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Longitudinal changes in mental health professionals' perceived trauma care competencies after participation in a brief online training programme

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ABSTRACT

Background: Further developments in trauma care training for mental health staff are needed to ensure that trauma survivors are recognised and get the most effective care. The evaluation of the effects of trauma care training programs would enable the untangling of the most efficient ways of building the competence of clinicians who encounter trauma-exposed patients in their routine clinical practice.

Objective: We aimed to analyse longitudinal changes in mental health professionals' perceived trauma care competencies after a brief online trauma care training, and to examine associations between these changes and specific work-related characteristics.

Method: In total, 223 mental health professionals, 96.4% women, 42 years on average, and 51.6% with more than 10 years of clinical practice, participated in a brief online trauma care training programme. The Readiness to Work with Trauma-Exposed Patients Scale (RTEPS) was used to measure perceived trauma care competencies at the pre-training, post-training, and at a 3-month follow-up.

Results: Training had a significant effect on all measured perceived trauma care competencies of assessment, treatment and affect tolerance at post-training and 3-month follow-up. We also found that many years of unspecific clinical practice did not contribute to perceived trauma care competencies, and the training was perceived equally beneficial by professionals with more or less clinical practice.

Conclusions: Our study indicates that brief training can have lasting effects on clinicians' self-confidence in trauma care. Further investigation of factors associated with the effects of training might help to increase the effectiveness of the training programs.

Cambios longitudinales en las competencias de atención en trauma percibidas por los profesionales de la salud mental después de la participación en un breve programa de capacitación en línea

Antecedentes: Se necesitan más avances en la capacitación en atención del trauma para el personal de salud mental para garantizar que los sobrevivientes del trauma sean reconocidos y reciban la atención más eficaz. La evaluación de los efectos de los programas de capacitación en atención en trauma permitiría desentrañar las formas más eficientes de desarrollar la competencia de los médicos que se encuentran con pacientes expuestos a trauma en su práctica clínica habitual.

Objetivo: Nuestro objetivo fue analizar los cambios longitudinales en las competencias de atención en trauma percibidas por los profesionales de la salud mental después de una breve capacitación en atención sobre trauma en línea, y examinar las asociaciones entre estos cambios y las características específicas relacionadas con el trabajo.

Método: En total, 223 profesionales de la salud mental, 96,4% mujeres, 42 años en promedio y 51,6% con más de 10 años de práctica clínica, participaron de un breve programa de formación online en atención al trauma. Se utilizó la Escala de preparación para trabajar con pacientes expuestos a traumas (RTEPS) para medir las competencias percibidas en la atención del trauma antes y después de la capacitación y en un seguimiento de 3 meses.

Resultados: La capacitación tuvo un efecto significativo en todas las competencias de evaluación, tratamiento y tolerancia afectiva percibidas para el cuidado del trauma después de la capacitación y a los 3 meses de seguimiento. También encontramos que muchos años de práctica clínica inespecífica no contribuyeron a las competencias percibidas en el cuidado del trauma, y los profesionales con más o menos práctica clínica percibieron la capacitación igualmente beneficiosa.

Conclusiones: Nuestro estudio indica que la formación breve puede tener efectos duraderos en la autoconfianza de los médicos en la atención del trauma. La investigación adicional de los factores asociados con los efectos del entrenamiento podría ayudar a aumentar la efectividad de los programas de entrenamiento.

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关键词

创伤护理; 胜任力; 培训; PTSD; 健康护理

HIGHLIGHTS

- A brief online training can have lasting positive effects on clinicians' perceived competencies in trauma care.
- Professional experience in terms of years spent in clinical practice was not associated with perceived trauma care competencies.
- Clinicians who encounter trauma-exposed patients more frequently might have lower perceived trauma care competencies as compared to those who see patients with trauma history less often.

