



# Epidemiological study of negative childhood experiences in three provinces of Turkey

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## Abstract

**Aim:** This study aimed to determine the frequencies of negative childhood experiences in the past years and negative childhood experiences throughout life in 11, 13 and 16 year-age group children who attended school in three separate provinces.

**Material and Methods:** Approval was obtained from the provincial National Education Directorates and educated investigators applied the ISPCAN child abuse screening tool questionnaire form which measures negative childhood events experienced at home in children. Statistical analysis was performed with chi-square test using SPSS 16.0 program. Approval from the ethics committee was obtained from İzmir Tepecik Education and Research Hospital Chief Physician Office Local Ethics Committee (29/11/2011-29).

**Results:** The study was conducted with 7 540 children in İzmir, Denizli and Zonguldak. The frequency of psychological and physical negative childhood experiences and neglect throughout life was found to be 70.5%, 58.3% and 42.6% in the 11, 13 and 16-year age groups, respectively; the frequencies in the last one year was found to be 62.7%, 46.0% and 37.5%, respectively. Psychological negative childhood experiences were found with a higher rate in children who lived in urban areas compared to children who lived in rural areas. Neglect was found with a higher rate in girls and physical negative childhood experiences were found with a higher rate in boys. The frequency of negative childhood experiences increased proportionally with the age of the child independent of the type of experience.

**Conclusion:** The frequencies of negative childhood experiences for the last one year and for the life-long period were determined using ISPCAN child abuse screening tool in Turkey for the first time in three provinces and in such a large population. The frequency of negative childhood experiences related with child abuse and neglect screened were found to be 42%-70% and it was elucidated that we are confronted with a very significant public health problem and adult health risk in these regions of Turkey. (Türk Ped Arş 2014; 49: 47-56)

**Key words:** Child abuse and neglect, child maltreatment, ICAST-CH, negative childhood experiences

## Introduction

An increasing number of studies show that maltreatment of children and traumatic stress factors have negative effects on healthy behavior and health results in the long term in adulthood (1). It has been reported that there is a relation between negative childhood experiences (NCE) and risk factors including obesity, smoking and physical immobility and the frequency of cardiac, lung and hepatic diseases, diabetes and depressive disorders (2, 3).

The first study reporting the relation between negative childhood experiences and health problems in adulthood reported that exposure to abuse in childhood and in-home insufficiencies had a strong relation with multiple risk factors in adulthood most of which can result in mortality (4). Similar results were obtained in the studies following this study (5, 6). In the population-based study of the World Health Organization (WHO) on child neglect and abuse which is one of the most important categories of negative childhood experiences, lack of comparison of the data because of use of different definitions and methods in studies conducted in the whole world was reported as the most important problem (7, 8). Therefore, ISPCAN Child Abuse Screening Tool (ICAST) was developed by ISPCAN (International Society for the Prevention of Child Abuse and Neglect) which works in association with UNICEF (United Na-

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tions International Children's Emergency Fund) (9, 10). The ISPCAN Child Abuse Screening Tools include ICAST-CH (ISPCAN Child Abuse Screening Tools for Children), ICAST-P (ISPCAN Child Abuse Screening Tools for Parents) and ICAST-R (ISPCAN Child Abuse Screening Tools-Retrospective) screening forms. All of these forms have been translated into many languages (9-11).

In this study, ICAST-CH was used to measure the frequency of experiences of violence exposed at home and in the near environment in the last one year and throughout life in children who attended school in three provinces.

## Material and Methods

### Balkan epidemiological study on child abuse and neglect and Turkey epidemiological study on negative childhood experiences

In the Balkan countries, the Balkan Epidemiological Study on Child Abuse and Neglect (BECAN) was designed to improve children's rights and to present the size of the problem to lawmakers. The design of the Balkan Epidemiological Study on Child Abuse and Neglect was accepted to be compensated by the seventh framework program of the European Union and to be applied to 9 Balkan countries (Greece, Turkey, Bosnia and Herzegovina, Albania, Bulgaria, Romania, Macedonia, Croatia and Serbia). The aim of this design was to constitute a map directed to NCE including child abuse and neglect in 9 Balkan countries.

