



Research report: “Strengths and Difficulties of Children at Nest Centres in Bosnia and Herzegovina”

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Introduction

Many basic needs of families and children in Bosnia and Herzegovina are compromised. In the society in transition there is poverty, high unemployment rate, Post-Traumatic Stress Disorder in parents, different forms of violence and other socio-pathological phenomena. Family is the most exposed to such immediate changes and because of its vulnerability it is often unable to fulfil its main role, to be a safe and secure place for the growth and development of children.

Multi-problem families refer to those with different risk factors intertwined, such as: poverty, health problems, mental illnesses, addictive diseases, domestic violence, prostitution, criminal behaviour, bad housing, child abuse and neglect, etc. Even if we exclude unemployment and poverty, some of these factors can play a role in classifying a family in this category. Interaction and constant occurrence of these factors can cause severe stress to its members. Bortolotti (1995) argues that such a family presents multiple problems of different types and that those problems affect both adults and children and are connected to each other. Moro (1995) talks about families that face marginality due to poverty, unemployment, social mobility or deviance. In such families, relationships can be seriously impaired. There is a visible imbalance between resources and problems and the lack of coping mechanisms for facing everyday challenges.

Children growing up in a multi-problem family may experience a high level of failure at school and risk of early leaving school, which considerably reduces the chances for their independence later in life and finding an adequate job. There is also a greater risk of psychological and socio-pathological phenomena such as addictive diseases, violence – whether they become victims and/or perpetrators – juvenile delinquency, aggression, obesity, depression, suicidal tendencies, etc.

The centres provide a safe place for children from multi-problem families to learn and associate. Support is organized through an individual and group approach and thus contributes to the prevention of various forms of risk behaviours. In the long run, it helps children at risk to grow to be healthy and responsible adults who will be good parents, committed and active members of their communities.

This research studies children from multi-problem families, whom we refer to, in the text below, as children at risk, who have been involved in the activities of daycare Nest Centres in Bosnia and Herzegovina over the past 18 months. The purpose of daycare centres for children at risk is to contribute to a better quality of life of the children coming from said families, to provide them with new possibilities of development through high-quality, professional and focused support directed at children and their parents, in cooperation with all relevant local community stakeholders. In the safe environment of the daycare centre and their own social environment, along with the necessary professional supervision, children meet their needs, acquire and develop life skills, as well as personal and social responsibilities for the purpose of becoming independent, and developing their social, cognitive and other important life functions.

Immediately after the second generation of daycare Nest Centres in BiH was opened (in 2013), we launched a research on the psychological characteristics of the children involved in the centres according to the previously defined criteria. We also applied the same measuring instruments on their peers from the same schools and then we compared them. In order to review the effects of this approach we repeated the survey 18 months later.

The main goal of the research is to establish any changes in the children's behaviour at daycare Nest Centres as opposed to their initial results achieved on the same tests 18 months before and as opposed to the results achieved by their peers. In the initial research we defined the psychological domains of children related to: emotional problems, conduct problems and peer relationship problems, hyperactivity, prosocial behaviour, level of self-esteem, self-confidence and attitude towards the future. On the basis of test results we established whether and in which aspects of psychosocial functioning any changes occurred as a result of activities carried out at the centres. An analysis of the test and retest will show whether this approach was efficient, in which aspects the most prominent change was made, and which factors contributed to them, which will help improve the quality of work at centres.

Method

The research (test and retest) is a comparative survey including a group of children at risk (1) and a reference group of children (2). The former is comprised of 105 children and the latter of 88 children, selected on the basis of the criteria defined beforehand. The first reference group comprises 126 of their peers from the same classes, and the second 69 children. The data on the children at risk has been gathered on the basis of the questionnaires filled out by the children, teachers (class masters), parents and Nest Centre staff. Two sets of age-adapted questionnaires have been applied.

Instruments

The following instruments have been used to collect the data

- 1) The *Strengths and Difficulties Questionnaire – SDQ* is intended as an overview of emotional and conduct problems in children and adolescents. Apart from difficulties, the questionnaire also aims to assess strengths. The questionnaire can be used to monitor and evaluate services of daycare centres (Goodman, Meltzer and Bailey, 1998).
The questionnaire comprises 25 items grouped in five scales: pro-social behaviour, hyperactivity, emotional problems, conduct problems and peer relationship problems. Each subscale has 5 items. There are several versions of the scale. We have used the self-report version for 11-16 year olds and the teacher version for 4-16 year olds. Apart from the baseline questionnaire, there is also a version including "an impact supplement" and a "follow-up" version to monitor changes and outcome of the intervention. The *level of presence* of a certain problem is assessed (Not True, Somewhat True, and Certainly True).

The rest of the questionnaire assesses the importance of difficulties through items referring to the *duration*, *areas in which the problems manifest themselves* and the *level of impact* on the child and his/her environment. The teacher version of the Strengths and Difficulties Questionnaire (SDQ - R. Goodman, 1997) is applied to the risk and reference groups of children of all age groups. The reliability of this questionnaire in our research is Cronbach alpha = 0.87. The youth SDQ self-report (SDQ - R. Goodman, 1997) is applied to children aged 12-16, while the reliability of the questionnaire in our research is Cronbach alpha = 0.72.

- 2) The Rosenberg self-esteem scale (RSES, 1965) contains ten statements, five positively worded and five negatively worded ones. Self-reporting is performed on a 5-degree Likert-type scale and applies to children aged 12-16. In our research, the RSES is treated as a one-dimensional scale that reliably measures general self-esteem. Reliability is Cronbach alpha = 0.73.

Additional data on respondents has been collected by means of tailor-made questionnaires:

1. Questionnaire on personal, family and school data on the child.
2. Questionnaire on family risk factors as the criteria upon which children are chosen to be Nest Centre beneficiaries – completed by the Nest Centre staff only for the children attending the centres
3. Self-esteem scale contains 12 items, completed by teachers and children aged 6-16
4. Life aspirations questionnaire (completed by children)
5. Questionnaire on the perceptions of belonging contains 33 items, while reliability is Cronbach alpha = 0.795

Sample

The first stage of the survey encompasses the total of 231 children aged 6-16 (Diagram 1). One group is comprised of the children using the BiH Nest Centre services (105 beneficiaries in total or 45.5%), and the reference group includes 126 of their peers from the same classes. The respondents are divided into two age groups; the younger group has 125 children aged 6-11 (54.1%), and the older-age group has 105 respondents aged 12-16. By gender: 124 girls (53.3%) and 107 boys (46.7%).

