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Comparison of Self-Reported and Parent-Reported Emotional and Behavioral Problems in Adolescents from Croatia

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ABSTRACT

The first goal of this study was to obtain, Child Behavior Checklist (CBCL) and Youth Self-Report (YSR) problem-scales data for youths in Croatia, and compare them to the original American sample. The second goal of this study was to compare boys-girls problem scales data and CBCL-YSR differences. The instruments were administered to school adolescents aged between 12–18 comprising a non-referred sample (n=611) drawn from the whole country. Youths, compared to their parents, rated higher scores in all scales in both sexes ($p < 0.001$). According to parents' reports boys had higher scores in more scales (five out of eleven). According to adolescents' self-reports girls had higher scores in more scales (seven out of eleven). Consistent with other studies, Croatian sample confirmed a larger number of serious behavioral and emotional problems reported by adolescents. Adolescents were confirmed as the most reliable informants on their problems.

Key words: CBCL, TRF, adolescents, emotional and behavioral problems, Croatia, cross-cultural comparison

Introduction

The distinct difference between child and adolescent psychiatry and adult psychiatry is the existence of multi-infor-

mant diagnostic assessment. In the work of child and adolescent's psychiatrists, commonly used sources of information are

parents and children/adolescents who give information about themselves. Data may also be obtained from teachers, relatives, pedagogues, etc. This multi-informant approach in diagnostic assessment enables collection of various important data that are then being rounded into a whole for each child/adolescent.

Parents are important observers in the assessment of their own child/adolescent. Parents provide important information on patient's history and developmental path. Personality, emotional and behavioral problems and capabilities of child/adolescent are being assessed using these information, and thus the insight into family dynamics and other different aspects of a child/adolescent functioning is provided. Today adolescents are considered competent enough to give important information about themselves, and their statements about themselves are unavoidable in diagnostic assessment. The data they provide often focus, faster and more clearly, the physician's attention on some aspects in the diagnostic process, than when the information is obtained from other informants.

In studies of adolescents there arises a problem of diagnostic assessment when information is given by different sources. Most of the authors noted low or moderate agreement between parents' reports and self-reports on problem behavior. The most usual average value is 0.25^{1,2}. In previous studies it was observed that in their self-reports adolescents reported more problems than the parents did in theirs³⁻⁵.

Especially important question that needs to be answered in studies of children and adolescents is how to detect children/adolescents with behavioral and emotional problems. Different methods of assessment of emotional and behavioral problems are being used for these purposes. Empirically based approach using standardized instruments is widely ac-

cepted today⁶. Child Behavior Checklist (CBCL) and the instruments derived from it, Youth Self Report (YSR) and Teacher Report Form (TRF), are most frequently used instruments in assessment of competence and behavioral and emotional problems of children and adolescents⁷⁻⁹. They also fulfill the criteria of multi-informant assessment.

In the attempt to obtain data on competence and emotional and behavioral problems of children and adolescents in Croatia, CBCL and TRF were, in our previous studies^{10,11}, administered to children and adolescents. Among children, both in the CBCL and TRF, boys had higher scores than girls on Externalizing and Total Problems scales. Parents rated higher scores on Internalizing and Externalizing scales and the Total Problems scale for both sexes, with the exception of the Internalizing scale in boys. Consistent with findings of other authors, results of our previous study confirmed that parents are very important observers of mental health problems in children. In our study of adolescents' behavioral and emotional problems, measured by CBCL-and TRF, a similar trend was noted as in the previously mentioned study of children¹¹. That is, the importance of parents as valuable informants on emotional and behavioral problems, as compared to teachers, was also confirmed in adolescents.

The first goal of this study was to obtain CBCL and YSR problem-scales data for youths in Croatia, and compare them to the original American sample. The second goal of this study was to compare boys-girls problem scales data and CBCL-YSR differences in our sample.

