

Psychological Service for Ukrainian School Students during the Russian Invasion: Experience of School Psychologists from Kryvyi Rih

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Abstract: *Introduction:* After eight years of the war in the East of Ukraine, two years of the COVID-19 pandemic with relevant lockdowns, and two months of bomb alerts, school students and school psychologists from Kryvyi Rih have been dealing with new brutal military actions during the Russian invasion of Ukraine since the 24th February 2022.

Purpose: This paper focuses on School Psychological Services' changes and challenges caused by the Russian invasion. It assesses war-related psychological effects on school students and school psychologists from Kryvyi Rih.

Method: Brief non-structured interviews and the survey.

Results and Conclusions: After the Russian invasion of Ukraine, School Psychological Services in Kryvyi Rih continued their work remotely, often combining it with in-person meetings (48.5%) and other volunteer activities (27.9%). The surveyed school psychologists (n=48) informed they conducted more individual consultations and psychoeducation and fewer diagnostics than usual to address school students' changing needs in response to wartime. School psychologists felt more effective and involved with students when they believed they got enough support from colleagues and supervisors, learned crisis interventions, received clear guidance, and did not feel burnout. They appreciated current governmental guidance and felt their post-traumatic growth more when they were safe. After 1.5 months of the war, 43.8% of psychologists experienced burnout. At least a quarter needed additional education, psychological support, easily accessible supervision (especially short and rapid), and guidance for specific cases.

Keywords: School students, school psychology, school psychologists, school psychological service, the war in Ukraine, Russian invasion.

INTRODUCTION

Numerous studies, including meta-analyses, have been devoted to the psychological effects of war on school children, and these should be considered in organizing relevant psychological support and crisis interventions. On the one hand, researchers insist that it is crucial to maintain education in wartime [1], primarily because of its potential for peacebuilding [2,3]. On the other hand, the evidence proves that traumatic stress events have a variety of consequences on school children's psychological conditions and development. Following G. Halevi, A. Djalovski, A. Vengrober, and R. Feldman [4], 81% of war-exposed children aged between 1.5 and 11 years displayed psychopathology (often comorbid) during childhood. In middle childhood (5-8 years old), they tended to show post-traumatic stress disorders, anxiety disorders, and attention-deficit/hyperactivity disorders. Whilst in late childhood (9-11 years old), post-traumatic stress disorders, conduct/oppositional defiant

disorders, and attention-deficit/hyperactivity disorders were also documented. Interestingly, the researchers found a mother's uncontained style to be a risk factor for early and chronic psychopathology. V. Khamis [5] assessed children from the Gaza strip within 3 years of the war's end. In her results, 30% of adolescents between the ages of 10 and 16 developed post-traumatic stress disorder, often including co-morbidity with other disorders, e.g., emotional disorder and neuroticism.

A meta-analysis of 62 studies involving 44,066 participants showed that early-life stress predicted depression in childhood and adolescence [6]. A systematic review conducted by E. Werner [7] showed that the development of post-traumatic stress disorder symptoms was linked to recent war exposure and the child's older age. Especially in the cases of children who are victims of rape who were involved in the war as soldiers or had been displaced. El Baba and E. Colucci [8] also concluded that the issues of PTSD, war-related trauma, depression, and anxiety were even more complex in the case of unaccompanied refugee minors and experiences of stressful events. These

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frequently included separation from family members, the death of parents and close relatives, level of exposure to armed conflicts, and threats to a person.

Assessing the dynamics of war-related post-traumatic stress symptoms in children (10-13 years old) from Gaza in Palestine, Punamäki *et al.* [9] have found three trajectories: Recovery trajectory, Resistant trajectory, and Increasing symptoms trajectory. The authors revealed that the Resistant trajectory among children was related to lower levels of negative post-traumatic cognitive appraisals, feelings of guilt, and emotion regulation compared to the Increasing symptoms trajectory. Interestingly, children with the Recovery trajectory showed attachment avoidance and high parental trauma compared to the Increasing symptoms trajectory.

As for the post-traumatic growth of war-exposed children, a meta-analysis of 154 independent samples with 98,436 respondents in 122 longitudinal studies conducted by J. Mangelsdorf, M. Eid, and M. Luhmann [10] showed that opportunities for post-traumatic growth were equal to other event-related growth, including after positive events. Both positive and negative events may contribute to self-esteem and relationships.