The second stage of the survey (Diagram 2) includes 157 children – 88 children at risk (56.1%) involved in centres' activities and 69 children from the reference group (43.9%). The respondents are divided into two age groups; the younger group has 56 respondents aged 6-11 (35.7%), and the older-age group has 101 respondents aged 12-16 (64.3%). Average age of the entire sample is 12.1 ($M=144.64$, $SD=26.60$). Average age of the children at risk is 11.8 ($M=140.49$, $SD=33.17$), while that of the reference group is 12.4. ($M=148.33$, $SD=18.35$). By gender: 83 girls (52.9%) and 74 boys (47.1%).

The survey includes the children living in Jablanica, Prijedor, Modriča, Zenica, where the newly-formed centres for children at risk are located, where the children are involved in the centre for the first time. The surveyed children are elementary school pupils and 1st grade secondary school students. The biggest number of respondents comes from the 3rd through the 7th grade (78%).

In the second stage of the survey, the sample got smaller, especially in the reference group. Data has not been collected on 17 children from all five centres because some children left the centre in the meantime, while some were absent during the data collection.

Table 1: *Sample structure by age and gender*

	Gender						Age					
	Male		Female		Total		Aged 6-11		Aged 12-16		Total	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Children at risk	49	46.7	56	53.3	105	45.5	66	63.5	38	36.5	105	45.5
Reference group	58	46	68	54	126	54.5	59	46.8	67	53.2	126	54.5
Total	107	46.3	124	53.7	231	100	125	54.3	105	45.7	231	100

Table 2: Gender of respondents

	Gender						Age					
	Male		Female		Total		Aged 6-11		Aged 12-16		Total	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Children at risk	49	46.7	56	53.3	105	45.5	66	63.5	38	36.5	105	45.5
Reference group	58	46	68	54	126	54.5	59	46.8	67	53.2	126	54.5
Total	107	46.3	124	53.7	231	100	125	54.3	105	45.7	231	100

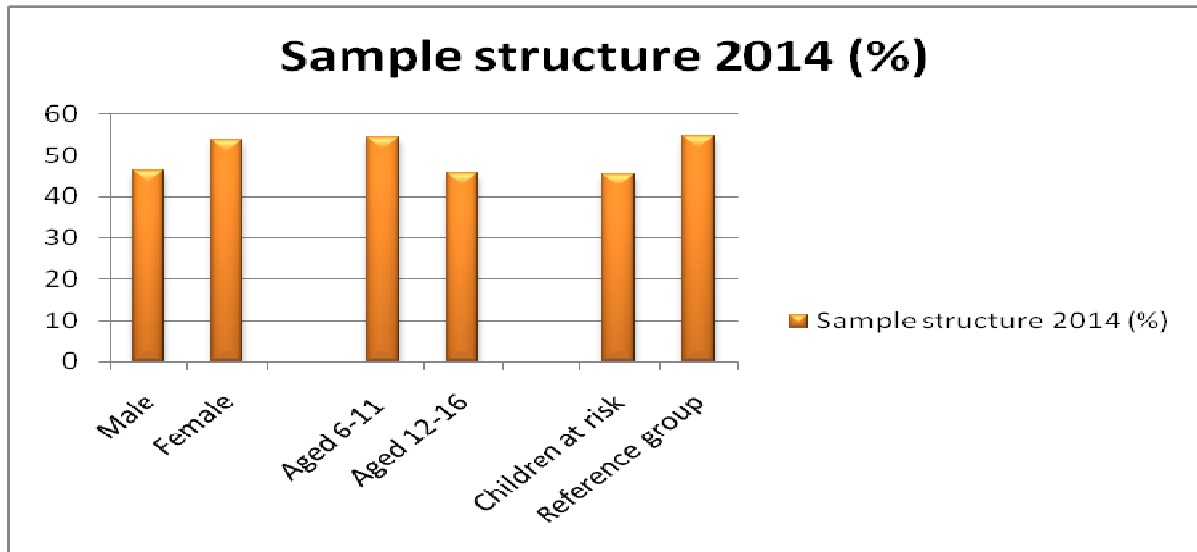


Diagram 1 Sample structure by gender, age and presence of family risk factors according to 2014 data

Diagram 1 shows the sample structure by gender, age and presence of family risk factors. The survey encompasses the total of 231 respondents (N=231), of which 46.7% are boys and 53.3% are girls. Of the entire sample, 54.1% (125 respondents) are aged between 6 and 11, while the children in the risk group (105 of them) represent 45.5% of the entire sample. Of the latter, 63.5% are aged 6-11, and 36.5% are aged 12-16.

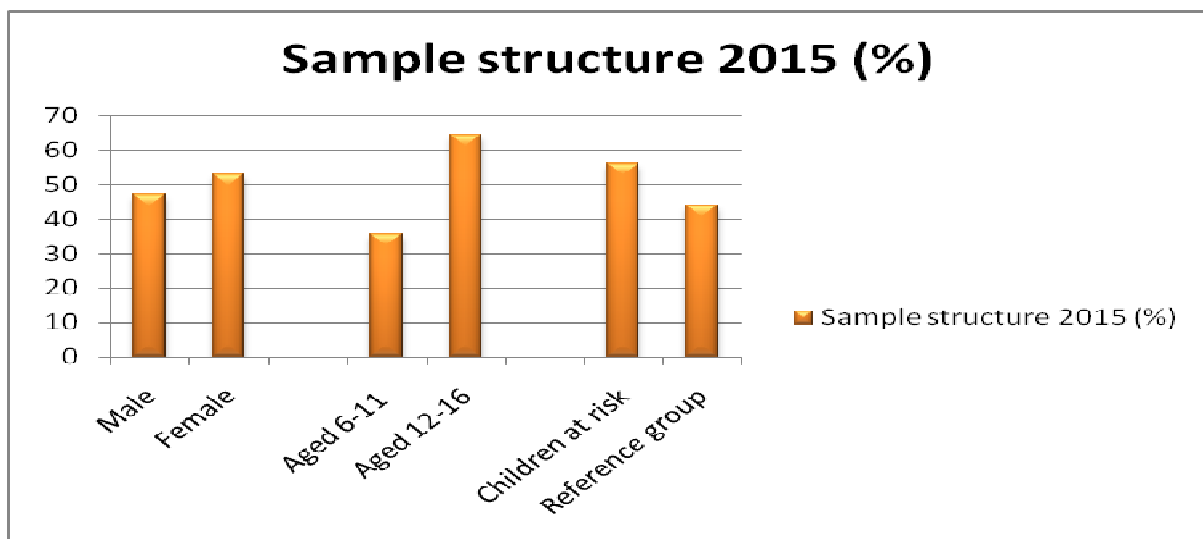


Diagram 2 Sample structure by gender, age and presence of family risk factors according to 2015 data

Diagram 2 shows the sample structure by gender, age and presence of family risk factors. The survey encompasses the total of 157 respondents (N=157), of which 52.9% are girls (88 respondents) and 47.1% boys. 35.7% of the sample are younger respondents aged 6-11, while

64.3% are older respondents (101 respondents). The group of children at risk, 88 of them comprise 56.1% of the entire sample.

