<0.001	<0.001	0.132	<0.001	<0.001
Pain	r	.201**	.168**	0.04	.180**	.145**
	P	<0.001	<0.001	0.217	<0.001	<0.001
Respiratory	r	.129**	.088**	-.061*	.072*	0.06
	P	<0.001	0.004	0.048	0.019	0.051
Cardiovascular	r	.209**	.194**	.063*	.179**	.155**
	P	<0.001	<0.001	0.042	<0.001	<0.001

Psychosomatic symptoms are strongly associated with traumatic symptoms, with exception of symptom of anger. The association is the highest between anxiety, depression and PTS symptoms on the one side and cardiovascular symptoms on the other side.

DISCUSSION

In opposite to other studies, our investigation found minimally differences between psychosomatic symptoms in boys and girls. Many other studies found more psychosomatic symptoms among girls than the boys. (Vulić-Prtorić & Macuka 2006, Hjern et al. 2008)

However, we disclosed more traumatic symptoms among girls like in other studies (Lien et al. 2009).

Adolescents who have traumatic symptoms such as anxiety, depression, PTS, dissociation have more psychosomatic symptoms.

The coefficient of correlation between psychosomatic and traumatic symptoms of adolescents shows connection in all traumatic symptoms and psychosomatic symptoms with the exception of symptoms of anger.

A Scandinavian article describes that school stressors, such as harassment by peers, schoolwork pressure and being treated poorly by teachers, were associated with psychosomatic pain as well as psychological complaints such as sadness, irritability, feeling unsafe and nervous. Children identified as highly stressed were four times as likely to have psychosomatic symptoms (Beutel et al. 2010). Psychosomatic complain are also strongly associated with depression in victims of school bullying (Roberts 1992, Fekkes 2004). In our study, the tape of stressor is not investigated. We just searched for traumatic symptoms and found that all psychosomatic symptoms were significantly associated with anxiety, depression, PTS and dissociation.

CONCLUSION

According to our results, psychosomatic symptoms are strongly associated with psychosomatic symptoms

in early adolescence. Therefore, we recommend appropriate mental health consultation for further evaluation and treatment of adolescents with the frequent and multiple psychosomatic complains. Association between psychosomatic complains and specific traumatic events could be topic of our further investigation.

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