PREVALENCE OF THE PTSD SYMPTOMS AMONG UKRAINIAN CHILDREN: A BRIEF REPORT ON THE RESERCH FINDINGS

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The articles discusses results of the study on the spread of the PTSD symptoms among children. The survey conducted in ten schools of Lviv (West Ukraine) with the application of the CRIES-8 screening tool has revealed an extremely high rate of the PTSD symptoms among children. 28% of the sample (total sample is 1505 schoolchildren) is at risk. It also shows that the percentage of girls with PTSD symptoms is much higher (35%) than the percentage of boys (23%). Despite the described limitations, the study has provided evidence for the need to introduce trauma awareness raising programs in schools, whose target groups must be school psychologists and social workers, teachers, school administrations, children and their parents.

Key words: PTSD, PTSD symptoms, CRIES-8, post-traumatic stress disorder, survey, children PTSD.

Currently Ukraine is involved in the war. Therefore, a big number of people are in a zone of mental health risks. In particular, World Mental Health Survey (conducted throughout the world from 2001 to 2012) shows that 84.6% of the adult respondents in Ukraine experienced at least one-lifetime traumatic event. It is the biggest number across the European countries. According to the study of the Kiev International Institute of Sociology (Issues of mental health and access to services among internally displaced persons in Ukraine, 2016) 32 percent of the respondents aged from 18 to 75 and above had PTSD symptoms, 22 percent had symptoms of depression, and 18 percent had symptoms of anxiety. In this situation, IDP and refugee children need the greatest attention. Unfortunately, there are almost no official statistics on mental health and socio-psychological problems of Ukrainian children. One of the few sources is the Handbook of Statistics 2013-2015 “Mental Health of Ukrainians”. According to the handbook, mental health disorders affected 18,6 percent of all Ukrainian children in 2015. At the same time , no child was diagnosed PTSD. Actually, post-traumatic stress disorder is the diagnosis that was officially recognized in Ukraine only for a few years after the war began.

It is clear that the traumatic events Ukrainian children are exposed to are not only connected with the war, witnessing death or being in the war zone. There are other traumatic events, or example, witnessing physical fights at home, having a serious illness, being stricken by natural disasters or having

automobile accidents. The epidemiology of the traumatic events exposure in the childhood is a way not only to understand the current situation but also to create the foundation for setting uo a holistic system of child mental health care in Ukraine.

Methods

Children's Revised Impact of Events Scale (CRIES-8). CRIES-8 is a psychological screening tool, created under the auspices of the Children and War Foundation to assessthe PTSD symptoms in children over 8 years old. It is already translated into 27 languages, including Ukrainian, and has been successfully used in different cultural settings [3].

CRIES-8 is an easy self-completed instrument available for group administering. It consists of eight items. Four items are supposed to measure Intrusion, and the other four are to measure Avoidance.

A number of studies have shown a good construct validity of this tool, a high level of reliability and potential to reveal children at PTSD risk [5; 8]. It has been proved that CRIES-8 correctly classified 75-83% of children with PTSD (cutoff score=17) [5].

The data of CRIES-8 cannot be used alone to make a clinical diagnosis. It gives general information about the prevalence of children with a high level of the two PTSD symptoms (avoidance and intrusion).

Setting. Ten schools were chosen in the city of Lviv (West Ukraine) following the strategy of randomization. The school psychologists under the supervision of the Institute of Mental Health (UCU) conducted CRIES-8screening. Before the screening started, all the school psychologists got a comprehensive training in the PTSD assessment and treatment, including fundamentals of the Trauma-Focused Cognitive-Behavioral Therapy (TF-CBT) and the CBT-based group intervention "Support for Students Exposed to Trauma" (SSET) [1; 4]. All together they got 30 hours of training. In addition, before the screening started the psychologists gave presentations of psychoeducational character to the school personnel and parents and received their their agreement for screening.

Analysis. The total number of children screened with CRIES-8 was 1505: 856 males and 649 females aged between 10 and 15 years old (12,9 years old average; 1,12 SD [1]). The PTSD symptoms were found in 38% of the research participants (38% of the female and 31 % of the males participants).

