



# Mixed Methods Findings of a Psychological First Aid Digital Peer Learning Program for Child-Supporting Professionals

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## ABSTRACT

**Background:** The need to provide children affected by the armed conflict between Russia and Ukraine with mental health and psychosocial support (MHPSS) services outweighs available support. In 2024, a certificate peer learning program on Psychological First Aid (PFA) equipped educators, social workers, and health professionals to extend initial psychosocial care to children and the individuals accompanying them.

**Methods:** Sequential mixed methods explored the program's impact through the lens of organizational learning theory. Correlation examined organizational learning culture, knowledge, and mission performance. Mean learning culture scores were compared to similar studies. Logistic regression assessed program completion variables to develop a predictive model. Content analysis explored contextual needs and participant-valued program features. Constant comparison between MHPSS outcomes analyzed core areas to systematically document and assess PFA impact.

**Results:** Significant correlations were found between learning culture and changes in organizational knowledge and missional performance. Mean learning culture scores were significantly higher than in similar quantitative studies.

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Peer review and gender analysis showed significant associations with program completion. Findings revealed common learning patterns and ways the program improved continuous learning opportunities. Participants found peer learning activities to be inclusive and motivational. MHPSS outcomes included improvements in functioning, subjective well-being, coping, social behavior, social connectedness, and severe reactions.

**Conclusion:** Results support large-scale programming using digital peer learning strategies to fill network gaps and promote continuous learning. Future PFA learning activities should incorporate group discussions and a PFA-evaluation tool to document MHPSS outcomes systematically. Strong learning systems, as demonstrated in this study, correlate with higher performance.

**Keywords:** psychological first aid; learning organizations; continuing professional development; humanitarian crisis; mixed methods

## АНОТАЦІЯ

**Передумови:** Потреба в наданні послуг психічного здоров'я та психосоціальної підтримки (ПЗПСП) дітям, які постраждали від збройного конфлікту між Росією та Україною, переважає наявну підтримку. У 2024 році сертифікатна програма навчання з першої психологічної допомоги (ППД) дозволила освітянам, соціальним працівникам та медичним працівникам надавати початкову психосоціальну допомогу дітям та особам, які їх супроводжують.

**Методи:** Послідовно використані змішані методи досліджували вплив програми крізь призму теорії організаційного навчання. Кореляційний метод досліджував культуру організаційного навчання, знання та цільову діяльність. Середні бали культури навчання порівнювалися з аналогічними дослідженнями. Логістична регресія оцінювала змінні завершення програми для розробки прогностичної моделі. Контент-аналіз досліджував контекстуальні потреби та оцінювані учасниками характеристики програми. Постійне порівняння результатів психічного здоров'я, соціального забезпечення та соціальної підтримки аналізувало основні області для систематичного документування та оцінки впливу ППД.

**Результати:** Було виявлено значну кореляцію між культурою навчання та змінами в організаційних знаннях і цільовій діяльності. Середні бали культури навчання були значно вищими, ніж у аналогічних кількісних дослідженнях. Експертна оцінка та гендерний аналіз показали значний зв'язок із завершенням програми. Результати виявили спільні моделі навчання та способи, якими програма покращила можливості для безперервного навчання. Учасники вважали, що заходи з навчання за участю колег є інклюзивними та мотивуючими. Результати, пов'язані з ПЗПСП, включали покращення функціонування, суб'єктивного благополуччя, подолання труднощів, соціальної поведінки, соціальних зв'язків та складних реакцій.

**Висновок:** Результати підтверджують ефективність масштабних програм з використанням стратегій цифрового навчання за принципом «рівний – рівному» для заповнення прогалин у професійних мережах та сприяння безперервному навчанню. Майбутні навчальні заходи з ППД повинні включати групові дискусії та інструмент оцінювання ППД для систематичного документування результатів, пов'язаних з ПЗПСП. Як показано в цьому дослідженні, сильні системи навчання корелюють з вищою ефективністю.

**Ключові слова:** перша психологічна допомога; навчальні організації; безперервний професійний розвиток? гуманітарна криза? змішані методи

## ABSTRAITE

**Contexte :** Le besoin de fournir des services de soutien en santé mentale et psychosociale (SMSPS) aux enfants touchés par le conflit armé entre la Russie et l'Ukraine est supérieur aux ressources disponibles. En 2024, un programme de certification sur l'apprentissage par les pairs en premiers secours psychologiques a permis de former des éducateurs, des travailleurs sociaux et des professionnels de la santé afin qu'ils puissent apporter un soutien psychosocial initial aux enfants et aux personnes qui les accompagnent.

**Méthodes :** Une approche mixte séquentielle a permis d'explorer l'impact du programme à travers le prisme de la théorie de l'apprentissage organisationnel. Une corrélation a examiné la culture d'apprentissage organisationnel, les connaissances et la performance de la mission. Les scores moyens de la culture d'apprentissage ont été comparés à ceux d'études similaires. Une régression logistique a évalué les variables liées à l'achèvement du programme afin d'élaborer un modèle prédictif. Une analyse de contenu a exploré les besoins contextuels et les caractéristiques du programme appréciées par les participants. Une comparaison constante des résultats en matière de santé mentale et de soutien psychosocial a permis d'analyser les domaines clés afin de documenter et d'évaluer systématiquement l'impact des premiers secours psychologiques.

**Résultats :** Des corrélations significatives ont été observées entre la culture d'apprentissage et les changements en matière de connaissances organisationnelles et à la performance de la mission. Les scores moyens relatifs à la culture d'apprentissage se sont révélés significativement plus élevés que ceux des études quantitatives similaires. La revue par les pairs et l'analyse selon le genre ont montré des associations significatives avec la réussite du programme. Les conclusions ont mis en évidence des schémas d'apprentissage communs ainsi que la manière dont le programme a amélioré les occasions d'apprentissage continu. Les participants ont trouvé les activités d'apprentissage entre pairs inclusives et motivantes. Les résultats en matière de santé mentale et de soutien psychosocial comprenaient des améliorations concernant le fonctionnement, le bien-être subjectif, les capacités d'adaptation, le comportement social, les liens sociaux et les réactions sévères.

