

# Prevalence of Behavioural and Emotional Problems among Two to Five Years Old Kosovar Preschool Children—Parent’s Report

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Preschool age is characterized by a rapid development in all aspects of child development. During this development, the introduction of emotional and behavioral disorders can happen to any child. Preschool children have been a neglected population in the study of psychopathology. The Achenbach System of Empirically Based Assessment (ASEBA), which includes the Child Behavior Checklist/1.5 - 5 (CBCL/1.5 - 5), constitutes the few available measures to assess preschoolers with an empirically derived taxonomy of preschool psychopathology. The study was based on an age- and gender-stratified sample of 755 children aged 1.5 - 5 years from five municipalities of Kosovo. The CBCL/1.5 - 5 form was voluntarily completed by the parents of 426 or 56.4% boys and 329 or 43.6% girls. There were 639 or 84% mothers and 116 or 15.4 % fathers. The prevalence of total problems was estimated as 2.9%, the prevalence of externalizing behavior problems was 2.5%, while the prevalence of internalizing behavior problems was 3.8%. These results are low compared to other international studies. The results revealed that there are not significant differences in mean scores among boys and girls on total problems, internalizing and externalizing. Regarding the age, there are statistical differences within the decreasing of age among the three broad-bands syndromes. Such findings highlight the way in which preschool behavior problems may vary within specific cultural settings and underscore the need for in-depth research to explore the contexts.

*Keywords:* CBCL; Preschool Children; Behavior Problems; Internalizing; Externalizing

## Introduction

Social-emotional development captures a broad swath of specific outcomes, ranging from the ability to identify and understand one’s own and others’ feelings, establish and sustain relationships with both peers and adults, and regulate one’s behavior, emotions, and thoughts (National Scientific Council on the Developing Child, 2005). In the literature, children’s behavioural and socio-emotional adjustment is generally indicated by the extent of their manifestation of behaviour problems (Campbell, 1995; Dearing, McCartney, & Taylor, 2006). Behaviour problems have often been conceptualized along two broad spectrums: internalizing problems which are expressed in intrapersonal manifestation, such as anxiety, depression and withdrawal; and externalising problems which are demonstrated in interpersonal manifestation, such as hyperactivity and aggression (Achenbach, 1991; Achenbach & Rescorla, 2000; Dearing et al., 2006). It has been reported that approximately 5% to 14% of kindergarten children in the general population exhibit moderate-to-severe behavioural problems (Lavigne et al., 1996; Luk et al., 1991) while Campbell (1995), states that approximately 10% - 15% of preschool children are mild to moderate behavior problems. In a comprehensive review of studies about the prevalence of psychiatric disorders, Roberts et al. (1998) reported prevalence rates of preschool children between 3.6% and

24% with a mean of 10.2%.

The literature is more inconsistent about gender differences during the preschool period (Campbell, 1995). The literature suggests that boys and girls often manifest different health, mental health, social, and behavior problems (Baillargeon et al., 2007; Maschi et al., 2008). Some studies have shown that girls are much more likely to cope with stress using internalizing behaviors (e.g., anxiety and depression) while boys are more likely to use externalizing behaviors (e.g., anger or aggression) (Hoffman & Su 1997; Moffitt et al., 2001). Furthermore, other research has reported a significant correlation between internalizing and externalizing problems (e.g. Achenbach & Rescorla, 2000; Mesman, Bongers, & Koot, 2001). Achenbach and Rescorla (2000) found a positive correlation between internalizing and externalizing scores among a national US sample, suggesting that children tend to score similarly in both areas of problems.

Another body of research has revealed gender differences in behaviour problems, especially in externalizing behaviour. For instance, it has been reported that boys tend to manifest externalizing problems more than girls (Prior, Smart, Sanson, & Oberklaid, 1993). Keenan and Shaw (1997, 2003) argued that gender differences in externalizing behavior are not apparent until toddlerhood and become more pronounced in preschool.