Sample description

The data on the families of children at risk was collected on the basis of their files, observations of centres' staff and a battery of tests formed for this survey.

Educational status of parents

Education levels of parents of children attending the Centres are much lower than of the parents of the reference group of children. In the second stage of the survey, the education level of parents in the target group is somewhat different. It is notable that the reference group maintained approximately the same structure of the education level of mothers even though the sample grew smaller. Changes are evident in the mothers of children at risk. The number of mothers with lower education levels has increased, while the number of mothers with secondary and higher education has decreased (Diagrams 3 and 4).

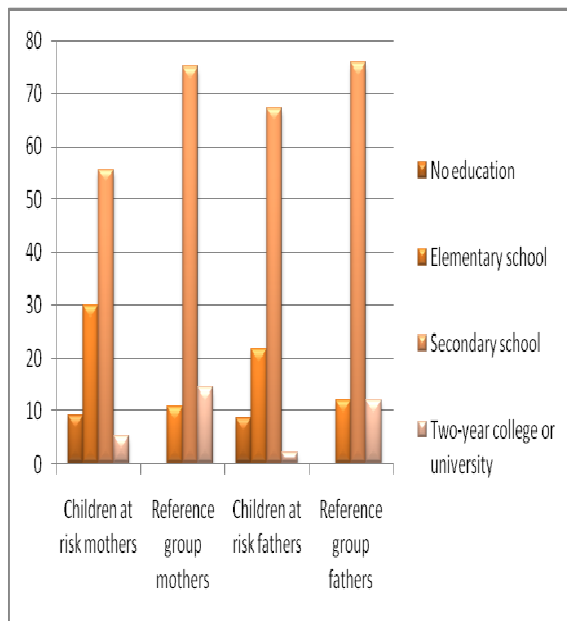


Diagram 3 Education levels of parents of children at risk and reference-group children in %

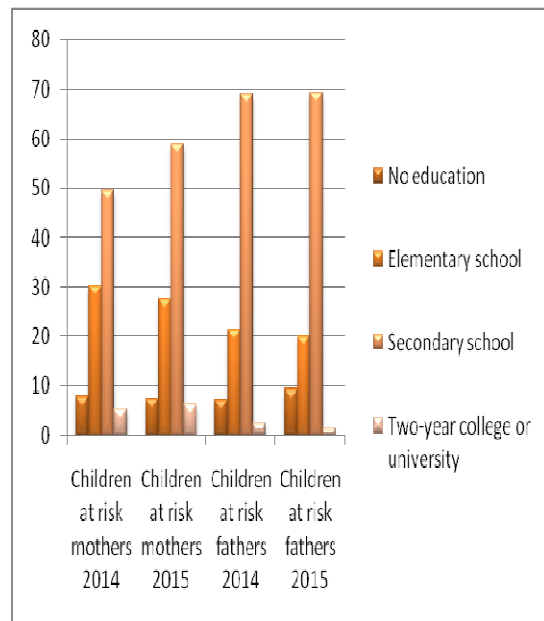


Diagram 4 Sample structure of parents of children at risk in relation to the education levels according to 2014 and 2015 data

Diagram 3 shows that the majority of parents in both groups have secondary education. On the other hand, it should be noted that 9.3% of mothers and 8.7% of fathers of children at risk have no education, which does not occur in the reference group. Furthermore, a higher percentage of

the reference group parents have higher or university education than the parents of the children at risk.

Diagram 4 shows the education levels of parents in the first and second stage of the survey, which are almost the same for 2014 and 2015 even though the sample of children at risk is somewhat changed. The majority of fathers and mothers have secondary education. However, it is notable that mothers have lower education as opposed to fathers.

Parents' employment rates

In the second stage of the survey, the data for the mothers of children in the reference group remained the same, while the unemployment rate of mothers of children at risk grew to 75%.

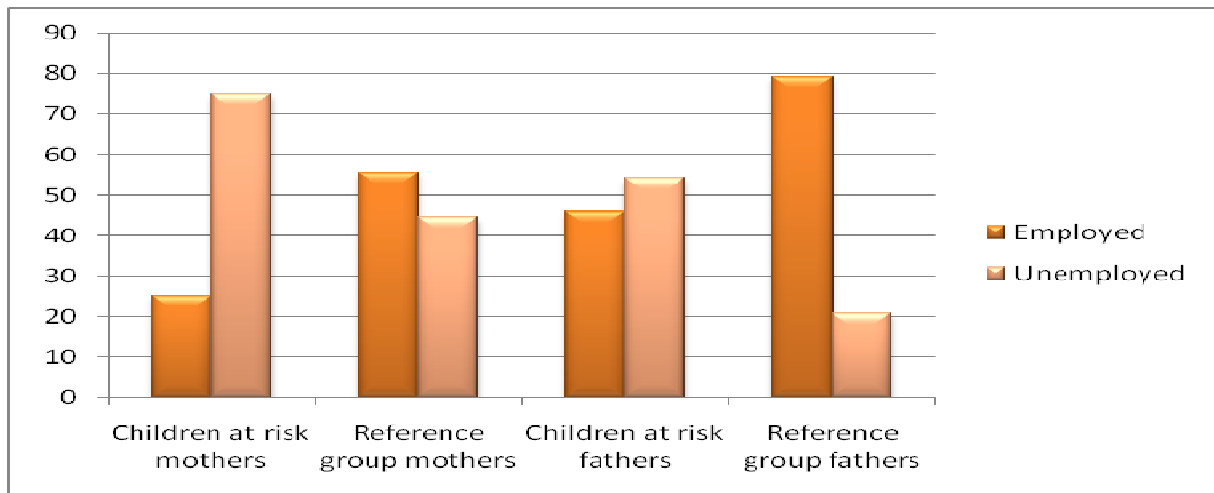


Diagram 5 *Educational status of parents of children at risk and reference-group children in %*

Diagram 5 shows the sample structure in relation to the employment rates of parents. It is observed that a higher percentage of the parents of children at risk is unemployed, 75% mothers and 54.1% fathers, while the parents of children in the reference group are mostly employed, 55.6% mothers and 79.2% fathers.