**Conclusion :** Les résultats confirment l'efficacité des programmes à grande échelle utilisant des stratégies d'apprentissage par les pairs pour combler les lacunes des réseaux et promouvoir la formation continue. Les futures activités d'apprentissage aux premiers secours psychologiques devraient intégrer des discussions de groupe et un outil d'évaluation spécifique afin de documenter systématiquement les résultats en matière de santé mentale et soutien psychosocial. Des systèmes d'apprentissage performants, comme le démontre cette étude, sont corrélés à de meilleures performances.

**Mots-clés :** premiers secours psychologiques ; organisation d'apprentissage; développement professionnel continu ; crise humanitaire ; méthodes mixtes

Approximately 6.8 million Ukrainians have sought protection as refugees and asylum-seekers, and an estimated 3.5 million are internally displaced (UNHCR, 2024). Whether displaced internally or abroad, Ukrainians face challenges associated with resettlement, like becoming familiar with other languages and cultures, finding employment, securing affordable housing,

improving material well-being, and connecting with essential services. Additionally, they may also experience other issues like unresolved legal concerns and loss of or separation from family and friends (IFRC, 2024b; Rizzi et al., 2023). In a recent survey on the mental health needs of displaced Ukrainians, 83% of respondents shared that they or their family members had faced

stressful or traumatic events (IFRC, 2024a). According to Save the Children (2025), two-thirds of Ukrainian children have fled their homes since 2022, and 85% of families surveyed reported needing psychosocial support. Roughly 92% of externally displaced Ukrainians have moved to other European countries.

Mental health care in Ukraine has historically been a specialist function in health facilities. “Services have been delivered in inadequate outpatient clinics, psychiatric hospitals, and in psychiatric departments in general hospitals in larger cities, such as Kyiv and Kharkiv, which are currently under attack” (Shi et al., 2022, p. e27). Given the urgency and high demand for mental health services in and beyond these facilities and cities, as well as the need to continue interventions in ways that destigmatize mental health care (Gaschet et al., 2025), organizations are partnering to extend multi-sectoral services (UNHCR, 2024). To build local capacity for short-term spikes in need and long-term community resilience, organizations are also collaborating to facilitate continuing professional development opportunities to diverse practitioners on immediate psychosocial care approaches (TGLF, 2025; UNHCR, 2024). One such intervention, psychological first aid (PFA), which lay-trained responders can provide, has shown promising results. Leveraging existing networks and infrastructure to bridge mental health care delivery gaps, PFA can scale immediate, decentralized, and culturally appropriate psychosocial care (Hermosilla et al., 2023; Shi et al., 2022).

Recognizing the need for additional PFA training support for practitioners, in 2024, the International Federation of Red Cross and Red Crescent Societies (IFRC) and The Geneva Learning Foundation (TGLF) (Table A in S1) developed the first certificate peer learning program on PFA in support of children affected by the humanitarian crisis in Ukraine. The training supplemented existing technical training with a range of peer learning activities, as well as a didactic self-guided module, which provided basic information for practitioners unfamiliar with PFA for children in the Ukrainian context (Sadki, 2025a, 2025b). In the same

way that conventional first aid supports initial care for those physically harmed or ill, PFA providers follow four core processes—prepare, look, listen, and link (Table B in S1) (TGLF, 2025). These processes ensure initial care for those experiencing distress reactions adapted to “the specific circumstances of armed conflict, disasters and remote settings...” (Wilp & El Gehani, 2022, p. 39).

## **2024 PSYCHOLOGICAL FIRST AID DIGITAL PEER LEARNING PROGRAM**

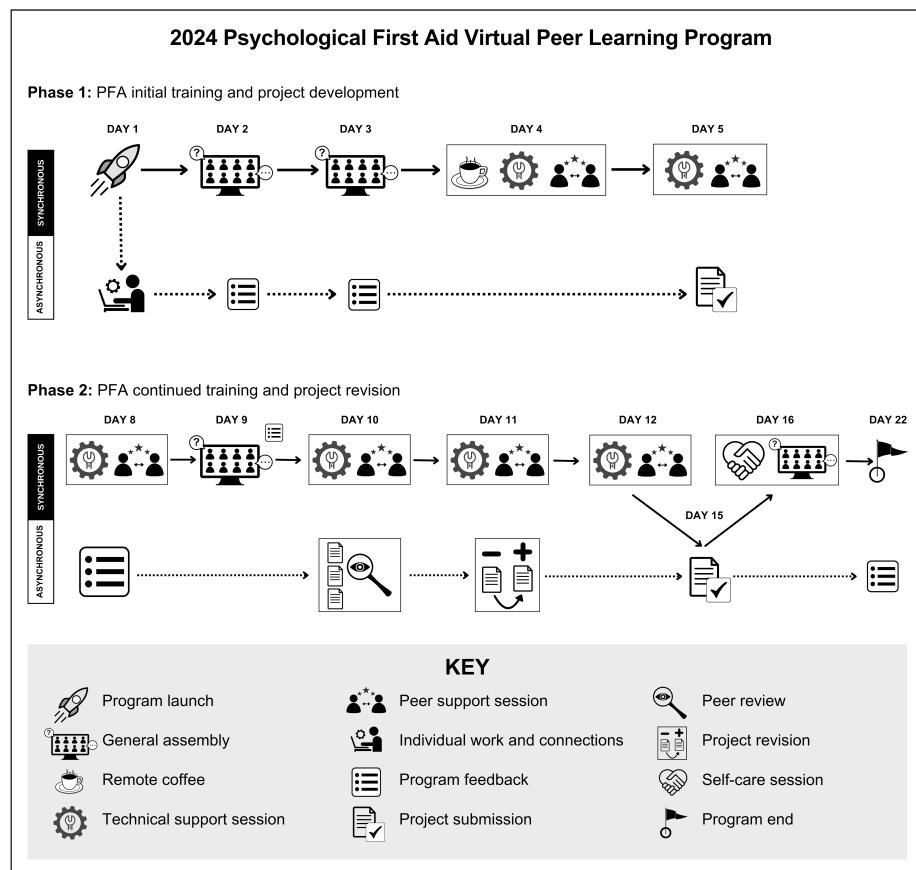
The program, using TGLF’s peer learning-to-action model (Eller, 2025; Eller et al., in press; Sadki, 2023, 2024; Umbelino-Walker et al., 2024; Watkins et al., 2022), created a digital, networked learning system for educators, social workers, and health professionals to strengthen support for Ukrainian children through PFA. The two-week program was implemented five times throughout 2024 for two English-speaking and three Ukrainian-speaking cohorts. Participation in the program was voluntary and free. Participants with and without medical licensure to provide mental health services were selected based on their direct experience in supporting the psychosocial needs of children affected by the humanitarian crisis in Ukraine and their willingness to engage in peer learning. Efforts were made to ensure a balanced representation of participants in each cohort, considering factors such as location, role, experience level, and gender (Table C in S1). While the overall structure of the program remained consistent across cohorts, group dynamics varied, prompting adjustments to specific activities. For example, some initial sessions were shortened for particularly strong groups, and an optional self-care session was offered in a unique format each time tailored to participant numbers and specific needs. At times, the self-care session became a pure peer support group; in other instances, it centered on shared learning and supervision; and on another occasion, it focused on challenges related to working with caregivers. The function of synchronous sessions described below was to scaffold asynchronous activities and to strengthen meaningful connections between participants:

- **Discovery Day:** Intensive small-group discussion, in which participants self-organized into peer learning groups, identified a case from their experience, and analyzed the case using the rubric they also used to develop their individual case studies.
- **Exploration Day:** Small-group discussions followed the same model with feedback from the Discovery Day.
- **Peer Support Sessions:** Synchronized sessions combining technical support (often provided by peers), experience-sharing, and PFA skills development on specific topics. These sessions provided opportunities to practice, problem-solve, and support each step of the case study development process.
- **Plenary Sessions:** Whole group discussions of peer review activities and final project submissions.
- **Remote Coffees:** Optional social sessions where participants offered advice, supported one another, and discussed issues of common interest.

Outside of sessions, participants wrote and revised a case study using TGLF's rubric in which they described and reflected on a time they provided PFA to children in crisis (Table D in S1). As part of the case study, participants also drafted an idea for a project to increase PFA capacity in their context. Three other participants provided feedback on case studies through TGLF's peer review platform using the same rubric. With this feedback, participants made revisions and submitted an improved version. Synchronous activities were recorded and made available via YouTube. TGLF provided certification to participants upon submission of the case study, peer review, and revision to improve the case study based on peer feedback and other inputs. [Figure 1](#) depicts the program structure (Tables E and F in S1).

## A THEORETICAL FRAMEWORK FOR THE HEALTH SERVICES CONTEXT

Global health service provision depends on the health workforce's adaptive capacity to evolve as rapidly as



[Figure 1](#) Learning to Action Pathway.

the problems we face, an act requiring continuous, interdisciplinary, and interprofessional collaborative learning (Eller, 2024a, 2024b, 2025; Eller et al., in press; Sadki, 2023, 2024; Umbelino-Walker et al., 2024; Watkins et al., 2022). To frame our findings within this understanding, we draw on the theoretical foundation of learning organizations. A learning organization “learns continuously and transforms itself” (Watkins & Marsick, 1993, p. 8) along seven dimensions or action imperatives, including: “create continuous learning, promote inquiry and dialogue, encourage collaboration and team learning, establish systems to capture and share learning, empower people toward a collective vision, connect the organization to its environment, and leaders model and support learning” (Watkins & Marsick, 1997, p.11). When attuned, learning organization culture transforms people and structures across individual, team, organizational, and global levels (Watkins & Marsick, 1993, p. 262). The original 43-item Dimensions of a Learning Organization Questionnaire (DLOQ) (Marsick & Watkins, 2003; Watkins and

Marsick, 1997; Watkins & O’Neil, 2013) and subsequent 21- and 7-item evaluative tools measure organizational propensity for transformation across all seven dimensions and four levels (Yang et al., 2004) and are thus appropriate measures of the capacity of participants’ organizations for adaptive service provision in response to global challenges.

Since 2019, TGLF has adopted the DLOQ to measure capacity for innovation and change in relation to performance. **Table 1** presents the mean DLOQ scores, the number of respondents (N), and contextual information reported in empirical studies on healthcare organizations from 2000 to 2025. Literature was considered in any language that contained combinations of the search terms: [1] dimensions of learning organization questionnaire or DLOQ, and [2] healthcare or health care or health services or health facilities. A total of 14 empirically-based articles were located.

Our literature review of other studies using the DLOQ in health care settings demonstrates that creating continuous learning opportunities and strategic

Health Focus	CL	DI	TL	ES	EP	SC	SL	N	Continent	Country	Context	Version
Alonazi (2021)	3.22	2.97	3.27	3.28	3.23	3.29	3.23	1131	Asia	Saudi Arabia	Hospitals	21-items
Alrashidi et al. (2023)	4.70	4.15	4.41	4.28	4.17	4.09	4.50	117	Asia	Saudi Arabia	Hospitals	not shared
Do et al. (2023)	4.67	4.00	4.00	4.00	4.00	4.33	4.67	336	Asia	Vietnam	Hospitals	21-items
Estrada (2009)	4.48	3.96	4.06	4.01	3.88	4.10	4.32	594	North America	U.S.	Acute care hospitals	21-items
Goula et al. (2019)	4.29	4.37	4.39	4.64	4.31	4.48	4.55	100	Europe	Greece	Private hospital	43-items
Goula et al. (2021)	2.60	2.93	2.60	2.45	2.24	2.42	2.75	380	Europe	Greece	Public hospitals	43-items
Khosravi et al. (2016)	3.03	2.95	2.82	2.80	2.43	2.53	3.05	170	Asia	Iran	Governmental healthcare organizations	43-items
Kumar et al. (2016)	2.83	3.60	2.73	3.23	3.24	3.18	3.79	286	Asia	India	Teaching hospital	21-items
Leufvén et al. (2015)	3.24	3.14	3.29	3.17	3.09	3.21	3.75	135	Asia	Nepal	Hospitals	21-items
Little & Swayze (2015)	4.31	3.85	3.93	4.10	3.72	4.10	4.10	500	North America	Southeastern U.S.	Medical center	21-items
McClendon-Davis (2022)	4.36	3.75	3.90	4.08	3.63	3.68	4.23	60	North America	Midwestern U.S.	Leadership association (manufacturing and healthcare organizations)	21-items

(Contd.)