心理健康专业人员参加简短在线培训计划后感知创伤护理能力的纵向变化

背景: 需要进一步发展针对心理健康人员的创伤护理培训, 以确保创伤幸存者得到认可并获得最有效的护理。对创伤护理培训计划效果的评估能够理清培养常规临床实践中会遇到创伤暴露患者临床医生胜任力最有效的方法。

目的: 我们旨在分析在简短在线创伤护理培训后心理健康专业人员感知创伤护理能力的纵向变化, 并考查这些变化与特定工作相关特征之间的关联。

方法: 共有 223 名心理健康专业人员参加了简短在线创伤护理培训项目, 其中 96.4% 为女性, 平均年龄 42 岁, 51.6% 具有 10 年以上临床实践经验。使用创伤暴露患者工作准备程度量表 (RTEPS) 来衡量在培训前、培训后和 3 个月随访时的感知创伤护理能力。

结果: 培训对培训后和 3 个月随访时所有测量的评估、治疗和情感耐受力的感知创伤护理能力具有显著效应。我们还发现, 多年的非特异性临床实践并没有有助于提高人们对创伤护理能力的认识, 而具有或多或少临床实践的专业人员认为培训同样有益。

结论: 我们的研究表明, 简短培训可以对临床医生对创伤护理的自信心产生持久的影响。进一步探究培训效果相关因素可能有助于提高培训计划的有效性。

1. Introduction

Despite the high prevalence of traumatic experiences and PTSD in the general and clinical populations, trauma-related disorders are not always recognised and treated according to the best standards in clinical practice. A recent overview of trauma care in Europe revealed that many countries face varying challenges in delivering evidence-based trauma-informed care services (Schäfer et al., 2018). For example, the official national registry data analyses showed that from 2014 through 2015, the national healthcare system identified only about 1% of potential PTSD cases in Lithuania (Kazlauskas et al., 2017). Furthermore, a similar analysis of a more recent period of 2018–2020 demonstrated that not much had been achieved in recognising posttraumatic stress in mental health services over five years (Kazlauskas et al., 2021). Research confirms that if untreated, PTSD may persist for decades (Bichescu et al., 2005), damage the lives of individuals and families (Smith et al., 2020), as well as have a high cost to society (von der Warth et al., 2020).

Multiple factors are associated with the low recognition of PTSD and ongoing treatment barriers in mental healthcare services. Some of them might be related to avoidance of disclosure due to distress and shame experienced by people with a trauma history. Also, trauma survivors might not be aware that PTSD symptoms are common and treatable (Ehlers et al., 2009). Other PTSD treatment barriers are associated with the affordability of treatment, long waiting times, logistics, or lack of continuity of care (Smith et al., 2020). Further, studies reveal that the competence of a therapist results in better therapeutic outcomes in PTSD treatment (Keefe et al., 2022). Therefore, untreated PTSD can be related to a lack of trauma-specific assessment and therapy competencies in mental health professionals. Lack of training in trauma care may lead to the severe consequences of nonrecognition, misdiagnosis, and mistreatment of people with PTSD (Cook et al., 2019).

Various guidelines for effective treatments of PTSD have been developed over the last 40 years (Hamblen et al., 2019). The implementation of good practice and evidence-based research knowledge into routine clinical practice is done by competence building via training as well as updating the knowledge and clinical skills of the practitioners. The number of available training in trauma care for health professionals has been growing over the years. However, it is also important that the effects of trauma care training programs are evaluated so that the most effective ways of improving practitioners' competence can be identified. It is also essential to assess heterogeneity in learning outcomes by evaluating various factors that might be related to training effectiveness. Therefore, in the current study, we aimed: (1) to analyse longitudinal changes in mental health professionals' perceived competencies to work with trauma-exposed clients after a brief training in trauma care, and (2) to examine associations between these changes and specific characteristics related to the professional and previous training experience of mental health professionals.

2. Methods

2.1. Training programme, participants and procedures

The current study was conducted as a part of the evaluation programme of the trauma-related training conducted by the Center for Psychotraumatology at Vilnius University, Lithuania. Registered/licensed mental health professionals who practice in licensed healthcare institutions in Lithuania participated in a brief online post-diploma-level trauma-care training programme. A single day 4-hour training was aimed at providing basic knowledge on trauma care and screening assessment of trauma-related disorders. The training programme was accredited by the University and acknowledged as a continuing education programme by the National Competence Center for

Healthcare Professionals in Lithuania. The training was delivered in groups of 25–30 participants. It included a combination of lectures and practical skills training in the screening of trauma exposure, adjustment disorder, and PTSD in small groups. Four experienced clinical psychologists delivered the training.

Invitation for participation in the training was distributed to mental health institutions in all regions of Lithuania. It was also shared on social media and via various online professional networks. Data was collected online using the online survey platform at three time points: as a part of the registration to the training (T1), post-training (T2) and at a 3-month follow-up (T3). Data were collected from November 2020 to March 2022. The study was approved by the Ethics Committee for Psychological Research of Vilnius University. All study participants gave their informed consent prior to the data collection.