At the time of our research, Kryvyi Rih was located within 40-50 km of territories temporarily occupied by Russian troops and was attacked daily by missiles, which failed to reach their target due to the air defense. Every day, residents heard the air alert and had to hide in bomb shelters or behind the strongest walls of their houses. Many people were therefore evacuated from Kryvyi Rih to other areas in Ukraine or abroad. However, the city took in numerous refugees from Mariupol and other towns in Donetsk and Luhansk regions because it was considered relatively safe. Not surprisingly, this situation affected both the psychological conditions of citizens who remained in the city (in particular pre-schoolers and school students) and the functioning of the municipal services (including the psychological services in every school that remained open [11, 12]). The findings of Ukrainian researchers showed a significant role of psychological interventions in reducing traumatic stress among school students in the regions close to occupied territory [13-18].

Moreover, following E. Werner [7], school-based interventions and support mitigated the influence of stress. They protected the development of post-

traumatic stress even when teachers or locally trained paraprofessionals implemented it. We hypothesized that some individuals were overwhelmed by this succession of psychological injuries, with persistent signs of stress, anxiety, and burnout. At the same time, we hypothesized that the experience of previous trauma for many might be an experience of managing it well by copings, searching for new creative decisions, and using learning approaches to self-care, which might help in the current challenging situation. This phenomenon could be defined as post-traumatic growth among Ukrainian, which could somehow prepare school students as well as school psychologists to face the current war with higher resilience [13, 19]. Thus, this paper focuses on the impact of the war both on school students and school psychologists in Kryvyi Rih and on the changes and challenges to the psychological services caused by the Russian invasion. We aimed to gather preliminary data on psychologists' observations of school students coping with war-related stress and on the first response of psychologists who had changed their practice.

MATERIALS AND METHODS

The research included two periods to elaborate a survey. The first period included a literature review and one consultation with the Principal of Kryvyi Rih Municipal Psychological Service for school students (the office which manages all school psychologists in the city). Besides, we conducted brief, non-structured interviews with two currently working school psychologists (one was located in Kryvyi Rih, and one was evacuated to another place but was still working in Kryvyi Rih school remotely), who volunteered to participate. The main question in the interviews was: *'How does the work of a school psychologist in Kryvyi Rih look like during the war?'*

Following the literature review, consultation, and interview results, we elaborated a research framework presented in Figure 1. We started from the hypothesis that the war might influence School Psychological Services from different perspectives:

- Affecting school students as main clients of School Psychological Services;
- requiring changes in functioning to follow the all-Ukrainian School System's response to the war, such as new orders and decrees from the government;

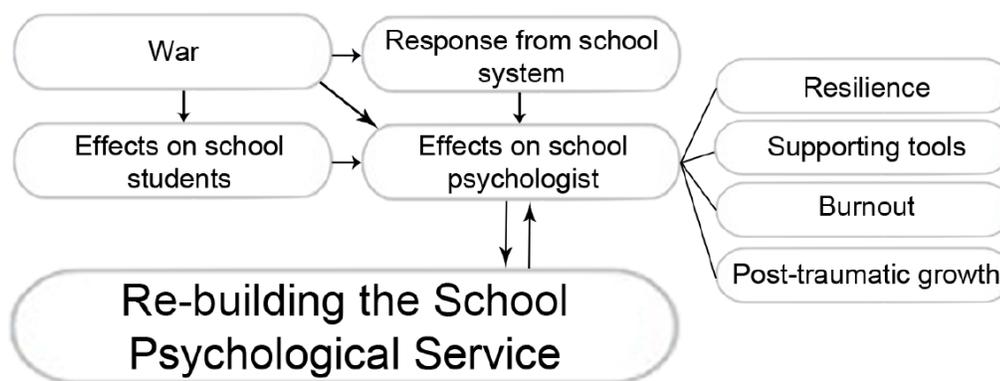


Figure 1: Theoretical framework of the study.

- directly affecting psychologists as human beings.

Based on this idea, we aimed to study what conditions, decisions, and challenges school psychologists faced, how they rebuilt their practice in wartime, and what they needed to support their practice.

Upon this framework, we created a survey for school psychologists [20], which included blocks of questions on (1) how forms, functions, and focuses of School Psychological Services had changed because of war, (2) how the number of school students had changed, (3) how school students of different age groups had been affected psychologically by the war (in the psychologist's opinion based on their observations or diagnostics if available), (4) had psychologist been prepared enough to conduct crisis interventions, (5) what signs of acute stress reactions of school students had been observed from the beginning of the invasion, as well as (7) Oldenburg Burnout Inventory [21], (8) Brief Resilience Scale [22] and (9) Post-Traumatic Growth Inventory [23] to evaluate psychologists.

The Kryvyi Rih State Pedagogical University Ethics Board evaluated and approved our research project. We gathered written consent for research participation and the questionnaire responses via Google Forms.