Health Focus	CL	DI	TL	ES	EP	SC	SL	N	Continent	Country	Context	Version
Nurmala (2019)	4.22	3.90	4.10	3.58	3.89	4.38	4.23	172	North America	U.S.	Georgia Public Health Training Center	21-items
Uğurluoglu et al. (2013)	4.09	4.22	4.37	4.31	4.65	4.51	4.93	243	Europe / Asia	Turkey	Public hospitals	43-items
Watkins et al. (2009)	3.23	3.11	3.12	3.07	2.84	3.13	3.41	675	North America	Midwestern U.S.	Local public health departments	43-items
<b>All Studies</b>	<b>3.81</b>	<b>3.64</b>	<b>3.64</b>	<b>3.64</b>	<b>3.52</b>	<b>3.67</b>	<b>3.89</b>	---	---	---	---	---

**Table 1** DLOQ Scores.

*Note:* The learning organization framework encompasses seven dimensions: creating continuous learning opportunities (CL), promoting inquiry and dialogue (DI), encouraging collaboration and team learning (TL), establishing systems to capture and share learning (ES), empowering people toward a collective vision (EP), connecting the organization to its environment (SC), and providing strategic leadership for learning (SL) (Watkins & Marsick, 1997).

leadership for learning were the strongest dimensions, while empowering people toward a collective vision was the weakest. We turn now to look at how the organizations in our study compared to these contexts.

## RESEARCH PURPOSE AND QUESTIONS

This research aims to analyze the learning culture of participants' organizations, PFA-related mental health and psychosocial outcomes, participants' local plans to strengthen PFA, and their learning program experience. Specifically, it asks: through an organizational learning theory lens, how did the 2024 Psychological First Aid (PFA) digital peer learning program enhance network capacity to address the mental health and psychosocial needs of Ukrainian children?

### **Quantitative Sub-questions:**

1. To what extent did participants describe their organizations as learning organizations?
  - a. How do their responses compare to previous learning organization studies in similar contexts?
2. What is the relationship between the learning culture of participants' organizations and the extent to which they completed the PFA programming?
3. To what extent is this relationship affected by the role or location of the participant?
4. Is there a model that predicts completion?

### **Qualitative Sub-questions:**

5. How did the program enhance PFA provision in participants' contexts?
6. How did the program benefit the network?
7. What mental health and psychosocial outcomes did participants report from the provision of PFA to Ukrainian children?

## METHODS

### **Study Design**

This sequential mixed methods analysis (quan → QUAL) triangulates secondary data to provide a comprehensive view of impact (Creswell & Creswell, 2018). Quantitative and qualitative secondary data were collected leading up to, during, and after the 2024 Psychological First Aid (PFA) digital peer learning programs. The quantitative data focused on what impacted participants' completion of the program, while the qualitative data sought to understand the impact beyond the participants to their contexts and to the network itself.

### **Ethics and Consent**

This study is part of a research project titled "Enstorying Global Health Landscapes of Learning" that evaluates the impact of TGLF's peer-learning model (Eller, 2025). It reviews secondary data collected by TGLF with oversight

from its Commission on Research Ethics (CRE). The project was approved on June 18, 2024, by TGLF's CRE and designated on July 12, 2024, by the University of Georgia Institutional Review Board as non-human subjects research (PROJECT00009825).

## **Data Collection**

Before collecting data, TGLF provided written information on the research purpose and how information may be used. Participants were not compensated and provided written consent for their data to be used for research. Data collection occurred from July 2024 to December 2024 and included [1] participants' program applications ( $n = 1,039$ ), [2] peer review feedback and final scores ( $n = 323$ ), [3] self-review reflections and final scores ( $n = 193$ ), [4] post-exercise feedback ( $n = 148$ ), [5] program reflections shared verbally, and [6] case studies ( $n = 24$  published). Program applications revealed participants' sociodemographic characteristics, workplace context, and culture (the seven-item form of the *Dimensions of a Learning Organization Questionnaire*, Watkins & Marsick, 1997), prior experience using PFA, and meeting preferences. Peer- and self-reviews shared assessment according to the case study rubric (Table D in S1). Post-exercise feedback collected data using TGLF's value creation framework on how participants felt the program changed them as professionals, influenced their social connections, helped their professional practice, affected their professional environment, and encouraged them to view the world differently (Wenger et al., 2011). Program reflections shared verbally revealed participants' thoughts on the peer learning process. Case studies described and analyzed participants' use of PFA in specific situations, and, building on this experience, shared their ideas for local projects to strengthen PFA support. Participants' program applications, peer- and self-review reflections, and post-exercise feedback were merged into a single database for analysis, along with a tracker created by the staff to show participants' progress through the exercise. All participant responses in the database were anonymized. Selected case studies and program reflections from participants shared verbally in linked videos and texts are publicly available (Table G in S1).

## **Data Analysis**

The analysis sequentially explained program impact through the lens of organizational learning theory. Correlational analysis examined organizational learning culture, knowledge, and mission performance. Mean learning culture scores were compared to similar studies. Logistic regression assessed program completion variables to develop a predictive model that was evaluated using Akaike information criterion and deviance statistics. Content analysis explored contextual needs and participant-valued program features. Constant comparative analysis (Glaser & Strauss, 1999) between participants' application responses and case studies with existing MHPSS outcome frameworks analyzed core areas to systematically document and assess PFA impact. **Table 2** shares details on the quantitative and qualitative data referenced and analysis performed to answer each research question.

## **Positionality and Reflexivity**

We are an interdisciplinary group of co-authors with diverse, intersectional identities relevant to this research (S2). Personally and professionally, we are connected to the work and desire to support helpers in humanitarian contexts and affected children. We regularly engage and participate in digital networks and do not see a way to address critical threats to our global society without them. Our collective stance and experiences have led us to develop expertise in peer learning and familiarity with Ukraine's context. To counteract our biases, we grounded our analysis in member-checked insights and quotes.