In the Turkey part of this study, data were collected using ICAST-CH and ICAST-P in three provinces. This publication includes the results obtained as a result of application of the ICAST-CH form.

The ethics committee approval was given with the decision of number 8 as a result of the meeting number 29 dated 11/29/2011 of the İzmir Tepecik Education and Research Hospital Chief Physician Local Ethics Committee.

### Sample

The population of the study was composed of the students of the fifth, seventh and tenth classes who attended school in İzmir, Zonguldak and Denizli (11,13 and 16-year age groups). The sample of the study was constituted by calculating 3% of the students of the fifth, seventh and tenth classes who continued their education in each province. This number was reported to be 2913 for the students of the fifth class, 3465 for the students of the seventh class and 2877 for the students of 10th class in three provinces (12). Thus, the total number of students targeted to be reached was determined to be 9 255.

The schools in which the application would be performed were selected by random selection method using the program called "Random Number Generator". As a result of the application performed in the selected schools, the application was performed in 178 classes in 46 schools in İzmir and 5027 students were reached. In Zonguldak, the application was performed in 68 classes in 18 schools and 1 418 students were reached. In Denizli, 1 319 students were reached by performing the application in 60 classes in 23 schools. Data were collected from a total of 7 764 students. The flowchart used to reach a valid sample is shown in Figure 1.

### Data collection tool

The ICAST-CH was used as the data collection tool. In this study, the scale was translated to Turkish by retranslation method and the questions were adapted to the Turkish sample. 19 of 51 questions in the scale are related with psychological NCE, 16 are related with physical NCE, 6 are related with sexual NCE/abuse and 3 are related with neglect. ISPCAN child abuse screening tools include two forms (a short form for 11 years of age and a long form for 13-16 years of age). The questions included in the questionnaire are given in Attachment 1. This questionnaire targets to investigate presence of negative behaviors which are common in many communities rather than questioning general concepts including violence and abuse which show definition differences between cultures. The questions in the questionnaire were asked in two ways such that if the experiences included in the questions were realized in the last one year and throughout their lives. The questions related with sexual abuse were removed from the scale because of bureaucratic problems.

As a result of the study, the internal consistency of the subscales was found to be 859 for psychological NCE, 864 for physical NCE, 810 for neglect and 649 for positive parenthood.