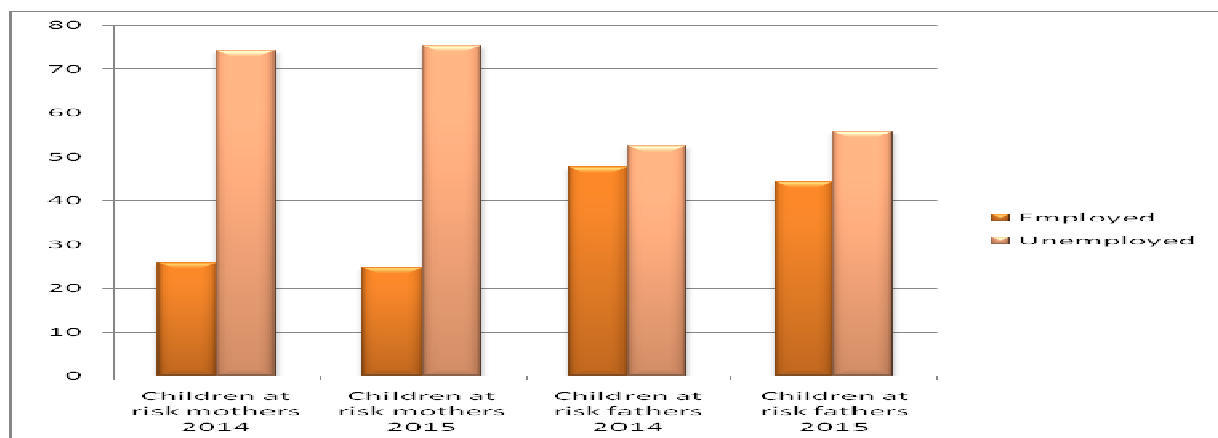


Diagram 6 Sample structure of parents of children at risk in relation to employment rates according to 2014 and 2015 data

Diagram 6 shows the sample structure of parents of children at risk in relation to employment rates. The structure of parents by employment rates is very similar for both 2014 and 2015. As we can see, a higher percentage of parents of children at risk are unemployed, which is particularly prominent in mothers - 74.2% unemployed in 2014, and 75.3% in 2015. According to the 2014 data, 52.4% fathers of children at risk were unemployed, and in 2015 there are 55.7% unemployed.

The educational status and employment rates of parents of children at risk are lower than of the parents of children in the reference group. Likewise, the data from the second stage of the survey indicates a negative trend in employment rates, i.e. an increased number of unemployed parents of children at risk (Diagrams 5 and 6).

Hence, employment rates are lower in the parents of children at risk in relation to the reference group of children, while unemployment rates increase in the group of the children at risk parents.

Risk factors in families of children involved in daycare centres

The most represented risk factor is poor socio-economic conditions (around 80%). It is followed by violent behaviour (45.5%), displacement, refugee status or belonging to an ethnic minority (33.9%), alcohol and drug abuse (over 31%), chronic illnesses (12.5%) and other risk factors (psychiatric disorders, mental disorders, teenage pregnancy, etc.), which occur in less than 10% of families. In the majority of cases, said factors are rarely isolated and most often occur in various combinations. Diagrams 7 and 8 show that the risk factors remained almost unchanged in 2014 and 2015.

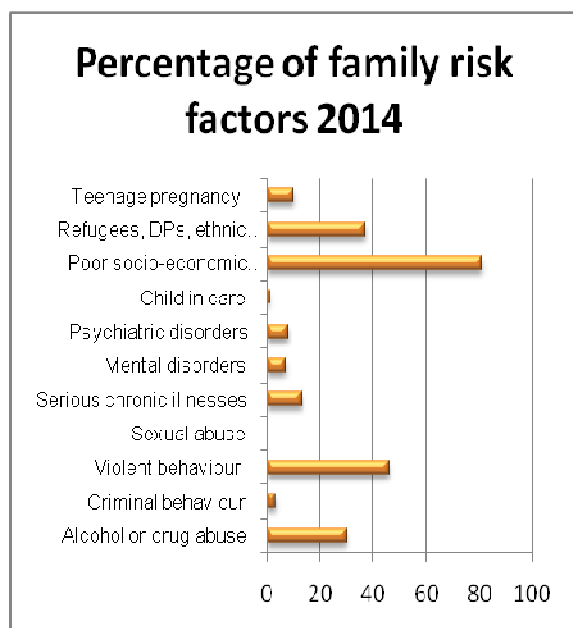


Diagram 7 Percentage of individual risk factors in families according to 2014 data

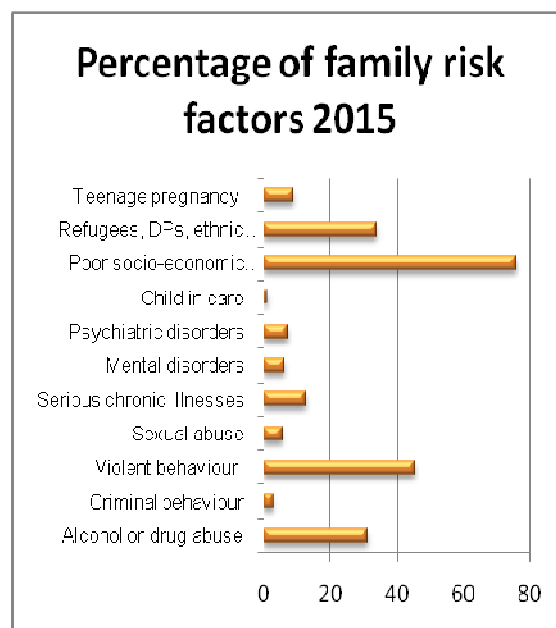


Diagram 8 Percentage of individual risk factors in families according to 2015 data

When the centres opened in early 2014, according to the centre staff reports, aggressive and socially unacceptable behaviour was recorded in 13% of cases, and social isolation in 24% of children. As regards the overall school results, there was no statistically significant difference between the children attending centres and the children from the reference group, but the children attending centres tended to have lower grades and more of them had to take makeup exams.

In 2015, according to centre staff reports, positive changes were observed in the behaviour, communication, school results, and in relationships with parents and peers.

Scores and discussion

The Rosenberg Self-Esteem Scale (RSES)

Table 1 shows the average value of self-report of the older age group of children (aged 12-16) on the *Rosenberg self-esteem scale*, standard deviations and the significance of differences between the average scores of children at risk and the reference group. We observed a statistically higher level of self-esteem in children from the reference group in relation to the children at risk, the significance level being $p < .01$. Self-esteem is considerably determined by the relationships within the family, at school, among peers and in the overall social environment the children come from. Children at risk live in an unsafe and less supportive environment, with

less positive stimuli for development, which results in lower self-esteem in relation to their peer reference group.

Table 1 Differences in the older age group reporting self-esteem in relation to the presence of family risk factors during the initial (2014) and final interviews (2015)

	Children at risk		Reference group		<i>t</i>	<i>df</i>	<i>p</i>
	<i>N</i>	<i>M(SD)</i>	<i>N</i>	<i>M(SD)</i>			
Rosenberg self-esteem scale 2014	34	35.76 (4.90)	64	38.80 (5.83)	-2.59	96	.01
Rosenberg self-esteem scale 2015	45	38.69 (6.42)	44	40.16 (5.93)	-1.12	87	.27

Furthermore, the retest results in the second part of the table show average values of self-report obtained in the final survey in 2015.