## **QUANTITATIVE RESULTS**

The total sample size of participants' program applications was 1,039, though the number of valid responses varied across measures due to missing data (Table A in S3). Correlation analysis (**Table 3**) revealed significant positive relationships between DLOQ metrics and performance outcomes. Five DLOQ metrics exhibited correlations above 0.5 with knowledge performance, while only strategic leadership approached 0.5 for mission performance. Strategic leadership showed the strongest correlation with both knowledge and mission performance. Additionally, the mean of all DLOQ metrics (Composite DLOQ Score)

Research Question	Associated Data	Analysis Performed
1. To what extent did participants describe their organizations as learning organizations?	<ul style="list-style-type: none"> <li>• DLOQ scores- current study</li> <li>• Performance metrics (knowledge and mission)-current study</li> </ul>	Pearson correlation analysis was conducted between the seven dimensions of the DLOQ metrics and two performance metrics measured on a 6-point scale (n = 757). Knowledge performance was based on participants' agreement with the statement, "Where I work, compared to last year, we are better at using what we learn to support children affected by the humanitarian crisis in Ukraine." Mission performance was based on agreement with: "Where I work, compared to last year, the mental health of children affected by the humanitarian crisis in Ukraine has improved due to our support."
1a. How do their responses compare to previous learning organization studies in similar contexts?	<ul style="list-style-type: none"> <li>• DLOQ scores- current study</li> <li>• DLOQ scores- previous studies (Overall reported means)</li> </ul>	Each of the seven DLOQ metrics was compared to the overall mean of corresponding metrics reported in previous studies using a one-sample t-test. To further validate the results, bootstrap confidence intervals were calculated.
2. What is the relationship between the learning culture of participants' organizations and the extent to which they completed the PFA program?	<ul style="list-style-type: none"> <li>• DLOQ scores (composite calculated as participant response average across seven DLOQ dimensions)-current study</li> <li>• Outcome variable: Participants' program completion status</li> <li>• Predictor variable: DLOQ score composite</li> </ul>	Program completion was categorized into two groups: completed and not completed. Logistic regression was used to model program completion status (binary outcome) as a function of the composite mean score of the seven DLOQ items.
3. To what extent is this relationship affected by the role or location of the participant?	<ul style="list-style-type: none"> <li>• Outcome variable: Participants' program completion status</li> <li>• Predictor variables: DLOQ composite Score, role, and location</li> </ul>	Location and participant's role were added to the logistic regression model to examine their influence on the relationship between the PFA program and DLOQ scores.
4. Is there a model that predicts completion?	<ul style="list-style-type: none"> <li>• Outcome variable: Participants' program completion status</li> <li>• Predictor variables: DLOQ Composite Score, role, location, gender, and peer review</li> </ul>	Logistic regression was performed to predict program completion using multiple combinations of predictor variables. Model fit was evaluated using AIC and deviance statistics. The model that included DLOQ composite score, location, role, peer review, and gender demonstrated the best fit with notable improvement in both AIC and deviance.
5. How did the program support and enhance PFA provision in participants' contexts?	<ul style="list-style-type: none"> <li>• Program reflections shared verbally by participants during the program</li> <li>• Self- and peer-review feedback (open comments)</li> </ul>	Analysis of PFA-related contextual needs and program features valued by participants was conducted using conventional content analysis (Hsieh & Shannon, 2005). All data were read multiple times and inductively coded. Reflection on the codes and notes led to code refinement, categorization, and the identification of verbatim quotes. Categories and verbatim quotes from the content analysis were then reviewed collectively for network benefit.
6. How did the program benefit the network?	<ul style="list-style-type: none"> <li>• Post-exercise feedback: <ul style="list-style-type: none"> <li>- Can you explain how participation in the program has changed you as a professional?</li> <li>- Can you explain how participation has affected your social connections?</li> <li>- Can you explain how participation has helped your professional practice?</li> </ul> </li> </ul>	

(Contd.)

Research Question	Associated Data	Analysis Performed
	<ul style="list-style-type: none"> <li>- Can you explain how your participation has changed your ability to influence your professional environment?</li> <li>- Can you explain how your participation made you look at the world differently?</li> <li>• Case studies (n = 24) purposively chosen as they represented a broad range of PFA contexts, techniques, and detailed information</li> </ul>	
7. What mental health and psychosocial outcomes did participants report from the provision of PFA to Ukrainian children?	<ul style="list-style-type: none"> <li>• Application Questions</li> <li>- How do you know that PFA has helped a child get better?</li> <li>- Do you have an experience supporting children affected by the humanitarian crisis in Ukraine that you would like to share with colleagues?</li> <li>- *Tell us what happened and how it turned out.* Be specific and detailed so that we can understand your story.</li> <li>- *Reflect* on your story.</li> <li>• Case studies (n = 24 as well as several unpublished cases)</li> </ul>	Analysis of MHPSS outcomes related to the past provision of PFA was conducted by comparing and contrasting participants' responses to associated questions in their program applications and case studies. Multiple rounds of inductive coding were first conducted using generative AI (OpenAI, 2024). Outcomes were (re)categorized several times, and a manual round of inductive coding proceeded. All generated code examples without evidence were removed, and additional codes were added, leading to further code synthesis. Codes and categories were then compared to multiple existing MHPSS outcome frameworks. General categorical descriptions were written based on the finalized codes, example verbatim quotes, and referencing existing MHPSS outcome definitions used by the Inter-Agency Standing Committee (IASC, 2021), which aligned with findings.

**Table 2** Analysis Plan.

	Knowledge Performance	Mission Performance
Continuous Learning	0.375**	0.281**
Dialogue & Inquiry	0.340**	0.327**
Team Learning	0.537**	0.443**
Embedded System	0.517**	0.413**
Empowered People	0.531**	0.415**
System Connection	0.524**	0.411**
Strategic Leadership	0.641**	0.495**
Composite DLOQ Score	0.639**	0.515**

**Table 3** Correlation of DLOQ and Performance Scores.

demonstrated a strong positive correlation with both knowledge performance ( $r = 0.639, p < 0.01$ ) and mission performance ( $r = 0.515, p < 0.01$ ), further reinforcing the overall relationship between a learning-oriented culture and performance outcomes.