In total, 48 school psychologists (47 women and one man) from Kryvyi Rih with professional experience between 1 and 30 years ($M = 11.08$ years, $S = 7.35$) agreed to participate in a study among all 121 school psychologists in the city, which were invited. They responded to a survey online from 11-13th April 2022. The response rate was 39.7%. Among the total 48 surveyed school psychologists, 37 noted they worked with primary school students, 46 with secondary school students, and 29 – with high school students, which

enabled the investigation of war-related effects on different age groups. The gender distribution of participants is similar to other research in the field of psychology and psychotherapy in the region [24].

Data analysis of this study included descriptive statistics, calculation of frequencies, Spearman rank correlations, percentages, and comparison of samples by Mann-Whitney and Kruskal-Wallis tests using IBM SPSS Statistics 22 software.

RESULTS

Experience of the Interviewed School Psychologists

School psychologist A (female, evacuated from Kryvyi Rih but continued her work remotely) was interviewed on 9th April 2022. She reported that after the invasion, she tried to provide school students with the weekly scheduled online group meetings for each students' group, which was implemented only for primary and secondary school, i.e., 1-8 grades in the Ukrainian education system. Her attempts to organize meetings with school students from a high school (10-11 grades) failed due to the response of students that they were too busy. As for the two students' groups of the 9th grade, one started meeting after some delay, and another did not because their tutor eluded the appointment of the schedule due to unknown reasons. The psychologist perceived miscommunication with some teachers as the most interfering barrier to reaching school students during the remote work of schools because only tutors of the classes had direct access to students' contacts and schedules.

She noted she received recommendations from the municipal psychological office on how to work during the war, with specific interventions for individuals and groups. Still, they seemed more appropriate for

preschool students. Instead of this, School psychologist A made her first meetings with school students in the form of a conversation to study their core topics and issues, avoiding debriefing. Based on it, she conducted further meetings with psychological exercises for stabilization and art therapy. According to her observations, some art therapy techniques, such as drawing with thread, were helpful and emotionally fulfilling. At the same time, some exercises for stabilization, for instance tearing and scattering paper to react to anger, which were effective while conducted in person at school, caused discomfort to school students when conducted online. Similarly, she observed a visible painful difference in psychological conditions between two groups of students of the same class (who still were in Kryvyi Rih and who were evacuated) when she proposed to them to take part in the photo competition on the topic 'My spring'. Nevertheless, there was an impression that School psychologist A used her previous experience, current attentiveness, and creativity to search for new ways to help school students to cope with their feelings and thoughts caused by the war.

School psychologist B (male, was located in Kryvyi Rih and worked remotely) was interviewed on 9th April 2022. He started with the current situation in school in general, informing us that more than half of school students did not continue their remote classes. The reason was: 1) some of them were evacuated to other areas of Ukraine and did not have an opportunity to join meetings online, 2) others (especially persons with disabilities) became refugees in other countries and went to schools there, and 3) another part did not join classes for various personal reasons. Even a less number of school students gathered for meetings with a school psychologist. Thus, it became usual for him to unite students of several grades to form a group.

Unlike the first interviewee, School psychologist B claimed he did not receive directions from the municipal office or the Ministry. However, he tried to find them via the Internet. At the first group meeting after the start of the military invasion in Ukraine in 2022, he asked school students how they felt and what topics they would like to talk about, but they answered that they were okay and had no topics. He was puzzled for some time and searched for papers devoted to psychological help in case of a war. He conducted further meetings with school students as psychoeducational groups about the symptoms and dynamics of stress, emotions and how they can be managed, panic attacks and ways to deal with them,

how to support others, etc. He had to cope with his own difficulties that interfered with perceiving his work as efficient (After the invasion, School psychologist B had a conflict with his mother, a citizen of the Russian Federation, who welcomed the war). Not being able to convince her that the war was unfair and unprovoked, he felt like both a not beloved son and a 'bad psychologist'.

Survey Results: War-Related Changes in School Psychological Services

Though to the date of the Russian invasion to Ukraine in February 2022, schools in Kryvyi Rih had already worked remotely due to previous bomb alerts, 45.8% of the surveyed school psychologists said they worked both online and offline. The such frame of work was possible because 85.4% of school psychologists were located in Kryvyi Rih, while others were already evacuated. Nevertheless, the factor of working online only or online and offline altogether did not affect other studied means.