Even though the differences in reporting self-esteem of the children at risk obtained in the initial and final survey are not statistically significant, i.e. there is no significant progress in the self-perception of self-esteem of children at risk, certain positive tendencies are visible in children at risk ($M(2014)=35.76$, and $M(2015)=38.69$), while this tendency to change is less prominent in the reference group ($M(2014)=38.8$ and $M(2015)=40.2$). In addition, it is evident that differences between the children at risk and the children in the reference group by the measured feature are less prominent and are not statistically significant ($p=.27$), as shown by the initial survey in 2014 ($p<.01$). After attending activities at the centre for 18 months, average values of self-esteem in children at risk came closer to the average values of reporting self-esteem in the reference group. There was also a notable change in self-reporting in children at risk in relation to the reference group.

Youth version of the Strengths and Difficulties Questionnaire (SDQ)

Table 3 *Differences in the self-report SDQ of children at risk obtained in the initial (2014) and final survey (2015)*

	2014		2015		<i>t</i>	<i>Df</i>	<i>p</i>
	<i>N</i>	<i>M(SD)</i>	<i>N</i>	<i>M(SD)</i>			
Emotional symptoms scale	26	4.15 (2.19)	26	3.08 (1.98)	2.16	25	.04
Conduct problems scale	25	2.40 (1.32)	25	2.08 (1.55)	1.12	24	.28
Hyperactivity scale	24	3.21 (1.55)	24	3.00 (1.78)	.49	23	.63
Peer problems scale	26	2.81 (1.70)	26	2.23 (1.53)	1.50	25	.15
Prosocial scale	26	8.54 (1.82)	26	9.04 (1.22)	-1.36	25	.19
Total difficulties score	23	12.65 (4.85)	23	10.43 (4.86)	2.10	22	.047

Table 3 shows average scores of self-report, standard deviations and the significance of differences in the average SDQ scores for older children (aged 12-16) of the children at risk obtained in the initial (2014) and final survey (2015).

A statistically significant difference of $p < .05$ on the *Emotional Symptoms Subscale* has been observed, i.e. the group of children at risk reports considerably lower emotional difficulties in their functioning in relation to the previous year. In addition, a statistically significant difference ($p < .05$) is observed in the total difficulties score. The differences in other subscales are not statistically significant, but a reduction in values is observed on those scales, which implies a lower presence of difficulties. On the *Prosocial Subscale* a *positive growth trend in prosocial behaviour* ($M(2014)=8.54$ and $M(2015)=9.04$) is observed. Given that the sample is small, it can be assumed that the differences in youth self-report would be more notable and statistically significant on a bigger sample.

Table 4 Differences in the self-report SDQ of the older age group in relation to the presence of family risk factors obtained in the initial (2014) and final survey (2015)

	2014							2015						
	Children at risk		Reference group		T	df	p	Children at risk		Reference group		t	df	p
	N	M(SD)	N	M(SD)				N	M(SD)	N	M(SD)			
Emotional symptoms	36	4.31 (2.10)	64	2.80 (2.06)	3.5	98	<.01	45	3.62 (2.37)	48	2.15 (2.00)	3.26	91	<.01
Conduct problems	35	2.29 (1.30)	62	2.34 (1.76)	-.16	95	.88	44	2.43 (1.89)	48	1.77 (1.46)	1.89	90	.06
Hyperactivity	34	3.24 (2.32)	63	3.05 (1.84)	.44	95	.66	45	3.18 (1.75)	44	2.50 (1.82)	1.79	87	.08
Peer problems	36	3.0 (1.70)	66	2.85 (1.96)	.39	100	.70	45	2.49 (1.75)	48	1.81 (1.32)	2.11	91	<.05
Prosocial scale	36	8.67 (1.62)	67	8.49 (1.70)	.50	101	.62	46	8.59 (2.11)	46	9.11 (1.37)	-1.41	90	.16
Total difficulties score	33	13.0 (4.75)	58	11.16 (5.52)	.61	89	.11	42	11.74 (5.69)	44	8.32 (4.22)	3.17	84	<.01

Table 4 shows a comparative overview of average scores including self-report, standard deviations and the significance of differences in the average scores in the SDQ for the older age group (12-16 year olds) in relation to the presence of family risk factors obtained in the initial (2014) and final survey (2015).

In the initial survey, there was a statistically significant difference of $p < .01$ on the *Emotional Symptoms Subscale* in self-report of the children at risk and reference group, i.e. the group of children at risk reported considerably greater difficulties in their functioning in relation to the reference group. According to the results obtained in the final survey in 2015, the total scores, i.e. difficulties on the individual subscales reduced. Statistically significant differences between the children at risk and the reference group are evident on the *Emotional Symptoms Subscale* ($p < .01$), *Peer Problems Subscale* ($p < .05$), and in the *Total Difficulties Score* ($p < .01$). Hence, the children at risk keep reporting their functioning on the mentioned subscales with more difficulties in relation to the children in the reference group, while the differences on other subscales are not statistically significant. A possible explanation of these differences lies in the average age difference of 6 months in favour of the children in the reference group, which along with favourable family environment and changes concerning growing and puberty increases the difference between these two groups in the most sensitive aspects of socioemotional development.

Teacher version of the Strengths and Difficulties Questionnaire (SDQ)

Table 5 *Differences in the teacher version of SDQ concerning older group of children at risk obtained in the initial (2014) and final survey (2015)*

	2014		2015		<i>t</i>	<i>Df</i>	<i>p</i>
	<i>N</i>	<i>M(SD)</i>	<i>N</i>	<i>M(SD)</i>			
Emotional symptoms scale	75	2.56 (1.91)	75	2.44 (2.31)	.47	74	.64
Conduct problems scale	78	2.18 (2.39)	78	1.81 (2.29)	1.28	77	.20
Hyperactivity scale	77	4.71 (3.03)	77	4.54 (2.61)	.57	76	.57
Peer problems scale	73	2.40 (2.06)	73	2.52 (1.96)	-.49	72	.63
Prosocial scale	75	6.43 (2.64)	75	6.72 (2.92)	-.85	74	.40
Total difficulties score	68	12.18 (6.66)	68	11.47 (7.40)	.87	67	.39

Table 5 shows average scores in the teacher version of the SDQ for the older age group of children at risk (12 to 16 year olds) including standard deviations and the significance of differences in the average scores obtained in the initial (2014) and final survey (2015). Even though the teachers report a lower level of difficulties on the majority of subscales for children at risk, as well as a mild increase in prosocial behaviour, these differences in average scores obtained in 2014 and 2015 are not statistically significant.