Subjects and Methods

Subjects and procedure

This study is an integral part of a much larger study of emotional and behavioral problems in children and adoles-

cents in Croatia. Participants of the study were adolescents chosen from 10 cities and rural areas. Our intention was to obtain data from different Croatian regions. Cities and rural areas were randomly chosen. The next step included a random selection of schools in respective cities and rural areas. Further, a class was selected in each school according to a certain age group. Examinees were between 12 and 18 years old. Schools and classes were randomly chosen by a local education contact person or a mental health expert. Parents of pupils from each so selected class were asked to complete the questionnaire. After the informed consent, parents were asked to complete at home the Croatian translation of the original CBCL questionnaire given to them in an envelope. Parents filled in the questionnaires on a voluntary basis. The response rate among parents was 98%. Further, the research was carried out in the way that adolescents were asked to fill in the questionnaires. The response rate among adolescents was 96.5%. This study thus included the questionnaires of examinees whose data from both questionnaires we already had (n=611).

The CBCL and YSR questionnaires

Each questionnaire consists of two parts^{7,9}. The first part contains a series of questions assessing adaptive behavior. The second part of the CBCL questionnaire contains items describing behavior, each of which is to be rated on a 3-point scale for applicability to a child: 0 = not true, 1 = somewhat or sometimes true, 2 = very true or often true. CBCL and YSR include 102 identical questions that describe possible problems. These ratings are combined to form eight narrow band scales or syndromes, two broadband scales, and a Total Problems score. The eight syndromes are termed: Withdrawn; Somatic Complaints; Anxious/Depressed; Social Problems; Thought Problems; Atten-

tion Problems; Delinquent Behavior and Aggressive Behavior. Broadband scales are termed: Internalizing and Externalizing. The Internalizing scale is made up of: Withdrawn, Somatic Complaints and Anxious/Depressed scales. The Internalizing scale reflects the internal stress. The Externalizing scale is made up of the Aggressive Behavior and Delinquent Behavior scales. Externalizing scale reflects one's conflict with other people and their expectations.

The CBCL and the YSR questionnaires were translated from English into Croatian by psychiatrists fluent in both languages. To ensure translation equivalents, the Croatian version was translated back into English independently by other psychiatrists. Conceptual and linguistic problems were resolved through extensive consultations with psychiatrists and linguists. In our previous study the CBCL showed high reliability in Croatian children sample¹⁰.

Statistical analysis

The internal consistency of CBCL and YSR scales was checked by Cronbach's α . Parents and adolescents consistency concerning the problem scales was verified by Pearson's correlation coefficient. The comparison of behavioral/emotional syndromes raw scores of this study with those found by Achenbach (1991)^{7,9} was performed by *t*-test for the CBCL and YSR separately. The difference between boys and girls according to raw mean CBCL and YSR scores, i.e. difference between raw mean CBCL and YSR scores of boys and girls was tested by the independent sample *t*-test, i.e. the paired sample *t*-test.

Results

Demographic distribution

Of all our adolescent examinees, 39.11% were boys. Distribution of examinees ac-

ording to Croatian geographical regions was as follows: central 59.3% and southern 40.7%. Mothers' education was as follows: up to 8 years of schooling 18.6%, 8 to 12 years 55.5%, more than 12 years 25.9%. Fathers' education was as follows: up to 8 years 12.2%, 8 to 12 years 63.3%, more than 12 years 24.5%. CBCL questionnaires were completed by mothers (83.8%), fathers (15%), and by somebody else (1.2%).

Reliability and parent-adolescent agreement

The internal consistency of CBCL and YSR problem scales measured by Cronbach's α was satisfactory, and the values span was 0.78 to 0.89 (Table 1). Parent – adolescent agreement measured by Pearson's correlation coefficient was statistically significant in all problem scales, the span was 0.29 to 0.48 ($p < 0.01$).

Mean values and cross-cultural comparison

The differences found when comparing the CBCL standard data of 12–18 year old American adolescents of both sexes to Croatian adolescents are presented in Table 2. Comparing the CBCL with the standard data of 12–18 year old American adolescents in boys, in problem scales, Croatian boys differed from the American boys in 3 out of 11 scales. Croatian boys had higher scores in CBCL's Somatic Complaints scale. American boys had higher scores in Withdrawn and Aggressive Behavior scales. Comparing the CBCL with the standard data of 12–18 year old American adolescents in girls, in problem scales, Croatian girls differed from the American girls in 6 out of 11 scales. Croatian girls had higher scores in CBCL's Somatic Complaints scale. American girls had higher scores in Withdrawn, Social Problems, Thought Problems, Aggressive Behavior and Externalizing scales.