Although gender differences in externalizing problems are well documented (see Maccoby, 1998), relatively little is known about these behaviors in girls (Hinshaw, 2002). In the toddler and preschool years, sex differences are not as marked as in older children. Boys' higher rates of disruptive behavior seem to emerge during the later preschool period, with studies documenting absence of sex differences from age 1 to 3 (Achenbach, 1992; Keenan & Shaw, 1994), followed by increasing sex differences from age 4 to 5 (Lavigne, Gibbons, Christoffel et al., 1996; Rose, Rose, & Feldman, 1989).

Several studies are available which indicate that early emergent behaviour problems are linked with serious behaviour problems later in life (Duncan, Brooks-Gunn, & Klebanov, 1994; Stormont, 2002). In support of this is the finding that 50% to 75% of kindergarten children with significant behaviour problems continue to have these difficulties up to 7 years later (Marakovitz & Campbell, 1998; Speltz, McClellan, DeKlyen, & Jones, 1999). Other research (Zoccolillo, Tremblay, & Vitaro, 1996) has further revealed that the stability and continuity of these behaviour problems can further negatively affect children's psychological, cognitive and behavioural outcomes, including poor academic competence, delinquency and conduct disorder.

Individual perceptions of what constitutes problem behavior can also vary. This concern is particularly important because most research on childhood behavior problems utilizes parental reports, and parents' perceptions of the appropriateness, severity, and quality of their child's behaviors are influenced by many factors. It is possible that the measurement and assessment of behavior problems could be influenced by cultural factors that vary by ethnicity (Spencer, Fitch, Grogan-Kaylor, & McBeath, 2005).

In fact, an understanding of the developmental origins of later psychopathology can be gained through research into the early signs of social and emotional dysfunction, and considering that most of our children start to attend preschool institutions when they are three years old, we designed the present study to determine prevalence rates of behavioural and emotional problems according to parent's report. Our hypothesis was that there will be differences between the girls and the boys on total problems, internalizing and externalizing.

## Methodology

### Sample and Procedure

From a total of 755 children, there were 426 boys or 56.4% and 329 girls or 43.6 [(mean age in years = 3.4 (SD 1.0)] from five municipalities (Pristina, Peja, Ferizaj, Mitrovica, Gjilan), who took part in the study. Children ranged in age from 2 to 5 years old (2 = 183 children; 3 = 221 children; 4 = 233 children; 5 = 118 children). There were 755 participants' parents who voluntarily completed a socio-demographic questionnaire, and rated their child's behavior on the Achenbach Child Behavior Checklist (CBCL 1.5 - 5). The response participation rate was 75.5%. As expected, 639 or 84% of parents were mothers and 116 or 15.4 % were fathers. **Table 1** presents the education level and employment rate for both parents.

**Table 1** shows that from 755 mothers, only 3 of them have the elementary level of education, while 752 of them are very well educated. We can say the same thing for the fathers as well, out of 755, 272 of them have secondary school level while 479 of them have university degree.

**Table 1.**  
Education level and employment rates for parents.

	Nr.	%
<b>Education level mother</b>		
Elementary	3	0.4
Secondary school	165	21.9
University degree	587	77.7
<b>Education level father</b>		
Elementary	4	0.5
Secondary school	272	36.0
University degree	479	63.5
<b>Employment situation mother</b>	736	98.1
<b>Employment situation father</b>	752	99.6

Prior to collection of the survey data, we granted the permission for using Kosovar version of CBCL 1.5 - 5. From November 2012 to May 2013 the researcher visited the preschool institutions in five municipalities that were selected from the list provided by Ministry of Education Science and Technology. The researchers met with each preschool director to explain the aim of the study and establish mutual cooperation. Then, the preschool director offered the CBCL to parents of preschool children who attended the preschool institution.