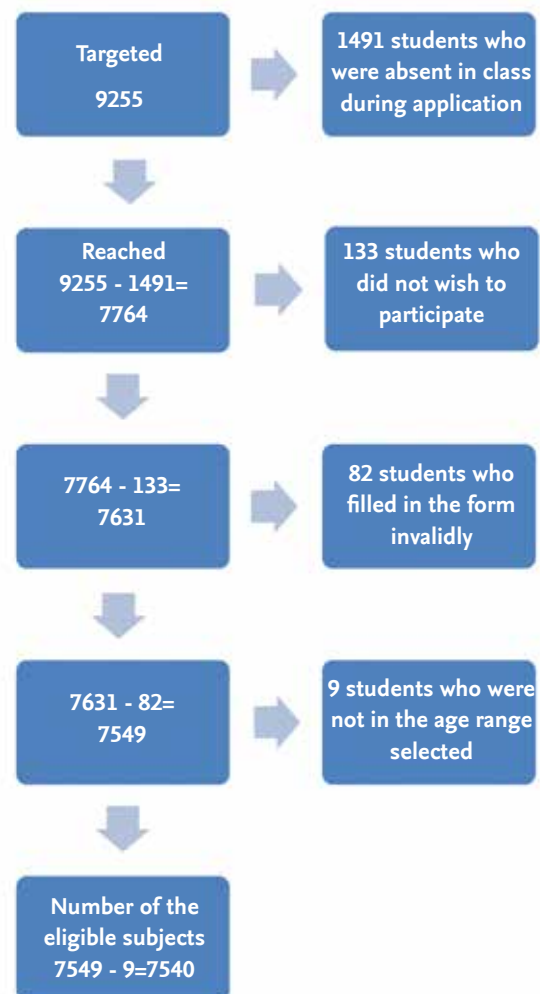
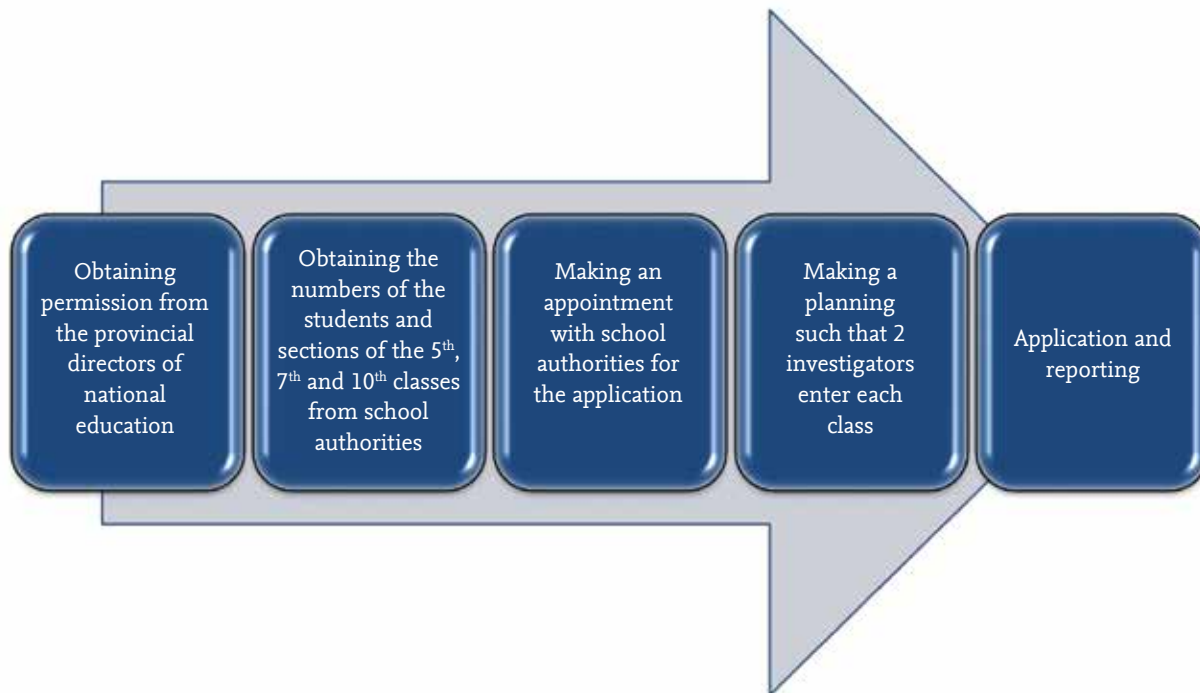


Figure 1. Flowchart related with the number of subjects obtained in the sample



**Figure 2.** Flow chart related with the application process

#### Data collection process

Application to the Provincial Education Directorships of the provinces where the forms would be applied were made and institutional approval was obtained. The application process is summarized in Figure 2. The data were collected in February and May in 2012 in three provinces.

#### Data collection

The study team arrived at the school at the time and on the day specified together with the school administration such that two investigators would be present in each class. In cases where the number of classes was high, the application was performed in successive class hours. The application was performed in a single session and consecutive class hours, if necessary in each school to prevent children from sharing the content of the questionnaire with each other before application. The time of application of the questionnaire in the classes was specified as one class hour (45 minutes).

During application, no identity information was obtained and care was taken that the children sat such that they could not see the forms of each other. Time was given to the children who continued to fill in the questionnaire at the end of the class hour until the end of the break.

#### Statistical analysis

The data collected were entered into the Statistical Package for the Social Sciences (SPSS) 16.0 program. Frequency analysis was performed for descriptive statistics for demographic data analysis. Chi-square analysis was used to determine the relation between NCE and demographic information.

#### Results

The study was completed with 7 540 students whose data were accepted to be valid (49.2% female). The response rate was found to be 87.8% in İzmir, 92.4% in Zonguldak and 71.5% in Denizli. The total response rate was found to be 85.3%. The age and gender distributions of the participants according to residence are shown in Table 1.

89.9% of the students who participated in the study reported that their parents were married with each other and 5.9% reported that their parents were divorced/separated. The information related with the marital status of the parents is shown in Table 2.