The sample included in the data analysis comprised 223 mental health professionals, mostly psychologists (62.8%), and around half of the sample (51.6%) was with 10+ years of professional experience. The majority of the participants ($n = 215$) were women (96.4%), seven were men (3.1%), and one participant identified their gender as 'other' (0.4%). Participants' age ranged from 24 to 73 years ($M = 41.92$, $SD = 11.06$). Characteristics of the sample are presented in Table 1.

2.2. Measures

2.2.1. Readiness to work with trauma-exposed patients

The Readiness to Work with Trauma-Exposed Patients Scale (RTEPS) is a brief 10-item self-

assessment scale designed to assess professionals' perceived competencies in working with trauma-exposed patients (Kazlauskas et al., 2022). The RTEPS measures perceived competencies related to trauma care in the three key areas: (a) Assessment (3 items), (b) Treatment (3 items), and (c) Affect tolerance (4 items). Respondents are asked to rate each RTEPS item on a 5-point Likert scale (0 = strongly disagree; 1 = disagree; 2 = neither agree nor disagree; 3 = agree; 4 = strongly agree). The coding of the items in the Affect tolerance subscale is reversed. The total score of the RTEPS scale is the sum of responses to all items, ranging from 0 to 40; the score for the subscales is a sum of responses to the items comprising them. Higher RTEPS scores indicate greater perceived readiness to work with trauma patients in clinical practice. In the previous study, the RTEPS demonstrated good psychometric properties in a sample of Lithuanian mental health professionals (Kazlauskas et al., 2022). The results of the current study indicated an acceptable internal consistency of the RTEPS, with McDonald's Omega of Assessment subscale $T1 = .67$; $T2 = .67$; $T3 = .79$; Treatment subscale $T1 = .78$; $T2 = .79$; $T3 = .77$; Affect tolerance subscale $T1 = .72$; $T2 = .74$; $T3 = .66$; and $T1 = .73$; $T2 = .69$; $T3 = .76$ for the total RTEPS score.

2.2.2. Professional and training experience

The participants were also asked about their professional experience in years. Encounters with patients (1) exposed to traumatic experiences and (2) having PTSD in clinical practice was assessed on a 4-point Likert scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often). We also inquired if the participants had previous training in PTSD assessment and PTSD treatment by collecting binary responses (0 = no, 1 = yes).

2.3. Data analysis

The data analyses were conducted using IBM SPSS version 28 and Mplus version 8.2. For the comparison of the means of the RTEPS scale and subscales between different measurement points, repeated measures ANOVA with post hoc Bonferroni test was used. A Latent Change Modelling approach was used (Duncan et al., 2013) to estimate the within-group effects of brief trauma care training on the basis of mental health specialists' profession-related characteristics: (1) previous trauma care training experience (0 = no previous training, 1 = previous training), (2) frequency of seeing patients with PTSD (0 = never or sometimes, 1 = often), (3) frequency of seeing patients with traumatic experiences (0 = never or sometimes, 1 = often), and professional experience (0 = <10 years, 1 = >10 years), reporting changes in the RTEPS scores from T1 to T2 and from T1 to T3. To calculate the between-group effects, we ran the series

Table 1. Characteristics of the study sample ($N = 223$).

Variable	<i>n</i>	%
Gender		
Male	215	96.4
Female	7	3.1
Other	1	0.4
Age <i>M</i> (<i>SD</i>)	41.92 (11.06)	
Profession		
Psychologist	140	62.8
Psychiatrist	17	7.6
Psychotherapist	48	21.5
Other	18	8.1
Work experience		
<2 years	27	12.1
2–10 years	81	36.3
>10 years	115	51.6
Seeing patients with traumatic experiences		
Never/rarely/sometimes	79	35.4
Often	144	64.6
Seeing patients with PTSD		
Never/rarely/sometimes	177	79.4
Often	46	20.6
Previous training in PTSD treatment		
No	156	70.0
Yes	67	30.0
Previous training in PTSD assessment		
No	191	85.7
Yes	32	14.3

Note. PTSD = Posttraumatic stress disorder.

of conditional latent change models in a full sample by regressing the different work-related characteristics on RTEPS scores at baseline and changes from T1 to T2, and from T1 to T3. The Wald test was used to compare the mean RTEPS scores between groups at T2 and T3. A Maximum Likelihood with Robust standard errors (MLR) estimator was used in latent change analyses. The effect sizes were interpreted according to the guidelines of Cohen (1988), i.e. 0.20 = small effect, 0.50 = medium effect, and 0.80 = large effect.