### Instruments

The ASEBA (Achenbach System of Empirically Based Assessment) preschool forms are standardized assessment instruments that are user-friendly, cost-effective, and usable by a wide range of professionals in different settings, which can be completed independently by most respondents in about 15 - 20 min. CBCL 1.5 - 5 were designed to provide normed scores on a wide array of behavioral and emotional problem scales in young children (Rescorla, 2005). The CBCL for preschoolers has been used in over 200 published studies and its validity and reliability are well documented (Rescorla, 2005).

Parent ratings were obtained using the CBCL 1.5 - 5 (Achenbach & Rescorla, 2000), which has 99 items rated 0-1-2 (0 = *not true (as far as you know)*; 1 = *somewhat or sometimes true*; or 2 = *very true or often true*) plus 1 open-ended problem items. Ratings of CBCL 1.5 - 5 problem items are based on the children's functioning over the preceding 2 months. Parents completed the questionnaires on a voluntary basis at home. They were asked to turn it to the preschool teacher, who collected and sent them to the director.

Six syndromes of co-occurring problems were identified for the CBCL 1.5 - 5 through exploratory and confirmatory factor analysis of item ratings (Achenbach & Rescorla, 2000). Second-order factor analysis of the six syndromes yielded two broad-band groupings: *Internalizing* (comprised of the *Emotionally Reactive*, *Anxious/Depressed*, *Somatic Complaints*, and *Withdrawn* syndromes) and *Externalizing* (comprised of the *Attention Problems* and *Aggressive Behavior* syndromes). The *Total Problems* scale is the sum of the ratings on all problem items.

### Data Analyses

T scores and raw scores were assessed using Assessment Data Management (ADM) and all other statistical analyses

were carried out by SPSS version 19 for Windows. Cronbach's alpha ( $\alpha$ ) coefficient was used as an index of internal consistency for the CBCL. Scales were described by mean and standard deviation (SD). Multivariate analyses were computed by means of the general linear model (GLM).

### Results

To compare broadband and syndrome scales all CBCL scores were transformed into T-values. **Table 2** displays the mean scores, standard deviation and the internal consistency for the seven syndrome scales and the three broad band syndromes.

The mean of the CBCL total score of the complete sample was 34.2 (SD = 22.6). As shown in **Table 2**, there is obviously a high level of internal consistency on both scales.

Further on, two main effects, gender and age, had no significant interaction,  $F(1) = 2.91, p = .088$ . There was no significant correlation between the gender of the children and the CBCL total score ( $r_s = -0.03, p = 0.32$ ), while there was a significant correlation between the age of the children and the CBCL total score ( $r_s = 0.13, p = 0.00$ ). The results for mean scores and standard deviations for three broad-band scales by gender are shown in **Table 3**.

The gender differentiated norms leveled the CBCL total scores of boys (Mean = 33.5, SD = 23.1) and girls (Mean = 35.1, SD = 21.9) and there was no significant difference  $t = 0.98, p = 0.325$ . It's the same thing for INT scale, were the  $t = 1.62, p = 0.106$  and also for the EXT scale were  $t = -0.624, p = 0.533$ . These results are inconsistent with the hypothesis. The scores of the two broadband scales, for all children, the INT and the EXT scale were significantly correlated:  $r = 0.66, p < 0.01$ . We can say the same thing also for girls, were the correlation is:  $r = 0.64, p < 0.01$  while for the boys the correlation is  $r = 0.69, p < 0.01$ . For the girls the means of the two broadband scales did not differ significantly: INT = 11.6; EXT = 11.2;  $t = 1.077; p = 0.282$ . For the boys the mean of EXT (11.5), was significantly higher than the mean of INT (10.6),  $t = -3.083, p < 0.002$ . On both broadband scales the means of boys and girls did not differ significantly, INT:  $M_{boys} = 10.6, M_{girls} = 11.6; t = 1.61, p = 0.106$ ; EXT:  $M_{boys} = 11.5, M_{girls} = 11.2; t = -0.624, p = 0.533$ .