The education level of the mothers of the students who participated in the study was reported to be primary school or lower in 52.8% (never attended school or attended primary school for a few years) and secondary school or higher in 41.6% (high school, university, postgraduate). The education level of the fathers was found to be primary school or lower in 35.3% and secondary school or higher in 55.3%. 5.6% of the children reported that they did not know the education level of their mothers and 9.4% reported that they did not know the education level of their fathers.

4.5% of the children stated that they did not feel safe when they were together with their families and 8.2% stated that they disliked being with their families (Table 3). The responses given to these questions and the states of exposure to abuse were compared. The relations of psychological NCE, physical NCE and exposure to neglect with feeling safe with the family and enjoying being together with the family were found to be statistically significant (Table 4).

**Table 1. Age and gender distribution by the residence of the participants (n=7 540)**

			11 years	13 years	16 years (general high school)	16 years (vocational high school)	Total
Village	Female	n	199	169	30	135	533
		%	37.3	31.7	5.6	25.3	100.0
	Male	n	183	176	3	88	450
		%	40.7	39.1	7.0	19.6	100.0
	Total	n	382	345	33	223	983
		%	38.9	35.1	3.4	22.7	100.0
City	Female	n	1058	1046	531	538	3173
		%	33.3	33.0	16.7	17.0	100.0
	Male	n	1062	1183	378	761	3384
		%	31.4	35.0	11.2	22.5	100.0
	Total	n	2119	2229	909	199	6556
		%	32.3	34.0	13.9	19.8	100.0

As a result of the analysis performed, the frequency of psychological NCE throughout the life time in the general population included in the study was found to be 70.4%, the frequency of physical abuse NCE was found to be 58.1% and the frequency of neglect was found to be 42.4%. The frequencies for the last one year were reported to be 62.7%, 46.0% and 37.5%, respectively (Table 5). While the frequency of exposure to multiple NCE types throughout life time was found to be 78.6%, the frequency of exposure to multiple NCE types in the last 12 months was found to be 70.7%.

The most common physical NCE behaviors included pinching, applying hot pepper, twisting ear and slapping in the face. The most common psychological NCE behaviors included screaming, insulting, blaming the child because of feeling oneself bad, comparing the child with other children and frightening the child with calling ghosts, hobs and similar creatures. In the scope of neglect, feeling oneself insignificant was reported as the most common category.

The rate of the children who witnessed intra-familial violence was found to be 30.9%. The children who reported that they witnessed intra-familial violence mostly (27.5%) stated that they saw adults who screamed and fought with each other such that they were scared at home. No significant effect of residence or the education level of the parents could be found on witnessing intra-familial violence ( $p>0.05$ ).

The results of the Pearson chi-square analysis which was performed to determine the effect of gender, residence and the class type which the student attended on NCE type are shown in Table 6. The relation of psychological NCE with residence ( $p<0.05$ ) and class type ( $p<0.01$ ), the relation of physical NCE with gender ( $p<0.01$ ) and class type ( $p<0.01$ ) and the relation of ne-

**Table 2. Marital status of the parents (n=7540)**

Marital status of the parents	n	%
Married	6717	89.1
Divorced/Lives seperately	431	5.7
Unmarried	26	0.3
Widow (mother or father died	137	1.8
Both parents are not living	32	0.4
I do not want to answer	137	1.8
I do not know	13	0.2
Lost data	47	0.6
Total	7540	100.0

glect with gender ( $p<0.01$ ) and class type was found to be statistically significant.

It was found that 54.9% of the subjects reported psychological NCE in 1-6 subcategories, 49.5% reported physical NCE in 1-6 subcategories and 42.6% reported neglect in 1-3 subcategories (Table 7).

The analysis directed to the age and gender of the person who caused to NCE showed that mostly adult women in the family led to psychological and physical NCE (Table 8).