2.4. Missing data analysis and handling

In the responses of the total of 235 recruited mental health participants, four missing data patterns of the RTEPS responses have been identified in the dataset: (1) no missing data ($n = 160$); (2) data only missing at post-training ($n = 3$); (3) data missing only at follow-up ($n = 61$); (4) data missing at baseline and follow-up ($n = 11$). We excluded participants falling into the missing data pattern 4 in data analysis, one participant was also excluded from the analysis due to random responses. The analysis showed that all data were missing at random (Little's MCAR test: $\chi^2(139) = 136.197, p = .551$). ANOVA was performed by excluding participants with missing data ($n = 159$). Latent change analyses were performed in a full sample ($n = 223$) by applying the Full Information Likelihood (FIML) algorithm.

3. Results

3.1. Changes in perceived trauma care competencies after the training

A repeated measures ANOVA was used to compare the RTEPS total score and the scores of subscales across measurement time points (See Table 2). The Mauchly's test did not indicate a violation of sphericity in the RTEPS total score and Affect tolerance subscale.

Table 2. The perceived readiness to work with trauma-exposed patients scores ($N = 159$).

Perceived competency	Pre-training <i>M (SD)</i>	Post-training <i>M (SD)</i>	3-month follow-up <i>M (SD)</i>	Within-subjects effects
Treatment	5.34 (1.85)	7.23 (1.76)	6.58 (1.95)	$F(1.86, 293.98) = 54.31^*$
Assessment	5.61 (1.68)	8.41 (1.69)	6.96 (2.19)	$F(1.93, 304.54) = 97.03^*$
Affect tolerance	10.22 (2.24)	11.37 (2.13)	11.18 (1.99)	$F(2, 316) = 27.18^*$
The RTEPS total	21.17 (4.25)	27.01 (3.97)	24.72 (4.53)	$F(2, 316) = 114.09^*$

Note. RTEPS = Readiness to Work with Trauma-Exposed Patients Scale; $*p < .001$.

But a violation of sphericity was found when assessing the Assessment and Treatment subscales; for this reason, a Huynh-Feldt correction was used. The total RTEPS score differed significantly across the three time points. Post hoc Bonferroni test showed statistically significant differences between the RTEPS scores at T1 and T2 (Mean difference = 5.84, $p < .001$; 95% C.I. [4.94, 6.74]), T1 and T3 (Mean difference = 3.55, $p < .001$; 95% C.I. [2.54, 4.56]), T2 and T3 (Mean difference = -2.29, $p < .001$; 95% C.I. [-3.20, -1.38]).

Significant differences in means across time points were also found in the RTEPS Treatment, Assessment, and Affect Tolerance subscales. Significant differences were found in the Treatment subscale between T1 and T2 (Mean difference = 1.89, $p < .001$; 95% C.I. [1.49, 2.27,]), T1 and T3 (Mean difference = 1.24; $p < 0.001$; 95% C.I. [.74, 1.74]), T2 and T3 (Mean difference = -.65, $p < .001$; 95% C.I. [-1.09, -.21]). In Assessment subscale, significant differences were found between T1 and T2 (Mean difference = 2.80, $p < .001$; 95% C.I. [2.36, 3.24]), T1 and T3 (Mean difference = 1.35; $p < .001$; 95% C.I. [.82, 1.88]), T2 and T3 (Mean difference = -1.45, $p < .001$; 95% C.I. [-1.93, -.96]). Also, significant differences were found in the Affect tolerance subscale between T1 and T2 (Mean difference = 1.15, $p < .001$; 95% C.I. [.72, 1.58,]), and T1 and T3 (Mean difference = .96; $p < .001$; 95% C.I. [.59, 1.33]), but not between T2 and T3 (Mean difference = -.19, $p = .749$; 95% C.I. [-.60, .21]).

3.2. The role of work-related factors on changes in perceived trauma care competencies after training

Further, the effects of brief online trauma care training on perceived competencies were evaluated using latent change analysis by taking into account the mental health professionals' work-related characteristics: (1) previous trauma care training experience, (2) encounters with PTSD patients in clinical practice, (3) encounters with patients with trauma history, and (4) professional experience. The results of latent change analyses are presented in Figure 1 and Table 3. The effects sizes of between-group training effects by identified groups based on work-related factors are presented in Table 4.