[1] SD – standard deviation

Table 1

Distribution by age and sex

Sex	Age						General
	10	**11**	**12**	**13**	**14**	**15**	
Male	2	76	245	254	192	87	856
Female	1	64	201	223	102	58	649
Total	**3**	**140**	**446**	**477**	**294**	**145**	1505

Table 2

Descriptive Statistics by Scales

	Valid N	**Mean**	**Mini-mum**	**Maxi-mum**	**Std. Dev.**	**Skew-ness**	**Kurtosis**
Intrusion	1505	6,57	0,00	20,00	5,42	0,65	-0,50
Avoid-ance	1505	7,81	0,00	20,00	6,05	0,29	-1,08
CRIES	1505	14,38	0,00	40,00	10,04	0,25	-0,83

Table 3

Statistics by Sex and Scales

Scales	**Valid N**	**Mean**	**Std.Dev.**
Females			
Intrusion	649	7,39	5,55
Avoidance	649	8,89	6,13
CRIES	649	16,27	10,20
Males			
Intrusion	856	5,95	5,22
Avoidance	856	6,99	5,85
CRIES	856	12,94	9,65

Table 4

Prevalence of the PTSD symptoms (cutoff score=17)

	Valid N	**PTSD %**	**Adjustment to the error (25%)**
CRIES 18 and more (Total=1505)	570	38%	28%
CRIES 18 and more (Males, total=856)	265	31%	23%
CRIES 18 and more (Females, total=649)	305	47%	35%

Discussion. The cutoff score for the decision-making on the PTSD symptoms according to the research of Perrin, Meiser-Stedman & Smith is above 17 [5]. Accordingly the 17-score indicator allows correctl identification of 75-83% children as PTSD positive.

The average score for the whole sample of our study is 14,38 (SD=10, 04) that is close to the 17-score threshold (Table 2). The female sample overall score (16,27, SD=10,20) is much closer to the threshold. . The male sample overall score is lower and equals to 12,94 (SD=9,65). Within both samples, the total scores on subscales Avoidance and Intrusion are approximately equal, with a slight domination of Avoidance. Thus, Avoidance in the boys' case is 6,99, SD=5.85, Intrusion is 5,95, SD=5,22; for the girls Avoidance is 8,89, SD=6,13, Intrusion is 7,39, SD=5,55 (Table 3). At the same timethe level of both subscales (Avoidance and Intrusion) is significantly higher for the female sample than for the male one (Fig. 1).

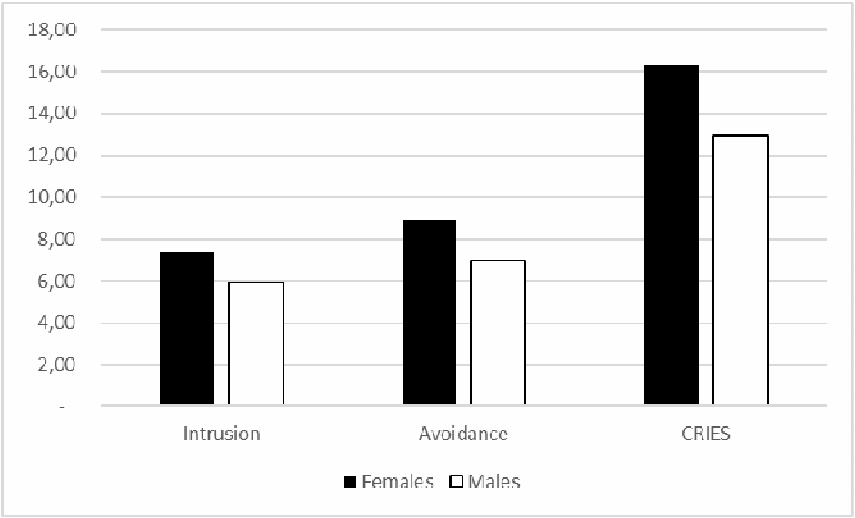

Fig. 1. The average level of the PTSD symptoms by subscales and sex

Taking into account the 25%-error (table 4), the estimated percent of the sample with the PTSD symptoms is 28 As it was expected, a much higher percentage (35%) is within the females sample – versus the 23% of the PTSD positive male sample(Fig. 2). Therefore, one should take into account not only the general widespread of the PTSD symptoms, , but also girls' vulnerability to PTSD. This problem needs to be resolved.