### Dimension of a Learning Organization Questionnaire (DLOQ) Scores

The DLOQ is a profile— a pattern of highs and lows that demonstrates the relative strength of each dimension in relation to one another. **Table 4** presents the DLOQ

Current Study	CL	DI	TL	ES	EP	SC	SL	N	Continent	Country	Context	Version
Eller et al. (2025)	4.03	4.46	4.75	4.97	4.56	5.13	5.13	757	Europe	Multiple	All respondents—Educators, social workers, and (mental) health professionals	7-items
	4.01	4.38	4.73	4.96	4.57	5.13	5.15	413	---	---	Mental health professionals	---
	4.01	4.51	4.75	4.96	4.51	5.10	5.09	344	---	---	Multiple roles	---
	3.97	4.40	4.75	5.00	4.52	5.10	5.15	550	---	---	Ukrainians	---
	4.15	4.57	4.70	4.86	4.60	5.15	5.05	207	---	---	Non-Ukrainians	---

**Table 4** DLOQ Scores, Current Study.

results of the organizations represented by participants in the current study. The majority of participants (47.5%) worked in nonprofit organizations dedicated to humanity and development (i.e., United Nations, Save the Children), 24.9% worked in organizations providing governmental or healthcare services, and 15.3% in organizations providing educational and research services. A total of 12.2% of participants indicated their organization was not affiliated with any of the above organizations. Of these 12.2% of participants, 63.8% completed a DLOQ questionnaire, and their responses were included in the DLOQ score analysis. The first row in [Table 4](#) displays the means of DLOQ dimensions for all respondents, and subsequent rows display the means for different subgroups of participants. [Figure 2](#) visualizes their pattern, showing how continuous learning, dialogue and inquiry, collaboration and team learning, and empowering people are lower than embedded systems, system connections, and strategic leadership. Thus, the organizations represented by participants in this study were stronger on the organizational level and less strong on the individual and group level dimensions.

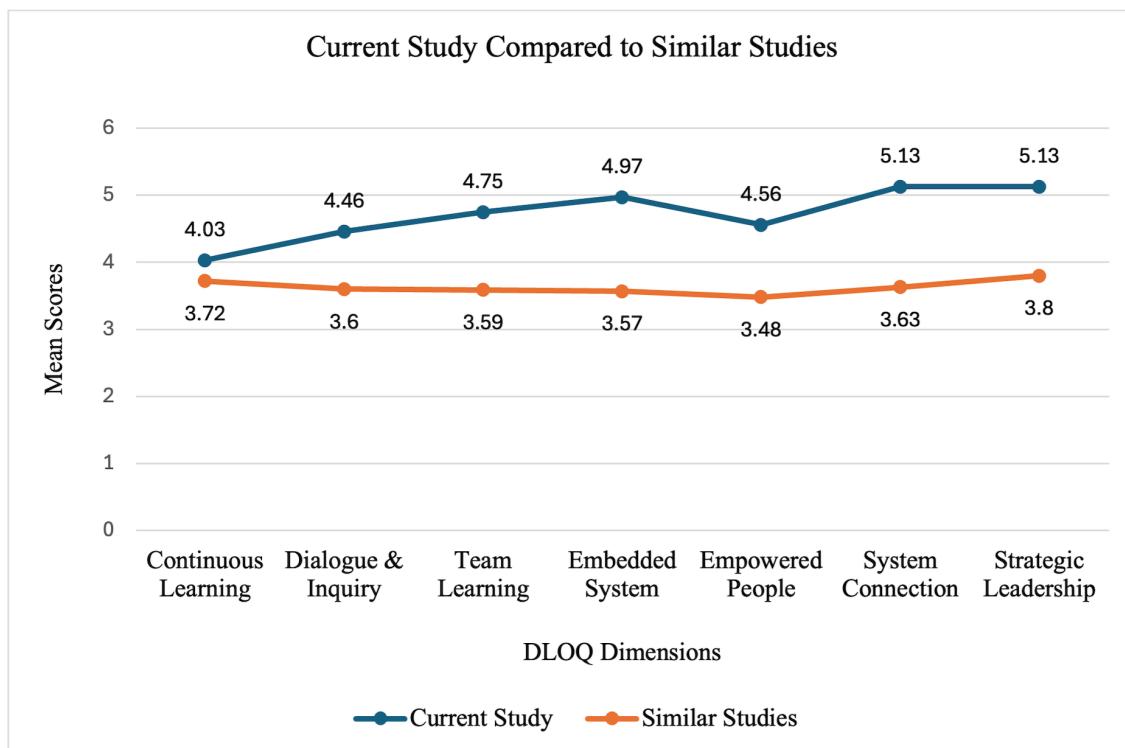
The following line graph ([Figure 2](#)) reveals how our results compare to those of similar studies noted above. While previous studies exhibit a relatively flat trend with small peaks at continuous learning and strategic leadership, the current study demonstrates sharp highs at embedded systems, system connections, and strategic leadership, with a sharp low at continuous learning.

We computed a series of one-sample t-tests to compare the mean scores of the seven dimensions of the DLOQ from the current sample ( $n = 757$ ) with reported means from prior similar studies. All comparisons yielded statistically significant differences ( $p < .001$ ), confirming that the current study's means are significantly higher than the respective means of the prior studies. Bootstrap analysis also confirmed these results.

### Learning Culture and Participant Factors in PFA Program Completion

[Table 5](#) presents the log of odds ratios predicting program completion. Model 1 includes only the DLOQ composite score, Model 2 adds role and country, and Model 3 further incorporates gender and peer review. The DLOQ composite score shows a weak positive association (0.002–0.128) with program completion across all models and is not statistically significant. Mental health professionals, compared to those in other roles, and Ukrainians, compared to participants from other countries, have lower odds of completing the program, though these differences are not statistically significant in both Model 2 and Model 3. This implies that the association with completion did not differ significantly for either role or country.

In Model 3, which includes the additional covariates of gender and peer review, female participants were significantly less likely to complete the program than males ( $-1.435$ ,  $p < .01$ ). This result should be interpreted cautiously due to the small number of male participants compared to female participants. However, peer review ( $5.864$ ,  $p < .001$ ) was



**Figure 2** PFA Comparison (Line Chart).

Predictor	Model 1	Model 2	Model 3
	<i>n</i> = 510	<i>n</i> = 510	<i>n</i> = 398
DLOQ Composite Score	-0.002	0.006	0.128
Role (Mental Health Professionals vs. Other)		-0.045	-0.014
Country of Participants (Ukraine vs. Others)		-0.295	-0.591
Gender (Female vs. Male)			-1.435 **
Peer Review			5.864 ***

**Table 5** Logistic Regression Odds Ratios of DLOQ Scores on Completion.

*p*-values: \*\*\* < 0.001, \*\* < 0.01, \* < 0.05, † < 0.1.

strongly positive and significantly associated with a higher likelihood of completion. Comparing Model 1 with other models using different combinations of covariates, Model 3 was the best fit, as indicated by AIC and Deviance tests. This suggests that the predictors of Model 3 explain a meaningful portion of the variance in completion.