The results obtained through analysis of variance indicated significant main effects for age. As shown in the **Table 4**, older children had a higher mean Total Problems score than younger children,  $F(1) = 5.3, p < 0.001, \eta^2 = 0.02$ . The ANOVA for internalizing yielded significant main effects for age. Older children had a higher mean internalizing score than younger children  $F(1) = 6.3, p < 0.001, \eta^2 = 0.02$ . We can say the same thing for the ANOVA results for externalizing,  $F(1) = 4.2, p < 0.001, \eta^2 = 0.01$ .

The results obtained through analysis of variance [2 (gender)  $\times$  4 (age group)], on seven empirical scores indicated significant main effects for age, the emotional reactive and somatic complaints indicated significant main effects for gender, while sleeping problems indicated significant main effects on both, gender and age. As shown in the **Table 5**, the values presented decrease with increasing age of the children, so the younger children have shown the higher mean than older children for all empirical scores.

For emotionally reactive,  $F(1) = 4.2, p < 0.00, \eta^2 = 0.01$ , age \* gender interaction was found significant:  $F(1) = 5.6, p < 0.001, \eta^2 = 0.02$ ; for anxiety scores, ANOVA indicate the same

**Table 2.**

The mean scores, standard deviation and the internal consistency for the syndrome scales and the three broad band syndromes.

	Mean (SD)	Cronbach's alpha ( $\alpha$ )
Emotional	2.4 (2.5)	0.88
Anxiety/depression	3.5 (2.7)	0.87
Somatic complaint	3.1 (2.5)	0.88
Withdrawn	2.0 (2.4)	0.88
Sleep problems	3.0 (2.4)	0.88
Attention problems	2.3 (1.8)	0.88
Aggressive behavior	9.0 (6.1)	0.86
Internalizing	11.0 (8.6)	0.86
Externalizing	11.4 (7.4)	0.86
Total problems	34.2 (22.6)	0.93

**Table 3.**

Mean scores and standard deviations for three broad-band scales by gender.

	Gender	N	Mean	SD	Comparison Boys-Girls
Total Problems	F	329	35.1	21.9	0.325
	M	426	33.5	23.1	
	F + M	755	34.2	22.6	
Internalizing	F	329	11.6	8.4	0.106
	M	426	10.6	8.8	
	F + M	755	11.0	8.6	
Externalizing	F	329	11.2	7.6	0.533
	M	426	11.5	7.3	
	F + M	755	11.4	7.4	

**Table 4.**

Mean scores and standard deviations for three Broad-band scales by age.

	Internalizing Mean (SD)	Externalizing Mean (SD)	Total Problems Mean (SD)
2 years	9.7 (9.2)	11.0 (6.8)	32.2 (21.8)
3 years	9.8 (6.6)	10.7 (6.5)	30.9 (17.8)
4 years	12.0 (8.1)	11.3 (7.5)	35.3 (21.5)
5 years	13.4 (10.9)	13.5 (9.2)	41.1 (31.2)

result:  $F(1) = 22.7, p < 0.00, \eta^2 = 0.07$ , age \* gender interaction was found significant:  $F(1) = 3.7, p < 0.01, \eta^2 = 0.01$ ; for withdrawal:  $F(1) = 6.7, p < 0.00, \eta^2 = 0.02$ , age \* gender interaction was found significant:  $F(1) = 12.4, p < 0.00, \eta^2 = 0.05$ ; for attention problems:  $F(1) = 2.9, p < 0.03, \eta^2 = 0.01$ , age \* gender interaction was found significant:  $F(1) = 7.2, p < 0.00, \eta^2 = 0.03$ ; and for the aggression:  $F(1) = 11.5, p < 0.00, \eta^2 = 0.04$ , age \* gender interaction was found significant:  $F(1) = 9.4, p < 0.00, \eta^2 = 0.04$ .

The sleeping problems and somatic complains indicated significant main effects for age and gender. Sleeping problems for gender:  $F(1) = 32.0, p < 0.00, \eta^2 = 0.04$ ; and for age:  $F(1) = 4.0, p < 0.00, \eta^2 = 0.02$ . For Age \* gender no interactions were significant.