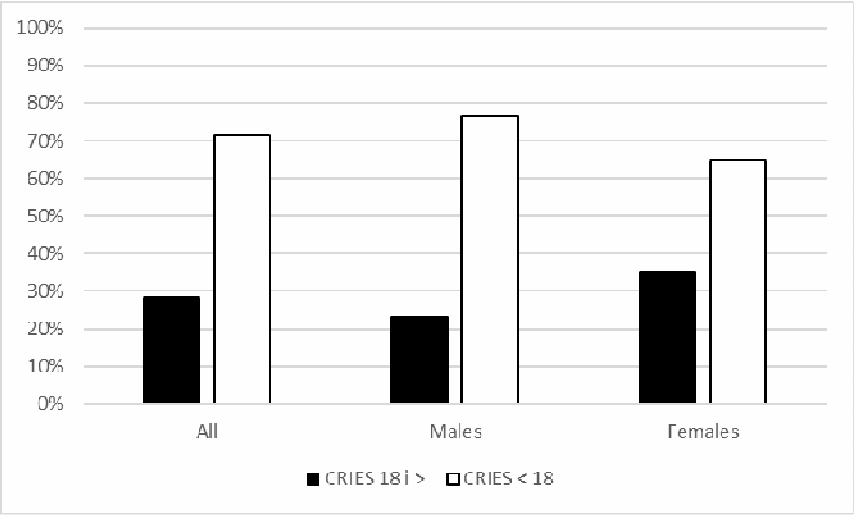

Fig. 2. Prevalence of the PTSD symptoms
(with the adjustment to the 25% error)

The PTSD symptoms level is very high even with the adjustment to the 25% error. we assume that nearly 30% of the children will develop PTSD after the exposure to traumatic events, then the further assumption will be that almost 80-90% of the children have been exposed to traumatic events in the different ways.

Limitations. This study has some limitations. The first limitation is lack of the data on additional demographic characteristics (income, parents' social status of the, IDP status, etc.). There was no permission of that the state administration to collect these data. Therefore, it is impossible to get a clear answer to the question "What kind of vulnerable groups of children are most exposed to trauma and the PTSD symptom?"

The second limitation is related to the fact that the application of CRIES-8 was not accompanied by direct questions about some traumatic experience in children's life and the type of this experience. The reason is little possibility to include an individual interview of the children in the group administration of the questionnaire. Direct questions could provoke tension, anxiety, reactivity, intrusion, and other reactions of the children with the high level of the PTSD symptoms.

After the survey was finished all the children (and the parents) with high level of the PTSD symptoms were offered a psychological support within the trauma-focused CBT-based group program "Support for Students Exposed to Trauma" or a course of individual therapy in the cases when the symptoms

were strong. The children whose parents gave their agreement received the necessary help (but the data of the study was insufficient to provide summary on prevalence of the traumatic experience). The children who did not get any kind of help, were given the informational pamphlets about the impact of trauma and PTSD symptoms, which also contained relevant contact information.

The third limitation deals with representation. The study was conducted only in one city - Lviv (West Ukraine), and only in 10 schools. Despite the strategy of randomization for choosing the schools, it is impossible to spread out its results in all Ukraine.

Therefore, the obtained data is to be taken into account as tentative, and a future comprehensive national study is necessary. It will mitigateof the limitations of that study.

Summary. This pilot study, despite its limitations, revealed the problem of the PTSD prevalence. Its results could be useful both for the future studies and for the mental health policy development, especially in the current situation when no similar data are availabel. Firstly, the study attracts attention to the revealed tendency of the high level of PTSD, and, therefore, to the trauma exposure. Secondly, it provides understanding that girls are more vulnerable to trauma than boys, but proves that the overall level of vulnerability of children is extremely high. Thirdly, it shows that avoidance is a more frequent PTSD symptom revealed among the children than intrusion. Therefore, identification of the children at risk can be a problem for mental health professionals and school workers.