TABLE 1
INTERNAL CONSISTENCY OF CBCL AND YSR PROBLEM SCALES AND INTERRATER RELIABILITY BETWEEN PARENTS AND ADOLESCENTS

Scale	Internal consistency (Cronbach α)		Agreement between parents and adolescents
	CBCL (N = 611)	YSR (N = 611)	γ^a (N = 611)
Withdrawn	0.85	0.82	0.32**
Somatic complaints	0.85	0.82	0.48**
Anxious/depressed	0.83	0.80	0.42**
Social problems	0.85	0.82	0.31**
Thought problems	0.86	0.82	0.29**
Attention problems	0.84	0.81	0.36**
Delinquent behavior	0.85	0.82	0.46**
Aggressive behavior	0.82	0.80	0.42**
Internalizing	0.82	0.78	0.43**
Externalizing	0.82	0.79	0.44**
Total problems	0.89	0.89	0.39**

CBCL = Child Behavior Checklist; YSR = Youth Self-Report; ^a Pearson correlation coefficient
** $p < 0.01$

TABLE 2
COMPARISON OF THE RAW MEAN CHILD BEHAVIOR CHECKLIST SCORES OF THE PRESENT STUDY WITH ACHENBACH'S (1991) SAMPLE BY MEANS OF STUDENT T-TEST

Scale	Boys					Girls				
	Present study (N = 239)		Achenbach (N = 564)		t	Present study (N = 372)		Achenbach (N = 604)		t
	X	SD	X	SD		X	SD	X	SD	
Withdrawn	1.9	2.2	2.4	2.2	-2.94**	1.8	2.0	2.6	2.4	-5.38***
Somatic complaints	1.5	2.0	1.0	1.5	3.89***	2.3	2.5	1.4	2.0	6.20***
Anxious/depressed	3.3	3.5	3.2	3.3	0.39	3.6	3.7	3.7	3.8	-0.40
Social problems	1.6	1.8	1.6	1.8	0.00	1.2	1.6	1.7	2.0	-4.08***
Thought problems	0.4	0.9	0.5	1.0	-1.33	0.4	1.0	0.6	1.1	-2.85**
Attention problems	3.2	3.1	3.3	3.1	-0.42	2.6	2.8	2.6	2.9	0.00
Delinquent behavior	1.7	2.4	1.9	2.5	-1.05	1.2	1.8	1.4	1.9	-1.63
Aggressive behavior	5.9	5.5	6.8	5.7	-2.07*	4.9	4.3	5.7	5.2	-2.49*
Internalizing	6.5	6.4	6.4	5.5	0.22	7.5	6.4	7.5	6.6	0.0
Externalizing	7.6	7.3	8.7	7.6	-1.90	6.1	5.5	7.1	6.6	-2.45*
Total problems	21.5	18.2	22.5	17.0	-0.75	20.2	15.9	22.0	17.7	-1.60

* p < 0.05; ** p < 0.01; *** p < 0.001

TABLE 3
COMPARISON OF THE RAW MEAN YOUTH SELF-REPORT SCORES OF THE PRESENT STUDY WITH ACHENBACH'S (1991) SAMPLE BY MEANS OF STUDENT T-TEST

Scale	Boys					Girls				
	Present study (N = 239)		Achenbach (N = 637)		t	Present study (N = 372)		Achenbach (N = 678)		t
	X	SD	X	SD		X	SD	X	SD	
Withdrawn	3.0	2.4	3.4	2.2	-2.66**	3.8	2.1	4.0	2.4	-1.32
Somatic complaints	2.3	2.5	2.2	2.3	0.64	3.8	3.0	2.9	2.9	4.65***
Anxious/depressed	4.8	4.4	5.1	4.2	-1.06	7.0	4.7	6.4	5.1	1.84
Social problems	2.6	2.1	2.6	2.0	0.00	2.6	1.9	2.5	2.1	0.75
Thought problems	1.4	2.1	2.3	2.1	-6.50***	1.5	2.0	2.4	2.3	-6.23***
Attention problems	4.6	2.8	4.8	3.0	-1.04	5.1	2.9	4.6	3.0	2.56*
Delinquent behavior	2.7	2.6	3.2	2.5	-2.99**	2.4	2.2	2.5	2.2	-0.69
Aggressive behavior	8.0	5.4	8.5	5.2	-1.44	9.0	4.9	7.9	4.9	3.41***
Internalizing	9.8	7.7	10.5	7.0	-1.46	14.0	7.9	12.9	8.5	2.02*
Externalizing	10.7	7.3	11.6	7.0	-1.92	11.4	6.5	10.3	6.3	2.62**
Total problems	34.3	20.9	37.3	19.1	-2.02*	39.8	19.5	38.9	21.3	0.66