## Discussion

This study is the first epidemiological study conducted in multiple provinces and in such a large population using ICAST tools for which international validity and reliability study was per-

**Table 3. Feelings of the children when they are together with their parents (n=7 540)**

	Never		Sometimes		Mostly		Always	
	n	%	n	%	n	%	n	%
Do you feel yourself safe when you are together with your family?	59	0.80	275	3.70	622	8.30	6 541	87.20
Do you like being with your family?	83	1.10	604	8.10	1 216	16.30	5 570	74.50

**Table 4. The relation of negative childhood experiences with delightfulness of the children for being together with their families and feeling safe with their families**

		Psychological NCE					Physical NCE					Neglect				
		Yes		No		$\chi^2$	Yes		No		$\chi^2$	Yes		No		$\chi^2$
		n	%	n	%		n	%	n	%		n	%	n	%	
Do you like being with your family?	Yes	4 986	72.3	1 910	27.7	65.937*	4 107	59.7	2 769	40.3	58.570*	2 947	42.9	3 916	57.1	299.685*
	No	298	92.8	23	7.2		256	81.3	59	18.7		235	76.1	74	23.9	
Do you feel yourself safe when you are together with your family?	Yes	4 629	71	1 895	29	66.550*	3 813	58.6	2 698	41.4	59.308*	2 680	41.2	3 828	58.8	134.715*
	No	640	95.2	32	4.8		537	81.6	121	18.4		492	76.6	150	23.4	

\*p&lt;0,01

NCE:Negative childhood experiences

**Table 5. Incidence and prevalence of negative childhood experiences**

	Psychological NCE (%)	Physical NCE (%)	Neglect (%)
Prevalence	70.5	58.3	42.6
Incidence	62.7	46	37.5
Other answers given to the questions related with prevalence			
I do not want to answer*	0.1	0.4	1.4
I do not want to answer and never**	3	3.5	2.5
Never ***	25.8	37.9	53.6

\*The subjects who answered all questions in this area of the scale as 'I do not want to answer'

\*\*The subjects who answered as 'never' to a portion of the questions in the area of the scale and as 'I do not want to answer' to another portion

\*\*\*The subjects who answered all the questions in this area of the scale negatively

formed in Turkey. Use of ICAST tools which have been gained to Turkish in future researches will allow investigators to compare the results due to use of similar methods. It is thought that this study related with negative childhood experiences will be directive for child abuse and neglect studies.

Among the students who participated in the study (n=7 540), the rate of lifelong psychological NCE was found to be 70.4%, the rate of physical NCE was found to be 5.1%, the rate of neglect was found to be 42.4% and 78.6% of the students were found to be exposed to multiple NCE. When the factors affecting the frequency of negative childhood experiences were examined, psychological NCE were found with a higher rate in the subjects who lived in urban areas compared to rural areas, neglect was found with a higher rate in girls compared to boys and physical

NCE were found with a higher rate in boys compared to girls. The frequency of negative childhood experiences increased directly proportionally depending on the age of the child independent of the experience type. As the age of the child increased, the reasons of increased frequency of NCE might have included the tendency of children of young age to hide/suppress their experiences or the fact that the 16-year age group is exposed to NCE with a higher rate compared to the 11-13 year age group especially with the impact of the identity seeking problems of adolescence.

This first study using ICAST-CH in Turkey was conducted with face to face interview performed with students of the 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> classes (n=440) in 49 schools in İstanbul. As a result of this study, the rate of in-home violence experienced by the children

**Table 6. Comparison of the states of exposure to the types of negative childhood experiences by gender, residence and class type**