The general conclusion is thatthe concept of the trauma-sensitive school and the programs of mental health awareness for all people who are connected with children, especially school professionals (including teachers and administrators, but not only psychologists and social workers) are needed. They are important for parents and children too. Their main aims are increasing awareness of one's own state of mental health and sensitivity to the mental state of peers and class- and schoolmates.

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Literature

1. Психічне здоров'я населення України. Аналітично-статистичний довідник 2013–2015 рр. / Український НДІ соціальної і судової психіатрії та наркології МОЗ України; Центр мед. статистики МОЗ України. – Кіровоград : Поліум, 2016. – 80 с.
2. *Deeba F.* Psychometric properties of the Children's Revised Impact of Events Scale (CRIES) with Bangladeshi children and adolescents / Deeba, F., Rapee, R. M., & Prvan, T. // Peer Reviewed Journals. – 2014. – Is. 2. – P. 1–23.
3. *Perrin S.* The Children's Revised Impact of Event Scale (CRIES): Validity as a screening instrument for PTSD / Perrin, S., Meiser-Stedman, R. & Smith, P. // Behavioural and Cognitive Psychotherapy. – 2005. – Is. 33 (4). – P. 487–498.
4. Principal components analysis of the Impact of Event Scale with children in war / Smith, P., Perrin, S., Dyregrov, A. & Yule, W. // Personality and Individual Differences. – 2002. – Is. 34. – P. 315–322.
5. *Roberts B.* Hidden Burdens of Conflict: Issues of Mental Health and Access to Services Among Internally Displaced Persons in Ukraine / Roberts, B., Makhashvili, N., Javakhishvili, J. // Report by International Alert/GIP-Tbilisi/London School of Hygiene and Tropical Medicine. – 2017. – Access mode : https:// reliefweb.int/sites/reliefweb.int/files/resources/Ukraine_HiddenBurdensConflictIDPs_EN_2017.pdf
6. The Epidemiology of Traumatic Event Exposure Worldwide: Results from the World Mental Health Survey Consortium / Benjet, C., Bromet, E., Karam, E. G., Kessler, R. C., et al. // Psychological Medicine. – 2016. – Is. 46(2). – P. 327–343.
7. Support for students exposed to trauma: A pilot study / Jaycox, L. H., Langley, A. K., Stein, B. D., Wong, M., Sharma, P., Scott, M., & Schonlau, M. // School Mental Health. – 2009. – Is. 1(2). – P. 49–60.
8. Toolkit for Adapting Cognitive Behavioral Intervention for Trauma in Schools (CBITS) or Supporting Students Exposed to Trauma (SSET) for Implementation with Youth in Foster Care / Schultz, D., Barnes-Proby, D., Chandra, A., Jaycox, L. H., Maher, E., & Pecora, P. // Rand Health Quarterly. – 2012. – Is. 2(1). – P. 13.

References

1. Psykhichne zdorovia naselennia Ukrainy. Analitychno-statystychnyi dovidnyk 2013–2015 rr. (2016). Ukrainskyi NDI sotsialnoi i sudovoi psykhiatrii ta narkolohii MOZ Ukrainy, Tsentr medychnoi statystyky MOZ Ukrainy [Mental health of population in Ukraine. Analytical and statistical handbook 2013–2015. Ukrainian Research Institute of Social and Forensic Psychiatry and Drug Abuse Ministry of Health of Ukraine, Center for Health Statistics Ministry of Health of Ukraine]. Kirovohrad: Polium Publ. (ukr).
2. Deeba, F., Rapee, R. M., & Prvan, T. (2014). Psychometric properties of the Chil-