* p < 0.05; ** p < 0.01; *** p < 0.001

The differences found when comparing the YSR standard data of 12–18 year old American adolescents of both sexes to

Croatian adolescents, are presented in Table 3. Comparing the YSR with the standard data of 12–18 year old Ame-

TABLE 4
COMPARISON OF THE RAW MEAN CBCL AND YSR SCORES OF THE PRESENT STUDY (N = 611)

Scale	Boys – girls difference ^a		CBCL – YSR difference ^b	
	CBCL	YSR	Boys	Girls
Withdrawn	0.05	-0.83**	-1.10**	-1.99**
Somatic complaints	-0.76**	-1.46**	-0.85**	-1.55**
Anxious/depressed	-0.27	-2.15**	-1.49**	-3.37**
Social problems	0.45**	0.01	-1.03**	-1.48**
Thought problems	-0.01	-0.11	-1.03**	-1.13**
Attention problems	0.59*	-0.53*	-1.41**	-2.53**
Delinquent behavior	0.50**	0.29	-0.97**	-1.18**
Aggressive behavior	0.98*	-0.97*	-2.13**	-4.08**
Internalizing	-0.94	-4.16**	-3.33**	-6.55**
Externalizing	1.48**	-0.68	-3.10**	-5.26**
Total problems	1.32	-5.56**	-12.78**	-19.59**

^a Independent sample t-test; ^b Paired sample t-test; * p < 0.05; ** p < 0.01

rican adolescents in boys, in problem scales, American boys had higher scores in Withdrawn, Thought Problems, Delinquent Behavior and Total Problems scales. Comparing the YSR with the standard data of 12–18 year old American adolescents in girls, in problem scales, Croatian girls differed from the American girls in 6 out of 11 scales. Croatian girls had higher scores in CBCL’s Somatic Complaints, Attention Problems, Aggressive Behavior, Internalizing and Externalizing scales. American girls had higher scores in the Thought Problems scale.

Boys-girls and CBCL-TRF differences in Croatian sample

In 6 problem scales the parents described boys differently as compared to the girls (Table 4). In general, the parents gave higher scores to the boys than to the girls. According to parents’ reports, boys had higher scores in the following scales: Social Problems, Attention Problems, Delinquent Behavior, Aggressive Behavior, and Externalizing. According to parents’ reports, girls had higher scores only in the Somatic Complaints scale. In 7 problem scales girls rated themselves higher as compared to the boys (Table 4). Accord-

ing to adolescents’ self-reports, girls had higher scores in the following scales: Withdrawn, Somatic Complaints, Anxious/Depressed, Attention Problems, Aggressive Behavior, Internalizing and Total Problems.

The adolescents of both sexes rated themselves higher, as compared to their parents (p < 0.01).

Discussion

Findings of CBCL and YSR in Croatian sample as compared to the American sample

The first goal of this study was to obtain, CBCL and YSR problem scales data for adolescents in Croatia, and compare them to the original American sample. Our results show satisfactory internal consistence of both CBCL and YSR. Comparing our sample to the American⁷ one, in parents’ reports for both sexes higher scores were found in several scales in which externalizing behavior prevails. In Croatian sample, however, we found higher scores, for both boys and girls, in the Somatic Complaints scale. We suppose that the results of the Croatian sample stem from socio-cultural differences.

According to boys' self-reports, American⁹ boys have higher scores than their Croatian counterparts, while Croatian girls have higher scores in a larger number of scales. According to this, Croatian girls seem to think of themselves as more problematic than the American girls⁹. What causes these differences remains yet to be established by further research. Further confirmation of our findings, as well as research of various factors, would thus be helpful in explaining these results.

Boys-girls and CBCL-YSR differences in Croatian sample

The second goal of this study was to compare boys-girls and CBCL-YSR differences in Croatian sample. In this study parents reported a larger amount of problems for boys than for girls. Other international studies showed similar results^{6,12}, although there are some studies with different results¹³. The findings of our study suggest that parents are more aware of externalizing behavior in boys, which is easier to notice. In this sense, we suggest that parents should be educated to spot various adolescents' needs, and also the needs not so easily spotted i.e. the ones related to the internal stress.

