

geographically, available guidelines should allow policymakers and practitioners globally to plan, implement, and evaluate MHPSS actions.

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### An In-Depth Mixed-Method Study on Stress Exposure and Coping Strategies in Civilian and Military Prehospital Emergency Personnel from a Systemic Perspective

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**Introduction:** Although prehospital emergency care in a civilian versus military context may differ in terms of working conditions and injuries, in both contexts the exposure to stressful and extreme events are present. Besides the continuous reports of post-traumatic stress symptoms, an alarming increase of burnout and suicide in (emergency) physicians is recognized as well. However, most of the research on this topic is either retrospective or peri-recovery, which might have an impact on the availability of information with regard to causes and underlying processes. Hence, in the current study, we conducted an in-depth study of well-functioning emergency care-takers, studying their profile while including their perspective on both their professional and personal context and the interconnectedness with their operational performance.

**Method:** We used a mixed method approach, combining the results of a quantitative questionnaire and a thematic analysis of 23 in-depth semi-structured interviews to gain additional qualitative information. We interviewed well-functioning and operating prehospital emergency professionals, recruited in three different settings, i.e., a military hospital, a military Special Operations Surgical Team, and a civilian hospital in the capital city.

**Results:** The quantitative part showed a preference for task-oriented coping. However, the interviews broadened this result, showing how the personnel are continuously seeking to find a balance between emotional connection and disconnection. Several risk-factors for mental injury were detected and the support and recognition from both the personal and professional environment showed to be crucial in finding a balance between job passion and the sacrifice of one's personal life.

**Conclusion:** The interviews showed that a variety of interrelated underlying professional and personal factors are related with how emergency personnel perceive and cope with stress events. A systemic approach to prevent mental health problems is highly recommended.

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### Health Care Worker Wellness Interventions during the COVID-19 Pandemic

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**Introduction:** The COVID-19 pandemic has not only put a strain on the health care system throughout the world but has had an extreme impact on health care workers caring for these patients on a daily basis. These workers have been isolated from their families and experienced significant stress and loss at work and home. Some health care workers experienced rationing of care, inadequate personal protective equipment, and found themselves without the resources needed to care for patients. This paper reports on a systematic review of wellness and stress interventions targeting healthcare workers during the COVID-19 pandemic.

**Method:** A systematic review of Pubmed and SCOPUS articles published between January 1, 2020 and November 1, 2022 was conducted using the terms “healthcare worker”, “nurse”, “doctor”, “paramedic”, “emergency medical technician”, “mental health”, “resilience”, “wellness”, “stress”, “sleep”, “intervention”, “Covid-19”, “coronavirus”, and “pandemic.” These results were imported into Covidence. Inclusion criteria were studies on interventions of healthcare workers. Exclusion criteria were papers not describing health care workers, papers not describing interventions, health care workers not caring for COVID19 patients, and papers not written in English.

**Results:** A total of 26 papers were included in the analysis after the final screen. These papers were examined and sorted into groups based on the types of interventions on health care workers. The groups of interventions included 1. Psychological interventions, 2. Wellness or well-being interventions, 3. Work-related interventions, and 4. Pharmacologic interventions. Two studies were longitudinal in nature. The most common intervention was psychological (10), followed by work-related interventions (6).

**Conclusion:** Psychological interventions were the most commonly deployed and included hotline establishment or speaking with a therapist. This was followed by wellness interventions such as exercise, sleep regulation, breathing exercises, and healthy eating. Fewer interventions were included in the work-related or pharmacologic categories. Data regarding effectiveness and feasibility of interventions was heterogenous.

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### Effects of the Six C's Psychological First Aid Model on Acute Stress Responses in a Simulated Emergency Situation

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**Introduction:** Arrival to the emergency room (ER) can increase stress levels in patients and family members. Thus, there is a

need for a short and effective form of PFA provided by ER staff members, to reduce acute stress responses (ASR). Past studies have shown that psychological interventions based on emotional expression do not help to regulate extreme emotional expressions nor does it prevent post-traumatic stress disorder (PTSD). Alternatively, the Six C's model adopts a neuropsychological approach that focuses on cognitive communication, challenging for efficient activation, organizing the event's chronological order and reduction in loneliness by committing to stay with them. This experimental design study examined the effectiveness of the Six C's model on reducing signs of ASR.

**Method:** Sixty-three participants (mean age 41.8 years) voluntarily took part. They were randomly assigned to the Six C's intervention (experimental condition) or to supportive emotional expression (control condition). They listened to a three minute audio recording of a real emergency 911 phone call. Interventions (SIX C's or emotional) were provided before and after listening to the recording. Before, immediately after, and five minutes after the recording, participants' anxiety, heart-rate variability (HRV) and mental resilience levels were measured.

**Results:** For all three outcomes, the Time x Group interactions were statistically significant. Following "simple effects", analysis revealed that The Six Cs participants showed lower anxiety and less reductions in HRV and resilience than controls immediately after the stressor. Furthermore, the Six C's participants recovered faster on all three outcomes compared to controls, five minutes after the stressor.

**Conclusion:** This study showed the Six C's model moderates people's ASR. Furthermore, the Six C's method helps people to "bounce back" faster psychologically and neuro-physiologically. These findings support using the Six C's model to reduce ASR and increase resilience, which is highly relevant to ER staff.

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### Psychosocial Support Interventions for Children During Ongoing War in Ukraine: A Pilot Study

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**Introduction:** This presentation describes an initiative to provide psychosocial support to children in Ukraine during the ongoing war using a children's storybook, coloring book, and activity book. The resources promote emotion identification, self-expression, coping skills, and social support—variables with empirical support in promoting children's mental health in response to trauma.

**Method:** The book: "An Unusual Situation" is a bibliotherapy intervention for children struggling with difficult situations. By identifying with the characters, children learn about their own struggles, they learn that other children share similar concerns, and learn important coping skills.

The book was translated into Ukrainian and Russian; supplementary materials including a coloring book, activity book and a guidebook were developed. Following a three-hour training, Ukrainian mental health professionals worked with children on the materials in their respective wartime settings.

**Results:** Results of the following research questions will be presented:

- 1) How do mental health professionals working with children in Ukraine utilize the associated book resources measured by a survey and completed by the professionals engaged in the project.
- 2) What do children who use these resources report about their experiences coping with the ongoing war, measured by:
  - a) Collecting children's responses in the activity book.
  - b) Surveying the mental health professionals about their observations of the children during the intervention process.
- 3) Does the intervention reduce children's distress, interpersonal functioning, or problematic behaviors, measured by pre-post scores on the Youth Outcome Questionnaire 2.0.

**Conclusion:** This pilot study will provide information to guide the implementation of a broad psychosocial support intervention for children living in the setting of the ongoing war in Ukraine. Conclusions to be presented include:

- 1) Tailoring the intervention to the current needs of Ukrainian children
- 2) Designing a wide-scale implementation plan tailored to Ukrainian mental health professionals' recommendations
- 3) Addressing barriers to implementation.

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