91.7% of respondents marked they got straight instructions for their work during the war from the Kryvyi Rih Municipal Office of Psychological Service for school students based on recommendations of the Ministry of Education and Science of Ukraine; however, 25% could use them only partly. 81.2% indicated a decrease in the number of school students who continued studying (in 16.7% of responses – to less than half). 79.2% confirmed that the number of their working hours with school students changed (37.5% said they worked more, and 41.7% worked less). Similarly, 29.2% indicated that they worked more, and 43.8% worked less with the school staff than they used to, while 29.2% considered they worked more and 47.9% worked less with parents of school students.

79.2% of school psychologists also claimed that they had changed the proportion of group or individual forms of their work (47.9% began to work more in individual form, while 31.3% used groups more often). The most often mentioned changes in professional activities were: '*I conduct more individual consultations than usual*' (62.5%), '*I conduct more psychoeducation than usual*' (58.3%), and '*I conduct fewer diagnostics than usual*' (50%). 27.9% of the surveyed practitioners indicated that they were engaged in other volunteer work out of school.

Eight respondents left their commentaries in the optional open question about what other specific

changes school psychologists would like to mention. They noted (1) the challenges of working online, often with a camera switched off and with silent school students, with no opportunity to communicate at the non-verbal level; (2) more hours of professional self-education in crisis interventions; and (3) plural non-psychological volunteer activities in response to municipal requests. Among the most influential factors which had induced these changes in their work, respondents chose (a) difficulties in logistics and communication to schedule meetings when some school students were in Kryvyi Rih and others were in different time zones, 32.6%; (b) being involved to psychological volunteer work in the city, 27.9%; (c) increased request for psychological help from school students, 27.9%; (d) reduced request for psychological help from teachers, 27.9%; (e) air alarms which could interrupt group or individual sessions, mentioned by a few respondents in a commentary to this question.

As for crisis psychological interventions, 58.3% of the survey participants informed us they did not have relevant skills at the moment of invasion. However, only 16.7% still did not have them to the date of our research. Nevertheless, the surveyed psychologists evaluated the perceived efficiency of the school psychological service they provided for the school students during the war as relatively high – $M = 7.17$, $S = 1.74$ (when 1 was min and 10 was max).

Survey Results: School Students Affected by the War

The central part of this survey block consisted of open questions about how school students of different ages were psychologically affected by the war. We asked psychologists to base their brief responses about their students in general on their observations or diagnostics, if available. We studied these responses through content analysis. We indicated certain content units, counted them, and grouped into categories. We

Table 1: Psychological Effects of War in Ukrainian School Students Observed by School Psychologists from Kryvyi Rih

Content groups		Primary School	Secondary School	High School
Emotional	Categories	Anxiety, fear, impulsiveness, apathy, stress reactions (n = 5)	Anxiety, fear, stress reactions, irritability, anger, insecurity, hopelessness, decreased self-esteem, perplexity, impulsiveness, rage, apathy, and tears (n = 13)	Fear about the future, anxiety, apathy with disappointment, stress reactions, rage, hopelessness, tears, guilt (n = 7)
	Mentions, n	39	56	40
Cognitive	Categories	Nightmares, impaired concentration, thoughts about deaths or destruction (n = 3)	Difficulties in learning, narrowing the circle of interests, denial (n = 3)	Difficulties in learning, non-acceptance of reality, nightmares (n = 3)
	Mentions, n	15	7	10
Physical	Categories	Feeling unwell, sleep disturbance, somatic disorders (n = 3)	Sleep disturbance, fatigue, exhaustion (n = 3)	–
	Mentions, n	4	7	0
Behavioral	Categories	Enuresis, hysterics (n = 2)	Social isolation, rudeness (n = 2)	Refusal to communicate about themselves or the war, social isolation, decreased self-efficacy, and longer stay in social networks (n = 4)
	Mentions, n	3	7	10
None	Mentions, n	2	–	–
In total	Mentions, n	62	77	60

Note. Content categories are listed in the order from the most to the least often mentioned.

distributed content units and categories into four groups: emotional, cognitive, physical, and behavioral effects, to collect more homogeneous data (Table 1).

Here we see the differences in numbers and types of the observed school students' reactions in accordance with age specifics. Primary school students had a short spectrum of emotional reactions, worried about deaths, and were affected physically in regressive forms, e.g., somatization. Secondary school students had an elaborated range of emotions and were more in line to protect their minds from new information and from others because of their fatigue. High school students who worried about their future felt disappointed and often were not ready to accept the new reality of the war.

As for Acute Stress Disorder and Psychological trauma in school students, 12.5% of the surveyed psychologists confirmed such cases, and 25% responded they did not have such information. Additionally, we asked the respondents to mark points in the list of stress reactions elaborated by Young *et al.* [25], which were the most often observed in Primary, Secondary, and High school students separately. The comparison of the number of marked stress reactions among school students of different ages is presented in Table 2. The number of observed stress reactions from emotional, cognitive and physical groups significantly differed among all school students.