In this study, girls were more ready to report on their problems than boys. This finding is consistent with previous studies¹³. The differences in our study were particularly prominent when internalizing problems in girls were concerned. This finding suggests that researchers should be more focused on the group of girls whose problems seem to be serious, yet not observed by their parents.

This study shows significant differences in adolescents' reports on their emotional and behavioral problems, as opposed to the parent's reports. Adolescents report significantly more behavioral and emotional problems than their parents. This finding is consistent with previous

studies that compared parents' and adolescents' reports^{2-4,14}. In the present study, both boys and girls reported more internalizing and externalizing problems than their parents. Developmental functions of adolescence shift the adolescent's focus from his/her parents to his/her peers. Age-mates thus become one's developmental need that parents can't replace. Adolescents spend more and more time with their peers; many important psychological mechanisms unfold dynamically: identification with one's peers, group dependency, age-mates as a way to »escape« from parents, experimenting with social and emotional relations etc. The same seems to go for emotional and behavioral problems, too. That is, it seems that adolescents tend to keep their problems to themselves, not wanting to share them with their parents anymore. On the other hand, spending fewer hours at home prevents parents from observing adolescents' problems. Our study shows the correlation between CBCL and YSR to be between 0.29 and 0.48. Previous studies showed similar results. Thus, the correlation between scales is 0.25, i.e., moderate to low^{1,15}. These findings suggest that it is very important to take into consideration information from both parents and adolescents.

However, there were some limitations to this research. Firstly, in our research so far, we haven't been able to achieve an equal representation of all Croatian regions. Secondly, psychometric characteristics of our instruments were not fully checked. For the above stated reasons, we do not consider our results as standard for the whole Croatia. However, it seems to us that, in the given circumstances, these limitations didn't significantly diminish our main results.

In the conclusion, our study suggests that the adolescents report significantly larger number of behavioral and emotional problems than their parents. Fur-

ther, according to parents' reports (CBCL), boys had higher scores in a larger number of scales (five out of eleven). According to adolescents' reports (YSR), girls had higher scores in a larger number of scales (seven out of eleven). The differences between parents' and adolescents' reports have several significant implications for both clinical work and research. Practice shows that most often, precisely at parent's request, the contact with various mental health experts is made. If we accept the finding that parents do not observe as many emotional and behavioral problems as their adolescents, than we may justly conclude that, in fact, a very small proportion of adolescents receive proper professional help. Adolescents are probably the most reliable informants on their emotional and behavioral pro-

blems. Girls are more ready to report their internalizing problems. It's more probable than that the girls' problems are less frequently recognized e.g. their depressive and anxious states. Further research would be very helpful in verification of adolescents' statements, as they become significant partners in diagnosis and possible therapy.

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USPOREDBA SAMO-IZVJEŠĆA ADOLESCENATA I RODITELJSKIH IZVJEŠĆA O EMOCIONALNIM I PONAŠAJNIM PROBLEMIMA MLADIH U HRVATSKOJ

S A Ž E T A K

Prvi cilj ove studije je bio dobiti nalaze problemskih skala liste dječjeg ponašanja (engl. Child Behavior Checklist, CBCL) i samo-izvješća adolescenata (engl. Youth Self-Report, YSR) u adolescenata u Hrvatskoj, te ih usporediti s originalnim američkim uzorkom. Drugi cilj ove studije je bio usporediti razlike problemskih skala dječaka -djevojaka i razlike CBCL- YSR u našem uzorku. Instrumenti za samoispunjavanje su bili primjenjeni na uzorku školskih adolescenata (n=611) između 12 i 18 godina, iz različitih regija. Adolescenti su u usporedbi s roditeljima davali veće skorove u svim skalama i u oba spola ($p < 0.001$). Prema roditeljskim izvješćima dječaci su imali veće skorove u više (pet) skala. Prema adolescentnim izvješćima djevojke su imale veće skorove u više (sedam) skala. Sukladno drugim istraživanjima, u uzorku u Hrvatskoj su potvrđeni veći ponašajni i emocionalni problemi navođeni od adolescenata. Adolescenti su potvrđeni kao najvažniji izvori informacija o svojim problemima.