Somatic complaints for age:  $F(1) = 3.2, p < 0.02, \eta^2 = 0.01$ .

Girls had a higher mean than boys:  $F(1) = 4.8, p < 0.03, \eta^2 = 0.00$ . Age \* gender interaction was found significant:  $F(1) = 6.9, p < 0.00, \eta^2 = 0.03$ .

For Internalizing, Externalizing, and Total Problems, we used the clinical range defined as  $T$  scores  $\geq 64$  (about the 90<sup>th</sup> percentile), the borderline range =  $T$  scores from 60 to 63 (84<sup>th</sup> to 90<sup>th</sup> percentiles, and the normal range = scores below the 84<sup>th</sup> percentile ( $T < 60$ ). With this cut-off, 2.9% of children scored in the deviant range. This percentage provided an estimate of the prevalence of emotional and behavioral problems in Kosovar children according to parents' rating. Prevalence rates were 3.8% for Internalizing problems and 2.5% for Externalizing. The results are presented in **Table 6** for Internalizing, Externalizing, and Total Problems by gender and age.

**Table 6** shows the prevalence rate for scores above the cut-off for deviance on Internalizing, Externalizing, and Total Problems separately by gender and age. For Internalizing, prevalence was higher for girls than boys and for three, four year old children higher than for younger and older children. For Externalizing, prevalence was much higher for boys than girls, and slightly higher for younger children than older children. For Total Problems, prevalence was slightly higher for girls than boys, and there is a big difference for four years old children, while for the other groups the prevalence is comparable.

## Discussion

With a very low rate, only 2.9% of the preschool children were in the clinical range on the CBCL 1.5 - 5. In comparison to a previous research with 360 children from the municipality of Pristine (Jetishi, 2010), using the same measure, this rate is low. Within the previous study (Jeshiti, 2010) the prevalence rate for total problem scores were 7.2% in the clinical range, while in this study 2.9. This can be explained with the fact that our research included 755 children from five different municipalities of Kosovo, all children who already attend a preschool education program, which is expected to have its impact on

**Table 5.**

Means and standard deviation for seven empirical scales, according to gender and age.

	Gender		Age			
	Girl Mean (SD)	Boys Mean (SD)	2 years Mean (SD)	3 years Mean (SD)	4 years Mean (SD)	5 years Mean (SD)
Emotional	2.5 (2.6)	2.2 (2.4)	1.8 (2.6)	2.2 (2.2)	2.5 (2.2)	3.0 (3.1)
Anxiety/ depression	3.7 (2.8)	3.4 (2.7)	3.3 (3.0)	3.2 (2.3)	3.7 (2.8)	4.1 (2.8)
Somatic complaint	3.4 (2.3)	2.9 (2.7)	2.8 (2.4)	2.9 (1.8)	3.2 (2.4)	3.7 (3.5)
Withdrawn	2.0 (2.4)	2.0 (2.5)	1.7 (2.5)	1.5 (1.9)	2.6 (2.3)	2.5 (2.9)
Sleep problems	3.5 (2.7)	2.6 (2.1)	2.9 (2.6)	2.7 (2.4)	2.9 (1.9)	3.6 (2.9)
Attention problems	2.4 (1.9)	2.4 (1.8)	2.1 (1.7)	2.2 (1.6)	2.4 (1.8)	2.8 (2.4)
Aggressive behavior	8.9 (6.2)	9.2 (5.9)	8.9 (5.7)	8.5 (5.4)	8.8 (6.2)	10.7 (7.1)

**Table 6.**

Prevalence (%) of scores above the cut-off for Internalizing, Externalizing, and Total Problems by gender and age.