As for the most frequently marked (by more than 40% of respondents) stress reactions among Primary school students, there was fear (75.7%), terror (56.8%), impaired concentration (54.1%), and confusion (45.9%). The secondary school students mentioned most often fear (67.4%), terror (67.4%), confusion (47.8%), decreased self-efficiency (47.8%),

irritability (43.5%), and worry (41.3%) among their stress reactions. High school students choose terror (69%), fear (55.2%), worry (55.2%), anger (48.3%), insomnia (44.8%), and irritability (41.4%).

Finally, the surveyed school psychologists marked the signs of post-traumatic growth in their students by filling in the Post-Traumatic Growth Inventory (PTGI) about each age group. The most frequently marked (by more than 40% of respondents) signs of post-traumatic growth (a) in Primary school students were 'Sense of closeness with others' (48.5%) and 'Having compassion for others' (48.5%); (b) in Secondary school students – 'An appreciation for the value of their own life' (61.4%), 'Priorities about what is important in life' (52.3%), 'Sense of closeness with others' (47.7%), 'Appreciating each day' (43.2%), 'A willingness to express their emotions' (40.9%), and 'Knowing they can handle difficulties' (40.9%); (c) in High school students – 'An appreciation for the value of their own life' (74.1%), 'Priorities about what is important in life' (74.1%), 'Knowing they can handle difficulties' (59.3%), 'Having compassion for others' (55.6%), 'Appreciating each day' (51.9%), 'Sense of closeness with others' (51.9%), 'A better understanding of spiritual matters' (48.1%), 'They established a new path for their life' (48.1%), and 'Being able to accept the way things work out' (40.7%).

Survey Results: School Psychologists Affected by the War

43.8% of school psychologists admitted that, to the date of our research, they observed their symptoms of burnout, which strongly correlated with their burnout levels found via the Oldenburg Burnout Inventory (OLBI); $r = 0.488$, $p < 0.01$. Interestingly, we also found a moderate inverse correlation between the burnout level and the evaluated work efficiency during the war

Table 2: Variety of Stress Reactions of Ukrainian School Students Observed by School Psychologists from Kryvyi Rih in Wartime

Age of school students	Stress reactions			Kruskal-Wallis test, H	Average level of expression
	Emotional (n)	Cognitive (n)	Physical (n)		
Primary School	M 2.46 S 1.30	M 2.11 S 1.74	M 0.95 S 1.78	21.29**	M 2.89 S 1.00
Secondary School	M 2.85 S 1.53	M 2.37 S 1.74	M 1.15 S 1.85	29.84**	M 2.98 S 0.93
High School	M 3.41 S 2.47	M 2.38 S 2.01	M 1.52 S 1.90	11.2**	M 3.10 S 0.94
Kruskal-Wallis test, H	1.9	0.66	1.7	–	1.1

Note: ** – $p < 0.01$.

Table 3: Average Means of OBI, BSR, and PTGI of School Psychologists from Kryvyi Rih in Wartime

Inventory Scale		Average (M)	Standard deviation (S)
Oldenburg Burnout Inventory (OLBI)	Disengagement Scale	16.17	3.30
	Exhaustion Scale	17.75	3.81
	In general	33.92	6.38
Brief Resilience Scale (BRS)		2.98	0.57
Post-Traumatic Growth Inventory (PTGI)	Scale 'Relating to others'	21.69	8.96
	Scale 'New possibilities'	13.63	6.20
	Scale 'Personal strength'	12.60	4.71
	Scale 'Spiritual enhancement'	5.92	2.57
	Scale 'Appreciation'	10.67	4.29

$r = -0.397$, $p < 0.01$. Lower levels of burnout were found among those who confirmed they had new school students evacuated to Kryvyi Rih from other areas ($U = 106$, $p < 0.01$) and those whose school students had physical injuries ($U = 19.5$, $p < 0.05$). The average means of this and other scales are presented in Table 3, and their intercorrelation matrix – is in Table A (Appendix A).

Despite the fact that resilience is widely considered a substantial feature of mental functioning to cope with crises, its scores did not correlate with other means in our study. However, the surveyed psychologists with lower levels of resilience were more likely to mention 'patriotism' ($U = 158$, $p < 0.05$) and 'belief in victory' ($U = 131.5$, $p < 0.05$) as what helped them to continue their work during wartime.