Although DLOQ scores, country, and role did not predict completion, DLOQ scores were positively correlated with the performance measures and, compared to similar studies, were significantly higher.

## QUALITATIVE RESULTS

The qualitative findings demonstrate the power of collaboration and peer networking to create a learning culture among participants. The program's foci on PFA for children, peer exchange, and its inclusive and engaging environment supported participant and network development. A review of participants' narratives showed that PFA led to mental health and psychosocial improvements in six areas for children affected by the armed conflict between Russia and Ukraine.

## Peer Exchange

While peer exchange enhanced strategy effectiveness, service comprehensiveness, and broadened participants' MHPSS perspectives, reflection stimulated new ideas.

- "I learned how to create personalized strategies that address both emotional and academic challenges... The continuous exchange of experiences...also inspired me to...consistently evaluate and refine my methods for greater effectiveness."
- "My group came up with...a course...that will help parents to talk and connect with their children, especially teenagers."

Sessions and group discussions exposed participants to varied cultural concerns, making visible network trends and inspiring advocacy.

- "We had a very interesting discussion about our countries' reaction for the first and second waves of the arrival of the refugees..."
- "...the program... helped me challenge existing practices that may overlook the cultural dimensions of psychological support and promote more inclusive, culturally sensitive approaches in humanitarian operations...within my organization and other platforms."

Peer review strengthened participants' assessments of crisis situations, communication skills, and repertoire of PFA strategies.

- "...when we gave feedback...it put us in the shoes of 'experts,'...to see the situation from the outside..."
- "I was able to look at my own case...(and) write my idea in a comprehensive way."
- "Analyzing the cases of my colleagues, I found many new practices and methods..."
- "Communication with my colleagues inspired me to look for sponsors...I have already received 15 Hibuki [stuffed dog toys]...for the students of my gymnasium."

## Mental Health and Psychosocial Outcomes

The MHPSS outcomes below were synthesized from participants' observations of past PFA provision. While these data are not associated with what was learned during the program, they contribute to collective knowledge-building on outcome categories and how impact can be measured. Reported PFA outcomes aligned with six mental health and psychosocial (MHPS) categories (see [Table 6](#)), used in the Common Monitoring and Evaluation Framework for Mental Health and Psychosocial Support in Emergency Settings (IASC, 2021). Given the immediacy of PFA outcomes, the category of "disabling distress/symptoms" was slightly modified to reflect 'severe reactions' observed in children.

## DISCUSSION

The data collected and results build upon one another to answer the research questions. Data collected reported on participants' sociodemographic data, PFA narratives, program experiences, and the learning culture of their diverse organizations. Quantitative results highlighted participants' need for continuous organizational learning and the impact of organizational learning culture on performance outcomes, as well as training completion. In a war zone, there are many reasons why participants might not complete a program (IFRC, 2024a; IFRC, 2024b; Rizzi et al., 2023). As our findings indicate, completion data alone is not an adequate proxy for learning impact, and qualitative data provides a richer demonstration. Yet in many arenas, including public health, qualitative data is less valued (Stickley et al., 2022).

Qualitatively looking beyond program completion to assess impact in the current study, we found TGLF's approach fostered continuous learning opportunities for participants in ways that enhanced capacities within and across the diverse networks of their organizations. Collaboration and networking strengthened participants' skills and enhanced their organizational strategies to provide PFA to children. The program also included a strong element of self-care and self-reflection by PFA providers. Thus, the results and findings from this study further shed light on best practices for embedding and

Category and Description	Outcome	Example
Functioning or the ability to carry out daily activities	Acted independently	“After our interaction, the little girl gradually began to participate in the daily activities of the kindergarten.”
	Resumed typical behaviors	“After one day of classes, his mother said: “Now I recognize my son again! What did you do?” The specialists told us to wait, but over time it got worse and worse. Now, after one day, he hugs and kisses me, sings songs, plays and tells me how much he likes food!”
	Improved sleep patterns	“A 17-year-old boy...complained of...thoughts that did not allow him to sleep. After (a) conversation with the young man’s mother...his thoughts before bedtime were no longer intrusive, and his sleep improved.”
Subjective well-being or happiness and satisfaction in life	Felt confident	“It was noticeable that the child’s mood improved, he began to behave more confidently, and at the end of our meeting he came up and said his name in my ear...”
	Expressed their thoughts/feelings	“He became more relaxed, his shoulders visibly easing as we talked. He became more open, sharing his thoughts and feelings more freely. He started smiling more...”
	Managed emotions	“The child began to behave calmly in the shelter, tears and tantrums disappeared, and communication with classmates was established, which was not the case before.”
Coping or the ability to address problems	Sought help on their terms	“Since the child refused to communicate, I gave her my business card with my phone number, which she could call me whenever she felt the need. A few days later, I received a call.”
	Requested help from leaders	“I was also helpful in offering ideas, directions and guidance regarding joining different communities and seeking for help... (His mother) told me that the kids don’t bully him as much as they used to since she sought assistance from the school as I suggested her to do so.”
	Used techniques for emotional regulation	“I conducted psychoeducational work with the mothers...and taught them techniques... it worked... (they have the) ability to regulate own emotions.”
Social behavior or the desire to get along and help others	Demonstrated less aggression	“...the children managed to trust others better ... (the child) is no longer engaged in fighting with others.”
	Acted pro-socially	“He came up and said: ‘Now I know it’s safe here.’ This was a significant progress, and now he not only feels calmer, but also helps other children overcome their fears.”
Social connectedness or strengthened relationships	Linked to essential services	“After my intervention, (the) family had better access to the necessary medical and social services...”
	Developed new friendships	“...they have been visiting local center for Ukrainian refugees I recommended... (the child) joined activities for children there and even managed to find a friend there.”
	Engaged in new communities	“My support included... introducing them to other people, and sharing insights about Finnish traditions and culture. This assistance positively impacted... their sense of participation in the community.”
Severe reactions or extreme behaviors	Reduced self-harming behaviors	“Moving the child to a safe, dimly lit area and providing toys, food, and drinks helped reduce distress. This led to a decrease in self-harming behaviors.”