Table 6: Differences in the teacher version of SDQ for the older age group by the presence of family risk factors obtained in the initial (2014) and final survey (2015)

	2014						2015							
	Children at risk		Reference group		T	df	p	Children at risk		Reference group		t	df	p
	N	M(SD)	N	M(SD)				N	M(SD)	N	M(SD)			
Emotional symptoms	100	2.67 (2.13)	77	1.05 (1.54)	5.87	174.4	<.01	83	2.34 (2.25)	69	1.64 (1.80)	2.09	150	<.05
Conduct problems	99	2.05 (2.30)	81	1.03 (1.36)	3.67	162.9	<.01	87	1.72 (2.24)	67	.84 (1.24)	3.13	139.1	<.01
Hyperactivity	101	4.48 (3.08)	80	2.30 (2.15)	5.58	176.5	<.01	85	4.36 (2.60)	68	2.90 (2.42)	3.58	151	<.001
Peer problems	96	2.42 (2.06)	74	1.38 (1.69)	3.61	167.4	<.01	81	2.47 (1.98)	69	1.32 (1.50)	4.05	145.8	<.001
Prosocial scale	100	6.52 (2.63)	80	8.04 (2.30)	-4.06	178	<.01	84	6.88 (2.92)	69	8.87 (1.70)	-5.25	140	<.001
Total difficulties score	93	11.73 (6.73)	69	5.80 (5.27)	6.29	159.5	<.01	77	11.17 (7.22)	66	6.45 (5.33)	4.48	138.1	<.001

Table 6 compares teacher reports for the reference group and children at risk obtained in the initial survey in 2014 and final survey in 2015.

It shows average scores, standard deviations and the significance of differences in the average scores of the teacher version of the SDQ for the **older age group (12 to 16 year olds)** in relation the presence of family risk factors. Teachers report that children at risk in relation to the reference group manifest significantly greater difficulties in functioning as regards emotions, conduct, peer relationships, and display higher hyperactivity. According to the teacher reports, the children in the reference group display significantly more prominent prosocial behaviour than the children at risk. These differences in teacher reports can partly be explained by the influence of one's personal expectations and views, and partly by prejudice towards the children coming from multi-problem families. The data also implies the need for specific knowledge, skills and methods of facing the school staff with the problems such children have.

Even though the teachers report that the children at risk show less difficulties than last year, the scores still indicate that there are statistically significant differences on all the measured subscales, meaning that the children from the reference group function better (Table 6).

Parent version of the Strengths and Difficulties Questionnaire (SDQ)

Table 7: Differences in the parent version of SDQ by the presence of family risk factors

	Children at risk		Reference group		<i>t</i>	<i>df</i>	<i>p</i>
	<i>N</i>	<i>M(SD)</i>	<i>N</i>	<i>M(SD)</i>			
Emotional symptoms scale	78	2.46 (2.34)	16	2.13 (1.41)	.55	92	.58
Conduct problems scale	78	1.62 (1.84)	15	1.13 (.83)	1.61	45.3	.11
Hyperactivity scale	77	3.87 (2.17)	16	3.25 (1.44)	1.09	91	.28
Peer problems scale	78	8.31 (1.92)	16	8.87 (1.31)	-1.44	29.9	.16
Prosocial scale	75	3.05 (1.99)	15	.93 (1.03)	6.03	38.3	<.001
Total difficulties score	72	11.01 (5.90)	14	2.90 (.77)	3.51	37.9	<.01

Table 7 shows average scores in the parent version of the SDQ for the entire sample by the presence of family risk factors, standard deviations and the significance of differences in the average scores. Even though the individual subscales do not indicate significant differences in reporting difficulties, parents of the children at risk report statistically significant more difficult functioning of their children within the entire scale ($p < .01$). At the same time, parents of the children at risk notice statistically more prominent prosocial behaviour in their children as opposed to the parents of the children in the reference group ($p < .001$).

Table 8: Differences in the parent and teacher versions of the SDQ for children at risk

	Teacher report		Parent report		<i>t</i>	<i>df</i>	<i>p</i>
	<i>N</i>	<i>M(SD)</i>	<i>N</i>	<i>M(SD)</i>			
Emotional symptoms scale	74	2.38 (2.32)	74	2.51 (2.38)	-.39	73	.70
Conduct problems scale	76	1.80 (2.30)	76	1.64 (1.85)	.69	75	.49
Hyperactivity scale	74	4.62 (2.58)	74	3.88 (2.16)	2.44	73	.02
Peer problems scale	72	2.40 (2.05)	72	8.31 (1.94)	-15.84	71	<.001
Prosocial scale	72	6.78 (2.91)	72	3.04 (2.01)	7.48	71	<.001
Total difficulties score	68	11.57 (7.38)	68	11.09 (6.00)	.57	67	.57

Table 8 shows average scores, standard deviations and the significance of differences in the average parent and teacher version of the SDQ for children at risk. Statistically significant differences are observed, the significance level standing at $p < .001$ between the teachers and parents' reports on two subscales: *Peer Problems Scale* and *Prosocial Scale*. Namely, the parents of the children at risk have noticed greater peer problems than the teachers, while the teachers perceived more prominent prosocial behaviour than the parents. It is worth noting that emotional difficulties in children are noticed by neither the teachers nor the parents but are indeed perceived by the children.

Self-Esteem Questionnaire

Table 9: Differences in the self-report Self-Esteem Questionnaire for children at risk obtained in 2014 and 2015

	Self-report 2014		Self-report 2015		<i>t</i>	<i>df</i>	<i>p</i>
	<i>N</i>	<i>M(SD)</i>	<i>N</i>	<i>M(SD)</i>			
Self-esteem questionnaire	79	16.82 (3.72)	79	15.91 (3.89)	1.498	78	.14

Table 9 shows average self-report scores in standard deviations and the significance of differences of the average scores for the older group of children at risk (12 to 16 year olds) in the Self-Esteem Questionnaire obtained in the initial (2014) and final survey (2015). As we can see, the changes in self-reporting of self-esteem by children at risk are not statistically significant ($p = .14$).