The distribution of all helpful points that psychologically supported the practice of the respondents is presented in Figure 1. Here we see the top 4 points with a high level of group agreement: 'Skills in psychological self-care (79.2%)', 'Belief in Ukraine's victory' (75%), 'Support from loved ones' (64.6%), and 'Support from colleagues and supervisors' (52.1%).

In general, 72.9% of respondents believed they got enough support from colleagues and supervisors, which was more inherent to more experienced psychologists ($U = 163.5$, $p = 0.01$) and corresponded to a lower level of burnout ($U = 161$, $p < 0.01$) and

higher evaluation of work efficiency ($U = 109$, $p < 0.05$). Those, who mentioned clear guidance from the municipal office as a supporting tool to feel able to work as psychologists during the war, had lower levels of burnout as well ($U = 101$, $p < 0.01$), and, besides, they showed higher levels of PTGI scales 'Relating to others' ($U = 152.5$, $p < 0.05$), 'New possibilities' ($U = 149$, $p < 0.05$), 'Personal strength' ($U = 162$, $p < 0.05$). On the contrary, skills in psychological self-care mentioned in Figure 1 as the most helpful point did not correlate with any other means.

The means of the four scales of PTGI appeared to be higher in a case when a school psychologist felt safe. These were 'Relating to others' ($U = 106.5$, $p < 0.05$), 'New possibilities' ($U = 129.5$, $p < 0.05$), 'Personal strength' ($U = 80$, $p < 0.01$), 'Appreciation' ($U = 99.5$, $p < 0.01$). Interestingly, it did not correspond with whether a respondent was evacuated from Kryvyi Rih or not.

Those, who had already learned methods of crisis interventions to the date of our research, had lower levels of burnout ($U = 75.5$, $p < 0.05$) and were more aware of the contingent of students in their school, i.e., less often chose an option 'I don't know' in questions about absent, injured or evacuated school students ($U = 84$, $p < 0.05$). Interestingly, among this group of respondents, those, who had skills in crisis interventions earlier, i. e., before the invasion, noticed more signs of stress among the school students ($U = 100.5$, $p < 0.05$).

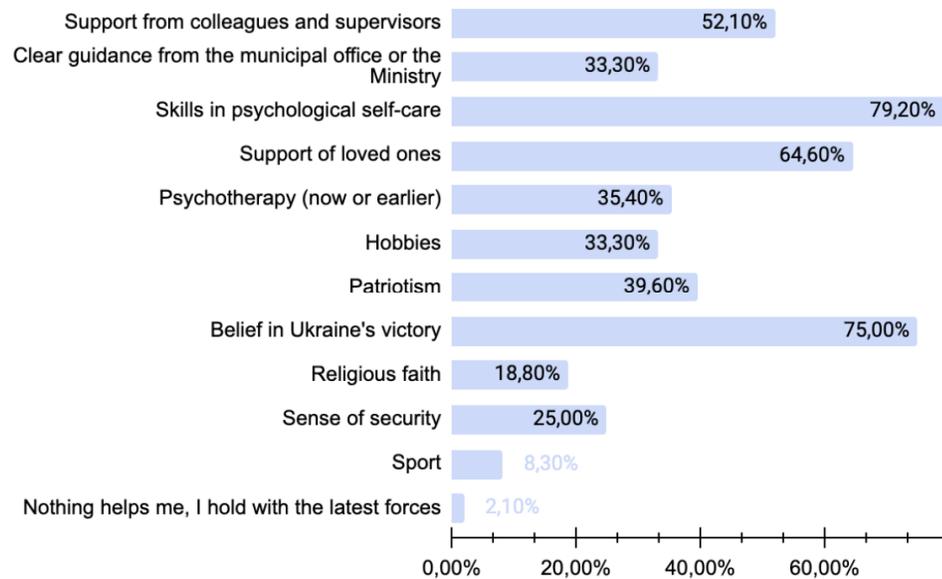


Figure 2: Points which school psychologists from Kryvyi Rih considered helpful for maintaining their work during wartime.

Note. 100% is all sample of 48 respondents.

Finally, 22.9% of respondents wished to express their professional needs in the relevant optional open question. For instance, they needed offline training in First Psychological Aid or other crisis interventions as well as protocols of work with certain symptoms, group supervision, group therapy, active chat with colleagues for rapid professional questions, and the opportunity to focus on the psychological goals of work instead of other volunteer activities.

DISCUSSION

First and foremost, the results of this study seem to resonate with the current international flash mob, 'Be brave like Ukraine'. Schools located in the areas of daily Russian missile attacks continued their work, and school psychologists tried to adapt their activities to reach school students' needs that were changed in response to a new war reality. For instance, the majority of the surveyed practitioners began to conduct more individual consultations and psychoeducation in groups than they used to do before and had to abandon the usual amount of diagnostics, whilst a third indicated they worked more hours per day. Most of them stayed in Kryvyi Rih instead of evacuation, and a half even worked partly in person. Moreover, almost a third of psychologists were also involved in other volunteer work in the city in addition to their school positions.