**Table 6.** MHPSS Outcomes in Ukrainian Children Following PFA Provision.

capturing learning on initial psychosocial care into continuing professional development systems for other ongoing conflict situations. For organizations providing such care, the findings revealed highly valued engagement strategies preferred by participants, such as giving and receiving feedback on psychosocial care provision.

However, in the development of international and multilingual peer learning programs, it is also important to consider how factors, like language, may influence the degree of participants’ engagement. The core materials—scripts, slides, and rubrics—were first developed in English by co-author and TGLF peer learning developer,

RS. For the Ukrainian cohorts, these materials were then translated by co-author YY, a Ukrainian-speaking subject matter expert. This approach meant that the overall structure and facilitation flow remained consistent across languages. Even so, several language-specific adaptations were necessary to ensure clarity and cultural resonance. Certain English terms lacked direct Ukrainian equivalents, requiring creative solutions. The term “peer learning exercise” was particularly challenging as Ukrainian does not have a commonly used word for ‘peer,’ and ‘exercise’ tends to carry only sports-related meanings. It was therefore adapted to ‘learning based on equal-to-equal principles’ (‘навчання за принципом ‘рівний-рівному’), a term drawn from social work. Also, the seemingly neutral term ‘cohort’ was replaced with ‘group’ to avoid unintended militaristic associations in the Ukrainian context. Other terms, like ‘mental health and psychosocial support’ and ‘distress,’ presented fewer challenges as they are now widely understood in Ukrainian, reflecting shifts in language use. A further layer of complexity arose from program partner communication guidelines. In core materials, the term ‘war’ was replaced with ‘armed conflict’ or ‘humanitarian crisis in Ukraine,’ but in sessions and online submissions, learners frequently referred to war and other similar terms. Thus, the translation choices and language sensitivities may have subtly influenced how freely participants engaged with key concepts, discussed certain topics in their groups, and framed their project ideas. Regardless of these potential influences, the strategies used were found to actively engage and empower practitioners in problem-solving efforts while widening the circle they turned to for support—strengthening their own wellbeing, psychosocial care for adults and children, and the resourcefulness of the network.

Compared to other PFA studies, this research found similar mental health outcomes but also provided concrete examples of behaviors that supported the mental health of children and, in some cases, the protective role of their caregivers. Furthering our ability to capture the extent of impact in these areas can address a network need for robust data on MHPSS outcomes and yield additional proxies for assessing program impact.

## LIMITATIONS

Our study was limited to professionals mainly supporting children from Ukraine and may not be generalizable to other populations, although we expect core insights to hold transferable value. Statistical analysis had sufficient power to detect differences but could have been stronger with a larger data set. Despite a total sample size of 1,039 participants, many DLOQ metrics, peer review, and completion data were missing, reducing observations in the complete model to 398 and in the DLOQ-only predictors model to 510.

## RECOMMENDATIONS

Specific recommendations for strengthening support to children in humanitarian crises include fostering peer learning strategies to enable continuous learning opportunities at scale. While many face-to-face programs use breakout groups to create opportunities for peer learning, TGLF’s approach ecosystemically embeds the knowledge gleaned from peers in a way that makes what is learned widely available across borders and system boundaries. It is a human-centered approach that extends knowledge sharing beyond technology-driven databases to allow for the kind of specific problem-solving and support people can offer one another.

Learning organization theory has generally focused on specific organizations and their culture. In this study, it was clear that while individuals came from many different organizations, there was a common pattern across them that could be affected by the collective learning of multiple participants. Additionally, future studies on MHPSS outcomes using the questionnaire created from these data (S4) could help validate the impact of PFA for children and be used as an additional proxy to more rigorously assess the outcomes of PFA-related learning interventions.

## CONCLUSION

Peer learning programs that use digital technologies to strengthen human connections, like those offered by TGLF, address a significant gap for practitioners who often lack ways to connect and share experiences,

especially in fragile and crisis contexts. They establish a learning culture that spans informal, incidental, and more formal, goal-directed learning. This culture builds on and extends participants' existing organizational learning culture by building practitioner networks where learning can continue long after the program ends. Combining and evolving large-scale programming and personalized small-scale learning opportunities fosters a unique learning culture that enhances network capacity.

This research quantitatively confirms previous studies on TGLF's peer learning-to-action model (Eller et al., in press; Umbelino-Walker et al., 2024; Watkins et al., 2022). It is significant to note that qualitatively, using a fully inductive analysis, we still arrived at the same themes found in the joint global guidelines (IASC, 2021). As Wang et al. (2024) argue, it is extremely difficult to conduct controlled trials in disaster contexts of the effectiveness of PFA. Yet, sufficient expert opinion supports PFA, and our study shows the essential elements of safety, calm, and connectedness identified by PFA providers are enhanced through TGLF's peer learning approach. Thus, TGLF's approach to building a learning community around shared knowledge leads to actionable solutions to complex challenges.

## ADDITIONAL FILES

The additional files for this article can be found as follows:

- **S1.** Additional Program Information. DOI: <https://doi.org/10.25894/ijfae.2835.s1>
- **S2.** The PFA Transparency Matrix. DOI: <https://doi.org/10.25894/ijfae.2835.s2>
- **S3.** Additional Data. DOI: <https://doi.org/10.25894/ijfae.2835.s3>
- **S4.** PFA Measure (1.0). DOI: <https://doi.org/10.25894/ijfae.2835.s4>

## COMPETING INTERESTS

Co-authors KE, KEW, RS, IJ, IS, SJV, YY, AND CM have a vested interest in The Geneva Learning Foundation (TGLF), which facilitated the program and

supported the research design, analysis, and publication. During the period of this research, KE was a qualitative analyst at The Geneva Learning Foundation. KEW is the president of TGLF's board. RS is the founder and president of TGLF. IJ and IS are research specialists with TGLF. SJV is the project manager for the psychological first aid (PFA) program and YY is a PFA subject matter expert for the PFA program. CNM is the deputy director of TGLF.

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