			Psychological NCE			Physical NCE			Neglect		
			n	%	p	n	%	p	n	%	p
Prevalence	Female	Evet	2 625	73.10	0.933	2 077	58	.000**	1 780	49.5	.000**
		Hayır	964	26.90		1 506	42		1 814	50.5	
	Male	Evet	2 686	73.20		2 307	63.3		1 414	39.1	
		Hayır	982	26.80		1 340	36.7		2 204	60.9	
Incidence	Female	Evet	2 335	63.00	0.630	1 614	43.8	.000**	1 594	43.1	.000**
		Hayır	1 370	37.00		2 070	56.2		2 106	56.9	
	Male	Evet	2 392	62.50		1 845	48.7		1 220	32.1	
		Hayır	1 436	37.50		1 941	51.3		2 579	67.9	
Prevalence	City	Evet	4 647	73.6	0.029*	3 827	60.9	0.233	2 798	44.7	0.094
		Hayır	1 664	26.40		2 456	39.1		3 465	55.3	
	Village	Evet	664	70.3		557	58.9		396	41.8	
		Hayır	281	29.7		389	41.1		552	58.2	
Incidence	City	Evet	4 147	63.3	0.009*	3 019	46.5	0.427	2 468	37.9	.117
		Hayır	2 402	36.7		3 475	53.3		4 049	62.1	
	Village	Evet	580	59		440	45.1		346	35.3	
		Hayır	403	41		535	54.9		635	64.7	
Prevalence	11 years	Evet	1 417	59.6	.000**	1 216	50.8	.000**	686	28.5	.000**
		Hayır	960	40.4		1 179	49.2		1 718	71.5	
	13 years	Evet	1 788	72.4		1 494	60.9		1 032	42.3	
		Hayır	683	27.6		958	39.1		1 408	57.7	
	16 years (general)	Evet	814	88		647	71.4		574	62.7	
		Hayır	111	12		259	28.6		341	37.3	
	16 years (vocational)	Evet	1 292	87.1		1 027	69.5		902	62.1	
		Hayır	192	12.9		450	30.5		551	37.9	
Incidence	11 years	Evet	1 223	48.9	.000**	1 054	42.7	.000**	615	24.7	.000**
		Hayır	1 277	51.1		1 416	57.3		1 872	75.3	
	13 years	Evet	1 591	61.1		1 224	48.1		922	36.1	
		Hayır	978	38.1		1 322	51.9		1 634	63.9	
	16 years (general)	Evet	735	78		430	45.7		503	53.5	
		Hayır	207	22		511	54.3		438	46.5	
	16 years (vocational)	Evet	1 178	77.4		751	49.6		774	51.1	
		Hayır	344	22.6		762	50.4		741	48.9	

\*p&lt;0.05, \*\*p&lt;0.01

NCE: negative childhood experiences

was found to be 73.4% (13). In addition, in the study conducted by Şahin et al. (14) with 40 university students in which ICAST-R was used, the rates of psychological NCE, physical NCE and sexual NCE were reported to be 63%, 23% and 21%, respectively. This study is the first epidemiological study which was conducted with children in three provinces in such a large population using ICAST-CH.

In another study, a questionnaire was applied to 1607 students aged between 12 and 17 years attending school in İzmir. The participants reported that they experienced emotional abuse (60%), witnessing intra-familial violence (55%), physical abuse

(48%), neglect (17%) and sexual abuse (8%) at least for one time in a life time (15).

In an international study, ICAST-CH was applied to 459 children in Columbia, India, Russia and Island. According to this study, 66% of the children were exposed to psychological NCE, 55% were exposed to physical NCE, 51% were exposed to in-home violence, 37% were exposed to 37% and 18% were exposed to sexual NCE/abuse in the last one year (11).

In a national study conducted in Georgia in the scope of UNICEF, ICAST-CH was applied to 1050 children aged be-

**Table 7. The number of questions marked by the children by the type of negative childhood experience**

Type of negative childhood experience		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Psychological (19/17 questions)*	Prevalence	25.3	14.7	11.6	9.7	7.3	6.2	5.4	4.0	3.0	2.0	1.5	1.1	0.8	0.6	0.7	0.8	0.3	0.5	0.2	0.2
	Incidence		25.8	18.8	13.8	11.5	8.5	6.2	4.6	3.4	2.2	1.5	1.3	0.8	0.5	0.4	0.3	0.3	0.1	0.1	0.1
Physical (16/15 questions)*	Prevalence	37.9	15.9	11.7	8.2	6.1	4.2	3.3	2.1	1.7	1.2	0.8	0.5	0.5	0.2	0.1	1.0	0.6			
	Incidence		32.9	21.2	13.9	10.2	6.4	4.6	3.6	2.1	1.6	1.0	0.8	0.6	0.3	0.3	0.4	0.3			
Neglect (3 questions)	Prevalence	53.6	14.4	12.1	16.1																
	Incidence		35.4	28.4	36.3																

\*the number of questions of 11 years ICAST-CH short version and 13-16 years ICAST-CH long version