As we mentioned in the introduction to this paper, at least a part of this bravery might correspond to the previous traumatized experience, including eight years

of the war in the East of Ukraine, the Crimea annexation, the COVID-19 pandemic, and two months of bomb alerts. For instance, the majority of surveyed psychologists considered their previously learned skills in psychological self-care as helpful in maintaining their work during wartime. And, as we found, previously obtained skills in crisis interventions made practitioners more attentive to stress reactions in school students even in such a difficult frame of work as online was. Besides, 3/4 of practitioners marked that their belief in the victory of Ukraine inspired them. At the same time, after this long sequence of challenges, including a new invasion, almost half of the surveyed respondents felt burnout which directly caused their dissatisfaction with the results of their work. This corresponds to the findings of Delgado, Saxon & Barkham [26] that higher levels of burnout among psychotherapists (also evaluated via OLBI) correlated with lower job satisfaction ratings.

Anyway, school psychologists from Kryvyi Rih sought to shift the forms, types, and methods of their work in response to changes in reality, new requests, the number and conditions of school students, as well as in accordance with new guidance for School Psychological Services. These shifts sometimes faced barriers to be conducted, e.g. issues of remote work and scheduling. Contrary to our expectations, this creative ability to invent new decisions, study new interventions, and achieve high work efficiency even during wartime did not correlate to resilience and previously learned skills of psychological self-care.

School psychologists felt more effective and involved with students when they believed they got enough support from colleagues and supervisors, learned crisis interventions, received clear guidance, and did not feel burnout. Surprisingly, those respondents, who confirmed cases of injured or evacuated to Kryvyi Rih children at their schools, had lower levels of burnout. It may raise a hypothesis about the link between psychologists' feeling engaged in work and empathy experienced in crisis circumstances.

It is important also that at least a quarter of the surveyed school psychologists indicated or formulated (in their narrative responses) their need for additional education, psychological support, easily accessible supervision (especially short and rapid), and guidance for specific cases. We believe that these points are even more widespread and needed because some respondents were overwhelmed by the war and their changed professional activities and were not yet aware of how it affected them. It is necessary for universities, psychological associations, and governmental programs to provide these literally 'frontline' practitioners with enough educational, psychological, and technical support.

As for school students, their description by psychologists was rather detailed and differentiated by age. It made an impression that the surveyed practitioners worked much, knew school students very well, and aimed to provide them with an individual approach to psychological support. Signs of war-related stress, including acute stress disorder, were observed, along with the observations of post-traumatic growth of school students, close to previous findings [19, 27]. Based on the data on the manifestations of emotional, cognitive, physical, and behavioral signs of war-related stress, we indicated some tendencies inherent to school students of different ages. First of all, fear, anxiety, and terror occurred to be the main stress reactions among school students of all ages. This corresponds to previous data from the zone of armed conflict in the southeast of Ukraine, where anxiety was also registered in all studied children [28]. Similarly, the sense of closeness with others was indicated as post-traumatic growth inherent to all ages.

Primary school students were mostly described in terms of emotional response to the war as severe anxiety, fears, increased impulsiveness of behavior, or apathy. Cognitive manifestations included thoughts about the destruction of the house, possible injury or death, impaired concentration, and the appearance of

nightmares. Interestingly, somatization of stress or its behavioral manifestations in this group was characteristic to a much lesser extent but had regressive forms. At the same time, this age group was evaluated as having grown in their ability to experience compassion for others.

Secondary school students had a broader spectrum of observed stress reactions, especially in the category of emotional ones. Along with anxiety and various fears, these were irritability, outbursts of anger and rage, uncertainty, hopelessness, low self-esteem, confusion, apathy, and tears. Compared with the previous age group, cognitive signs of stress reactions were less distinctive but had protective tendencies of narrowing the circle of interests and denying the situation. No less important were the described manifestations of stress in the form of physical fatigue, limiting their contact with others, and attempts to express feelings by rudeness. However, we see elaboration in post-traumatic growth as well. This age group began to appreciate each day, and their life, in general, became more open in their emotions and felt they could handle current difficulties, which corresponds to non-traumatized students [10].