	Internalizing		Externalizing		Total Problems	
	Nr.	%	Nr.	%	Nr.	%
<b>Boys</b>	15	3.2	21	4.4	20	4.2
<b>Girls</b>	15	4.6	5	1.5	15	4.6
<b>2 years</b>	8	4.4	6	3.3	8	4.4
<b>3 years</b>	13	5.9	7	3.2	10	4.5
<b>4 years</b>	11	4.7	7	3.0	4	1.7
<b>5 years</b>	5	4.2	3	2.5	5	4.2
<b>Total</b>	29	<b>3.8</b>	19	<b>2.5</b>	22	<b>2.9</b>

child development and behavior. However, the other demographic variables should be considered.

We can say the same thing for the comparison with international studies, with research showing the range from 7% - 25% (Angold & Egger, 2004) and 11.9% of Turkish Children (Erol et al., 2005). The prevalence rate of this study was too far from the range of 10% - 15% reported by Campbell (1995) and from 10.2%, which was the mean prevalence in preschool studies reviewed by Roberts et al. (1998).

Notwithstanding cross-national comparisons of studies, it is of interest in the current study that the mean Total Problems score of 34.2 (SD = 22.6) for 2 - 5 years old Kosovar children was slightly higher than the mean Total problems score for Dutch children, which was 30.5, also for 466 Italian children it was 33.4 (Frigerio et al., 2006), for 374 Finnish children (Sourander, 2001), was 30.4, while for 109 Icelandic children the mean score was 27.5 (Hannesdóttir & Einarsdóttir, 1995) and for 756 Quebec children, it was 32.9 (Larson et al., 1988).

On the other side, our result was lower than in some other studies. Namely, the mean Total Problems score for 169 Spanish children from the general population, was 37.6 (De la Osa, Ezpeleta, & Navarro, 1996), while Erol et al. (2005) obtained a total problems mean score of 39.5 for 638 Turkish children assessed with CBCL 2 - 3.

There was an obvious tendency of increase of internalizing values within the age, which could be explained and may reflect improvements in the capacity to remember and anticipate negative events (Kaslow, Brown, & Mee, 1994). For externalizing problems there was a slight decrease of values, which corresponds with developing language and cognitive abilities that permit the use of emotion regulation strategies other than physical aggression to settle disputes. Regarding the gender differences there was no statistical significance for any of the three broad band syndromes. This was in line with a body of studies (Campbell, 1995; Keiley et al., 2000; Richman et al., 1982), that there are no gender differences in preschool children, and disagreed with some other studies, which reported that boys tend to demonstrate a significantly higher propensity to manifest externalizing problems than girls (Prior, Smart, Sanson, & Oberklaid, 1993; Sanson, Oberklaid, Pedlow, & Prior, 1991).

In our context, having into consideration that out of 755, 639 respondents were mothers, and that our mentality encourages boys to be more lively, more active than girls, this result is of interest to further studies. Also from the fact that we used only parent's report, while it has been argued that multi-informant assessment of children may offer a more comprehensive under-

standing of children's problems (Kagan, Snidman, McManis, Woodward, & Hardway, 2002), and that modest to moderate strength of correlations across informants and across settings (Achenbach, Edelbrock, & Howell, 1987; Grietens et al., 2004) may reflect true variations in children's behaviors across different settings and interpersonal relationships (Kerr, Lunkenheimer, & Olson, 2007; Merrell, 1999), we strongly recommend a multi-informant assessment of Kosovar preschool children.

### Limitations

Despite the large sample size, restrictions must be made about the generalizability of the findings. The study sample was derived from preschool institutions and there is a very low percentage of preschool attendance in Kosovo. The educational levels of parents and a predominantly middle class bias were specific features of the sample. Also the rate of employment was clearly higher than the national average.

When interpreting the results, it should be taken into account that the child mental health status was assessed by a symptom checklist questionnaire. Given the large number of subjects, the questionnaire approach offers useful information but lacks the specificity and additional depth that structured psychiatric interviews might provide.

Further studies on preschool children behavior problems are strongly recommended in order to understand the continuity and discontinuity of CBCL scores as the children develop.

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