**Table 8. Age and gender table of the person who realized psychological and physical negative childhood experiences**

	Adult male		Adult female		Young male/Child		Young female/Child	
	n	%	n	%	n	%	n	%
Psychological NCE (n=4 446)	2 317	52.1	2 964	66.7	2 317	46.2	2 053	43.0
Physical NCE (n=3 572)	1 924	53.9	2 266	63.4	1 193	33.4	1 023	28.7

NCE: negative childhood experiences

tween 11 and 17 years by way of face to face interview and the children reported psychological NCE with a rate of 59.1%, physical NCE with a rate of 54%, exposure to violence with a rate of 28.6%, neglect with a rate of 24.8% and sexual NCE/abuse with a rate of 7.8% (16). Application of the same tools with different methods including filling in questionnaires and face to face interviews complicates comparison of the results of these studies.

However, all these results were in parallel with our study. The common finding in all studies was the fact that psychological NCE was the most common NCE in all regions and this was followed by exposure to in-home violence, neglect and sexual NCE/abuse. Since psychological abuse accompanies all other chronic abuse types, it is observed more widely in all populations compared to physical abuse and sexual abuse especially when investigated based on NCE, though it is difficult to detect (17, 18).

As a result of international studies conducted by the World Health Organization, it was found that approximately 20% of women and 5-10% of men were exposed to sexual abuse in childhood and 25-50% of all children were abused physically (19). In a study performed to determine the prevalence of child abuse in England, it was reported that 7% of children were abused physically by caregivers and 6% of the adolescents were exposed to in-home physical neglect (20). In a study conducted in rural and urban schools in Ethiopia, 21% of urban participants and 64% of rural participants had echymoses and swelling on their bodies related with parental punishment (21). The national prevalence study which was performed periodically by the government in USA showed that 2% of the pediatric population experienced proven neglect and abuse in 2011 and 2/3 of these were related with neglect (22).

In our study, studies related with child abuse and neglect have started to be conducted in the last 20 years. In a study in which many studies were reviewed, it was reported that the rate of physical abuse in the population examined ranged between 15% and 75% and the rate of sexual abuse was approximately 20% (23). Physical abuse was found with a rate of 36% and emotional abuse was found with a rate of 52% in children who presented to child psychiatry outpatient clinics (24). The difference of these subjects from the study group in our study was the fact that these subjects presented to hospital.

In this study, the analysis related with presence of NCE showed that children who answered positively to one of the questions of each subscale were exposed to NCE by the methods of the study. It is obvious that all NCEs are not at the level to make a diagnosis of abuse. Therefore, the rates found in this study and in other studies which used ICAST-CH were found to be higher compared to the subjects in hospital admissions or records or to population-based studies which reported rates of abuse and neglect.

The most common physical NCE behaviors include pinching, applying hot pepper, twisting ear and slapping in the face. Similarly, the most common physical NCE behaviors were found to include pulling hair, twisting ear, throwing objects, hitting with hand and slapping in the Intra-familial Violence and Child Abuse study performed in 2010 (25). Screaming at the child, rejection, humiliation, terrorisation, threatening, abasement and mocking are the commonly observed types of emotional abuse (26). In this study, the most commonly observed psychological NCE behaviors included screaming, humiliation, blaming the child because of feeling bad, comparing the child with other children and frightening the child with making the child feel himself/her-

self bad and frightening the child with calling ghost, hobs and similar creatures.

Although it was found that the negative behaviors of NCE types were realized most frequently by an “adult woman” in the study, it was observed that physical and sexual abuse was realized most frequently by men, when the recorded subjects were examined (27). However, recorded cases are generally the ones which reach law enforcers and the possibility of these cases of being the most serious cases of abuse is very high. Since mothers and older sisters are mostly the people who spend time with children or give care to children in our country, it is an expected finding that the individuals who realize NCE are most frequently adult women.

It was observed that the children who reported NCE in the family disliked spending time with the family and did not feel safe with the family with a higher rate compared to the children who did not report NCE. Negative behaviors by the individuals who give care to the child and would primarily meet the need for safety abuse the trust of the child to the family and a will to keep away from the family develops based on the fear which develops.