dren's Revised Impact of Events Scale (CRIES) with Bangladeshi children and adolescents. *Peer Reviewed Journals,* 2, 1–23.
3. Perrin, S., Meiser-Stedman, R. & Smith, P. (2005). The Children's Revised Impact of Event Scale (CRIES): Validity as a screening instrument for PTSD. *Behavioural and Cognitive Psychotherapy,* 33 (4), 487–498.
4. Smith, P., Perrin, S., Dyregrov, A. & Yule, W. (2002). Principal components analysis of the Impact of Event Scale with children in war. *Personality and Individual Differences,* 34, 315–322.
5. Roberts, B., Makhashvili, N. and Javakhishvili, J. (2017). Hidden Burdens of Conflict: Issues of Mental Health and Access to Services Among Internally Displaced Persons in Ukraine. Report by International Alert/GIP-Tbilisi/London School of Hygiene and Tropical Medicine, https://reliefweb.int/sites/reliefweb.int/files/resources/Ukraine_HiddenBurdensConflictIDPs_EN_2017.pdf
6. Jaycox, L. H., Langley, A. K., Stein, B. D., Wong, M., Sharma, P., Scott, M., & Schonlau, M. (2009). Support for students exposed to trauma: A pilot study. *School Mental Health,* 1(2), 49–60.
7. Benjet, C., Bromet, E., Karam, E. G., Kessler, R. C., et al (2016). The Epidemiology of Traumatic Event Exposure Worldwide: Results from the World Mental Health Survey Consortium. *Psychological Medicine,* 46(2), 327–343.
8. Schultz, D., Barnes-Proby, D., Chandra, A., Jaycox, L. H., Maher, E., & Pecora, P. (2012). Toolkit for Adapting Cognitive Behavioral Intervention for Trauma in Schools (CBITS) or Supporting Students Exposed to Trauma (SSET) for Implementation with Youth in Foster Care. *Rand Health Quarterly,* 2(1), 13.

Климчук В. О., Горбунова В. В. Поширеність симптомів ПТСР у дітей в Україні: короткий звіт за результатами дослідження

У статті представлено результати проведеного в 10 школах м. Львова дослідження проявів симптомів ПТСР у дітей. Як скринінговий інструмент використано опитувальник CRIES-8, який було перед тим децентровано перекладено та перевірено на надійність і валідність. З'ясовано, що серед учасників дослідження (1505 осіб) віком від 10 до 15 років частка дітей з ризиком ПТСР сягає 28%, при цьому частка дівчат у зоні ризику (35%) є набагато більшою, ніж хлопців (23%). Виявлено тенденцію до збільшення частки дітей, які потрапляють у зону ризику ПТСР. Описано також обмеження та застереження щодо використання результатів цього дослідження. Зроблено висновок про необхідність широкого впровадження у школах програм, спрямованих на підвищення рівня усвідомлення впливу травми на психіку дітей. Ідеться як про просвітницькі програми для шкільних працівників, батьків та дітей, так і програми розвитку травма-фокусованих терапевтичних компетентностей шкільних психологів.

Ключові слова: ПТСР, симптоми ПТСР, CRIES-8, посттравматичний стресовий розлад, опитування, дитячий ПТСР.

Климчук В. А., Горбунова В. В. Распространенность симптомов ПТСР у детей в Украине: короткий отчет о результатах исследования

В статье представлены результаты проведенного в 10 школах г. Львова исследования проявлений симптомов ПТСР у детей. В качестве скринингового инструмента использован опросник CRIES-8, децентрированный перевод, а также

проверка надежности и валидности которого были проведены предварительно. Установлено, что среди участников исследования (1505 человек) в возрасте от 10 до 15 лет доля детей с риском ПТСР достигает 28%, при этом доля девочек в зоне риска (35%) намного выше, чем мальчиков (23%). Выявлена тенденция к возрастанию доли детей, попадающих в зону риска ПТСР. Описаны также ограничения и замечания относительно использования результатов этого исследования. Сделаны выводы о необходимости широкого внедрения в школах программ, направленных на повышение уровня осознания воздействия травмы на психику детей. Речь идет как о просветительских программах для школьных работников, родителей и детей, так и о программах развития травма-фокусированных терапевтических компетентностей школьных психологов.

Ключевые слова: ПТСР, симптомы ПТСР, CRIES-8, посттравматическое стрессовое расстройство, опрос, детское ПТСР.