Table 10: Differences in the children's self-report Self-Esteem Questionnaire in relation to the presence of family risk factors obtained in the initial (2014) and final survey (2015)

	Children at risk		Reference group		<i>t</i>	<i>df</i>	<i>P</i>
	<i>N</i>	<i>M(SD)</i>	<i>N</i>	<i>M(SD)</i>			
Self-esteem questionnaire 2014	124	17.36 (3.50)	101	16.23 (3.15)	2.53	223	.01
Self-esteem questionnaire 2015	86	15.71 (3.96)	66	16.62 (3.05)	-1.60	149.9	.11

Table 10 shows average scores for self-report, standard deviations and the significance of differences of the average scores in the *Self-Esteem Questionnaire* in relation to the presence of family risk factors obtained in the initial survey in 2014 and final survey in 2015. Unlike the statistically significant differences observed in the initial survey ($p = .01$), no statistically

significant differences were recorded in the final survey in the self-report of the children at risk and the reference group of children. This is to say that they do not differ significantly in the self-report of self-esteem, which implies a tendency of the surveyed children's own assessment of self-esteem becoming similar. One of the possible factors that could have improved the self-esteem of the children at risk is the visibly improved school result.

Table 11: Differences in teacher reports on children in the Self-Esteem Questionnaire in relation to the presence of family risk factors obtained in the initial (2014) and final survey (2015)

	Children at risk		Reference group		<i>t</i>	<i>df</i>	<i>P</i>
	<i>N</i>	<i>M(SD)</i>	<i>N</i>	<i>M(SD)</i>			
Self-esteem 2014	95	14.26 (5.47)	82	17.74 (5.62)	-4.17	175	<.01
Self-esteem 2015	85	14.61 (6.28)	67	17.78 (5.42)	-3.28	150	<.01

Table 12: Differences in teacher reports on the self-esteem of children at risk obtained in 2014 and 2015

	2014		2015		<i>t</i>	<i>df</i>	<i>P</i>
	<i>N</i>	<i>M(SD)</i>	<i>N</i>	<i>M(SD)</i>			
Self-esteem questionnaire	72	14.07 (5.15)	72	14.17 (6.26)	-.174	71	.86

Table 12 shows average scores in teacher reports, standard deviations and the significance of differences of the average scores in the *Self-Esteem Questionnaire* in relation to the presence of family risk factors obtained in the initial survey in 2014 and final survey in 2015. Similar to the initial survey, the teachers report that there are differences in self-esteem between the children at risk and the reference group in favour of the reference group of children and the significance level is $p < .01$. The teachers report no change in self-esteem of the children at risk as compared to the previous year, i.e. the differences in reports are not statistically significant ($p = .86$).

Table 13: Differences in parent reports in the Self-Esteem Questionnaire in relation to the presence of family risk factors

	Children at risk		Reference group		<i>t</i>	<i>df</i>	<i>p</i>
	<i>N</i>	<i>M(SD)</i>	<i>N</i>	<i>M(SD)</i>			
Self-esteem	86	16.58 (4.67)	16	19.19 (2.95)	-2.15	100	<.05

Table 13 shows average scores in parent reports, standard deviations and the significance of differences of the average scores in the *Self-Esteem Questionnaire* in relation to the presence of family risk factors. We observe that the parents of the reference group of children report

higher self-esteem in their children than the parents of the children at risk and the significance level is $p < .05$.

Level of Aspirations Questionnaire

Table 14: Differences in the level of children's aspirations in relation to the presence of family risk factors obtained in the initial 2014 survey

	Secondary education					Higher education				
	Three-year secondary school	Four-year secondary school	χ^2	<i>df</i>	<i>P</i>	Da	Ne	χ^2	<i>df</i>	<i>p</i>
Children at risk	18	18	10.82	1	<.01	21	17	5.30	1	.02
Reference group	11	54				52	14			

Table 14 shows the differences in the level of aspirations in relation to the presence of family risk factors, i.e. differences in the frequency of children at risk and reference group regarding the level of education they opt for, and the significance of those differences, obtained in the initial survey in 2014.

Table 15: Differences in the level of children's aspirations in relation to the presence of family risk factors obtained in the final 2015 survey

	Secondary education					Higher education				
	Three-year secondary school	Four-year secondary school	χ^2	<i>df</i>	<i>p</i>	Da	Ne	χ^2	<i>df</i>	<i>p</i>
Children at risk	34	52	14.76	1	<.001	47	40	14.15	1	<.001
Reference group	8	60				57	12			

Table 15 shows the differences in the level of aspirations in relation to the presence of family risk factors, i.e. differences in the frequency of children at risk and reference group regarding the level of education they opt for, and the significance of those differences, obtained in the final survey in 2015.

The 2014 survey (Table 14) determined that a statistically significantly higher number of children from the reference group ($p < .01$) chose to attend a four-year secondary school, as well as that a

statistically considerably higher number of children from the reference group ($p < .05$) intended to go to university. Even though the new data implies that the number of children at risk interested in four-year secondary school and university is increasing (Table 15), these differences are still statistically significant at the level of $p < .001$.

Sense of Belonging Questionnaire

A sense of belonging is a psychological construct that includes affection exchange, a sense of acceptedness, positive evaluation and involvement in the social context to which a person naturally belongs. According to Baumeister and Leary (1995), the need to belong is defined as a need for permanent contact and as a perception that interpersonal relationships are marked by stability, affectionate attachment, and constancy, that it is positive and refers to significant others. The sense of belonging to the family, school and peers is particularly important for early and middle adolescence. In this period of growing up, children find belonging to peer groups more important than belonging to the family. The sense of belonging is one of the significant protection factors which is why the need arose to further explore and measure the most important factors of belonging. In this survey, pupils and students reported their sense of belonging to the family, school, peer group and Nest Centres.

Table 16: Self-report of children at risk on subscales of the Sense of Belonging Questionnaire

	Children at risk		
	<i>N</i>	<i>M</i>	<i>SD</i>
Perception of family belong	57	22.51	3.61
Perception of school and class belonging	58	22.71	3.47
Perception of peer group belonging	58	17.03	2.34
Perception of Nest Daycare Centre belonging	58	18.40	2.62

Table 16 shows average scores of children at risk self-report on the individual subscales of the *Sense of Belonging Questionnaire*. It is observed that children at risk feel the strongest sense of belonging to: 1) school and class ($M=22.71$, $SD=3.47$), 2) family ($M=22.51$, $SD=3.61$), 3) Nest Daycare Centre ($M=18.40$, $SD=2.62$), 4) peer group ($M=17.03$, $SD=2.34$), which is the least prominent.

Table 17: Differences in children's self-report on the Sense of Belonging Questionnaire in relation to the presence of family risk factors

	Children at risk		Reference group		t	df	p
	N	M(SD)	N	M(SD)			
Perception of family belong	57	22.51 (3.61)	269	24.20 (2.01)	-3.43	63.58	<.01
Perception of school and class belonging	58	22.71 (3.47)	269	23.65 (3.08)	-2.06	325	<.05
Perception of peer group belonging	58	17.03 (2.34)	269	18.39 (2.00)	-4.10	75.94	<.001

Table 17 shows average scores of children's self-report, standard deviations and the significance of the average scores on the *Sense of Belonging Questionnaire* in relation to the presence of family risk factors. Statistically significant differences are observed in favour of the reference group of children on the subscales *Perception of family belonging* ($p<.01$), *Perception of school and class belonging* ($p<.05$) and *Perception of peer group belonging* ($p<.001$), meaning that the children in the reference group have a greater sense of belonging to all of the surveyed groups.