Since the information related with the demographic properties of families was collected by ICAST-P, the comparison of these properties and negative childhood experiences will be reported in a separate study. Therefore, risk factors were not compared in this study.

### Strong aspects and limitations of the study

This study is the study with the largest scale in the area of child psychiatry in our country.

In the ethical dimension of the study, collaboration was made with both national and international ethics consultants. The data collection phase of the study was conducted with experienced healthcare workers including mainly psychologists. The investigators received theoretical and practical training related with the method of the study, ethical values and potential problems before working on the field.

The three provinces İzmir, Zonguldak and Denizli where the study was conducted cover only two geographical areas. Therefore, the results probably do not reflect the national status.

In this study, the questions related with sexual abuse were removed from the question form, since permission could not be obtained. Therefore, the rates of sexual NCE/abuse could not be determined.

Since the physical conditions of the classes where the questionnaires were applied were different from each other, the possibility of giving right answers might have been decreased especially for the students in crowded classes. This might have caused the frequencies of NCE to be determined lower than the actual frequencies.

As a result of screening performed in 7 540 children attending school in three provinces using ICAST-CH, it was found that the

rates of exposure to psychological and physical NCE, neglect and intra-familial violence were high. As known, NCE lead to important health problems in the childhood and especially in the adulthood and thus to significant morbidity and even early mortality. Therefore, determining the nationwide frequency of NCE by using the ICAST-CH, ICAST-P and ICAST-R tools with the support of the government is an urgent need for public health. Following these studies, reconstitution of national regulations directed to prevent NCE and especially intra-familial violence and child abuse and neglect should be regarded as a common necessity.

**Ethics Committee Approval:** Ethics committee approval was received for this study from the ethics committee of İzmir Tepecik Education and Research Hospital Chief Physician Office Local Ethics Committee (29.11.2011-29).

**Informed Consent:** The research was not applied to patients and personal information was not wanted so we didn't use informed consent.

**Peer-review:** Externally peer-reviewed.

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# Attachment 1. Questions used in the Questionnaire

## Questions related with psychological negative childhood experiences

1. Screamed at you very loud and aggressively ?
2. Humiliated you by saying bad words including stupid, lazy etc. ?
3. Damned you?
4. Ignored you by not listening to you?
5. Blamed you for feeling himself/her-self bad ?
6. Read your diary, messages or e-mails without your permission ?
7. Delved in your bag, drawers or pockets without your permission?
8. Compared you with other children in such a way that you have felt humiliated ?
9. Made you feel ashamed/embarrassed in front of other people in a way you will always feel bad about?
10. Said that they wished you were dead/had never been born?
11. Threatened to leave you or abandon you?
12. Threatened you with throwing you out or sending you away from?
13. Has there ever been an occasion when they did not take you inside home?
14. Threatened you with calling ghosts, hobs and similar creatures?
15. Threatened you with harming you or ending your life?
16. Do you feel that you did not get enough to eat (went hungry) and/or drink (were thirsty) even though there was enough for everyone for the aim of punishment ?
17. Have to wear dirty, torn clothes, or clothes that were not warm enough/too warm, shoes that were too small even though there were ways of getting better/new ones for the aim of punishment?
18. Locked you up in a small place or in a dark room?
19. Threatened you with a knife or a gun?

## Questions related with physical negative childhood experiences

1. Pushed or kicked you?
2. Pulled a part of your clothes or your body forcibly and shook you?
3. Spanked you with a hand?
4. Hit your head or nape with a hand ?
5. Spanked your buttocks with a naked hand?
6. Hit your back with a broom, belt, walking stick or stick?
7. Hit any part of your body (excluding your back) with a broom, belt, walking stick or stick?
8. Hit you with an object or fist repeatedly? (beating, battering etc.)
9. Choked you or tried to drown you ?
10. Burned or scalded you?
11. Put pepper in your mouth to give you pain?
12. Tied you up or chained you to something?
13. Twisted your ear?
14. Pulled your hair?
15. Pinched you?
16. Making you stay in one position holding a heavy load or another burden or making you do exercise as punishment?

## Questions related with neglect

1. You did not feel cared for?
2. Felt that you were not important?
3. Felt that there was never anyone looking after you, supporting you, helping you when you most needed it?