In the group of High school students, psychologists observed a specific fear of losing their usual way of life and fear about their future. The occurring cognitive difficulties caused the strengthening of defensive strategies of rejection of reality and a decrease in interest in education. Brightest specific compared to the group of Secondary school students was the refusal to talk about the war and to isolate themselves from others in combination with constant monitoring of news feeds and social networks. We would comment on this finding along with thoughts about death in Primary school students as the possible consequence of a rapid decrease in the number of school students because of the Russian invasion. School students might feel as if they have lost their friends and cannot be sure whether they are still alive. Refusing contact may be their attempt to protect themselves from possible further losses of friends, i.e., 'If I don't have friends, I cannot lose them'. At the same time, such a coping strategy poses a risk for school students because disengagement from war stressors predicts post-traumatic stress symptoms among adolescents [29]. However, this age group had a comprehensive list of signs of post-traumatic growth, which could be considered mature ones, e.g., a better understanding of spiritual matters and acceptance of reality.

LIMITATIONS

This study has several limitations. First, in elaborating on the research design, the authors had to consider the restrictions of the war. As they could not meet the school students themselves, the authors surveyed only school psychologists and only remotely (i.e., online). Therefore, they built their conclusions on psychologists' observations. Second, the presented results from a small and specific sample describe psychological services and psychologists' challenges in local circumstances. As for the total sample of Ukrainian psychologists, this study might be used only as preliminary research, i.e., a pilot study. The main value of the proposed results is a description of psychologists' first attempts and challenges in working with school students in wartime.

CONCLUSIONS

Ukrainian school psychologists who continued their work with school students remotely or in person after the Russian invasion are the frontline practitioners, brave and dedicated, who try to help children between 6 and 18 years bear their war-related stress and trauma. Based on the observed specifics of stress reactions and post-traumatic growth inherent to each age, they provide school students with regular psychoeducational or therapy groups and individual sessions, often much more hours than before. School psychologists felt more efficient and involved with students when they believed they got enough support from colleagues and supervisors, learned crisis

interventions, received clear guidance, and did not feel burnout. They appreciate current governmental guidance and feel their post-traumatic growth more when safe. Those respondents, who confirmed cases of injured or evacuated to Kryvyi Rih children at their schools, had lower levels of burnout. At the same time, after 1.5 months of the war, almost half of the surveyed school psychologists from Kryvyi Rih experienced burnout, and at least a quarter needed additional education, psychological support, easily accessible supervision (especially short and rapid, like a chat), and guidance for specific cases. Thus, we believe it is essential to study and create flexible multifaceted support for this frontline work of School Psychological Services, including elaborating new governmental and international initiatives to educate, supervise and support Ukrainian practitioners during wartime.

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CONFLICT OF INTEREST

We have no conflicts of interest to disclose.

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APPENDIX

Appendix A: Intercorrelation matrix of OBI, BRS, and PTGI scales means of school psychologists from Kryvyi Rih

	evaluated efficiency of work	OBI			BRS	PTGI					years of experience
		Disengagement	exhaustion	full scale		relating to other	new possibilities	personal strength	spiritual enhancement	appreciation	
scale	1	2	3	4	5	6	7	8	9	10	11
1	-	-0.327 [*]	-0.325 [*]	-0.397 ^{**}	-0.224	0.195	0.339 [*]	0.221	0.129	0.103	-0.036
2	-0.327 [*]	-	0.650 ^{**}	0.901 ^{**}	0.092	-0.208	-0.109	-0.140	-0.255	-0.038	-0.294 [*]
3	-0.325 [*]	0.650 ^{**}	-	0.891 ^{**}	0.057	-0.103	-0.106	-0.031	-0.002	0.052	0.059

4	-0.397**	0.901**	0.891**	-	0.109	-0.176	-0.136	-0.118	-0.144	-0.001	-0.129
5	-0.224	0.092	0.057	0.109	-	0.217	0.088	0.084	0.261	-0.012	-0.006
6	0.195	-0.208	-0.103	-0.176	0.217	-	0.746**	0.839**	0.747**	0.612**	-0.078
7	0.339*	-0.109	-0.106	-0.136	0.088	0.746**	-	0.788**	0.539**	0.539**	-0.128
8	0.221	-0.140	-0.031	-0.118	0.084	0.839**	0.788**	-	0.758**	0.706**	-0.072
9	0.129	-0.255	-0.002	-0.144	0.261	0.747**	0.539**	0.758**	-	0.490**	0.046
10	0.103	-0.038	0.052	-0.001	-0.012	0.612**	0.539**	0.706**	0.490**	-	-0.004
11	-0.036	-0.294*	0.059	-0.129	-0.006	-0.078	-0.128	-0.072	0.046	-0.004	-

Notes: * - $p < 0.05$; ** - $p < 0.01$.

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