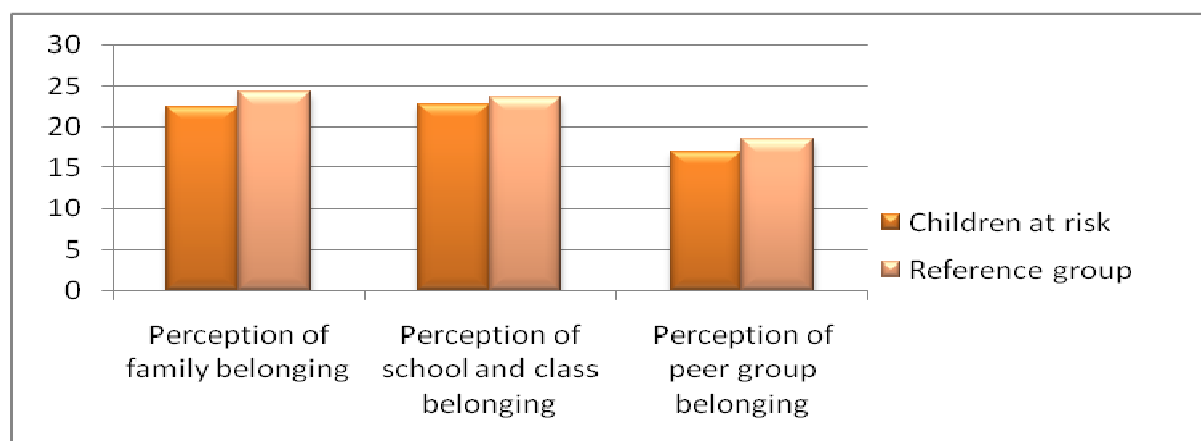


Diagram 9: Differences in children's self-report on the Sense of Belonging Questionnaire in relation to the presence of family risk factors

Diagram 9 shows average scores of children's self-report on the *Sense of Belonging Questionnaire* in relation to the presence of family risk factors. As Table 17 and Diagram 9 indicate, children in the reference group perceive a greater sense of belonging to the family, school and class and peer group than the children at risk.

Conclusions

The survey results indicate there is a statistically significant difference in the individual surveyed attributes between the children at risk and the reference group, both on the basis of children's self-reports and the reports completed by teachers and Centre staff in relation to the repeated survey.

After 18 months of conducting activities with children at risk at Nest Centres, the repeated survey indicates the following findings:

- The most represented risk factors in the children involved in the centres in both stages of the survey are: poor socio-economic conditions (approx. 80%), violent behaviour (45.5%), displacement, refugee status and belonging to ethnic minorities (33.9%), alcohol and drug abuse (over 31%) and chronic illnesses (12.5%). Other risk factors (psychiatric disorders, mental disorders, teenage pregnancy, etc.) occur in less than 10% of families, which confirms the consistent application of the previously set criteria for the selection of children for centres. In the majority of cases, the aforementioned factors rarely work in isolation and occur considerably more frequently concerted in different combinations.
- Educational status of the parents of the children attending Nest Centres is considerably lower compared to the parents of the reference group. The majority of fathers and mothers have secondary education, but it is notable that mothers as opposed to fathers have lower levels of education. The structure of parents of children at risk concerning the level of education is almost identical in the 2014 and 2015 surveys even though the sample of children at risk is somewhat different.
- A greater percentage of the parents of children at risk are unemployed in relation to the parents of the reference group of children, which increases the family risk factors for those children.
- According to the centre staff reports, children have shown positive changes in behaviour in relation to the first stage of the survey. Less "incidents" and cases of socially unacceptable behaviour have been recorded, children are more open and more involved in centre activities.
- Overall school results of the children at risk do not differ considerably from the reference group of children. The children attending centres improved their school results and reduced the number of class absences. According to staff reports, the children approach their school assignments with less resistance, which implies better developed work habits.
- Self-esteem in children at risk has improved and come nearer to the average scores of the reference group's self-esteem.
- The children at risk show a significant improvement in emotional functioning and a tendency to improve in all the measured attributes, i.e. they report less problems in behaviour,

hyperactivity, relationships with peers and believe to be more prosocially oriented. According to the final 2015 survey results, we observe that the total scores, i.e. difficulties on the individual subscales have reduced.

- Even though the children at risk show a significant improvement in all aspects of socio-emotional functioning, there are still differences between the two groups of children in emotional functioning and in relations with peers, as well as in the total score (SDQ).
- The teacher report on children's behaviour indicates a mild positive change although the teachers still notice significant differences in the social and emotional functioning of the surveyed children. The teachers report that the children at risk have more problems in all surveyed aspects (emotionality, behaviour, hyperactivity, peer relationships, etc.).
- The parent report on the strengths and difficulties scale (SDQ) indicates significantly greater difficulties of the children at risk, but the parents do identify more prominent prosocial behaviour in relation to the reference group.
- The parents of the children at risk report that their children have more peer problems than their teachers' reports imply.
- Self-report of self-esteem by the children at risk has approached the scores of the reference group, i.e. there is no longer a difference in relation to the initial test. According to their parents and teachers' reports, those differences are still present. The teachers report that the children at risk display lower self-esteem in relation to the children in the reference group, while they report the girls to have higher self-esteem than the boys.
- In terms of continuing education, a statistically significant difference between these two groups of children has been identified: the children from the centres are more oriented on three-year schools, while the majority of the reference group of children opt for four-year secondary schools and continue their education further. In the repeated survey, the number of the children at risk intending to continue their education has notably increased.
- The children at risk perceive a lower sense of belonging to the family, school or class and peer group than the children in the reference group.

General conclusion

After 18 months of continued work and monitoring of the children at Nest Centres in BiH, the results of the repeated survey indicate changes in the monitored aspects of psychosocial functioning, even though the risk factors remained unchanged or worsened.

Continued support, safe environment, supportive relationships and positive learning models contribute to a more stable development and growth of these children. This method of work and specific approach has proved efficient in working with children at risk. This is corroborated by the results of their self-reports as well as the reports by teachers, parents and centre staff.

Changes in the children's functioning were more significantly perceived by the children themselves than by the teachers, parents and/or centre staff.

It can be confirmed by these findings that the children's general functioning improved on the personal, family, school and social (peer) level and that they have approached their peers in that respect. In order to make more significant confirmations of these findings, it is necessary to conduct longitudinal monitoring of children, which would show more significant and more lasting change.

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