The results revealed that all investigated subsamples of mental health professionals based on the identified work-related factors showed a significant increase in the RTEPS scores at post-training and at a 3-month follow-up compared to the baseline assessment, indicating that training had a positive effect on perceived competencies for all participants despite previous work or training experience. Mental health professionals with previous experience in trauma care training had significantly higher RTEPS scores at baseline, so previous training was associated with

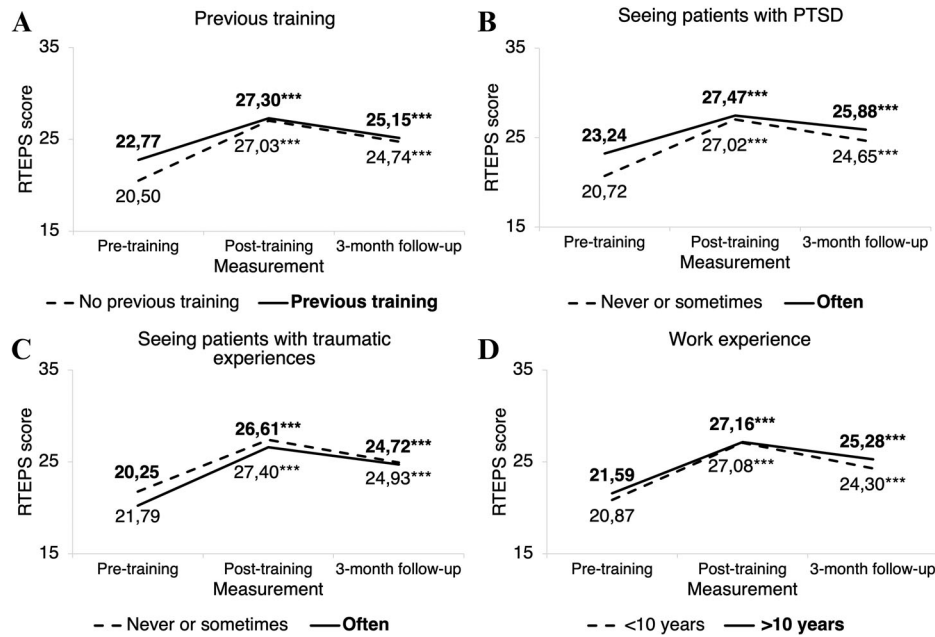


Figure 1. Trajectories of the perceived trauma care competencies change after training. Note. PTSD = Posttraumatic stress disorder; RTEPS = Readiness to Work with Trauma-Exposed Patients Scale. Mean values are presented for within-group analysis from pre- to post-training, and from pre-training to follow-up. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3. Training effects on perceived trauma care competencies ($N = 223$).

	Measurement time point			Between-group effects			Wald test	
	Pre-training <i>M (SD)</i>	Post-training <i>M (SD)</i>	3-month follow-up <i>M (SD)</i>	β_{baseline}	$\beta_{\text{t1-t2}}$	$\beta_{\text{t1-t3}}$	Post-training ($df = 1$)	3-month follow-up ($df = 1$)
Previous trauma care training								
No	20.50 (4.29)	27.03 (4.54)	24.74 (5.51)	0.25***	-0.21**	-0.17*	0.20	0.21
Yes	22.77 (3.69)	27.30 (4.29)	25.15 (4.43)					
Seeing patients with PTSD								
Never or sometimes	20.72 (4.10)	27.02 (4.35)	24.65 (5.40)	0.24***	-0.18*	-0.10	0.27	1.19
Often	23.24 (4.19)	27.47 (5.00)	25.88 (4.45)					
Seeing patients with traumatic experiences								
Never or sometimes	21.79 (4.11)	27.40 (4.42)	24.93 (4.98)	-0.17**	0.08	0.12	2.05	0.11
Often	20.25 (4.29)	26.61 (4.76)	24.72 (5.60)					
Work experience								
<10 years	20.87 (4.00)	27.08 (4.17)	24.30 (4.91)	0.09	-0.07	0.02	0.04	1.29
>10 years	21.59 (4.43)	27.16 (4.88)	25.28 (5.50)					

Note. β – regression coefficient for between-group analyses. Mean values and standard deviations are presented for within-group analysis for pre- to post-intervention and from pre-intervention to follow-up. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4. Training effect sizes in professionals with various professional experiences ($N = 223$).

	Within-group effect size		Between-group effect size	
	Pre-training/ Post-training <i>d [95% C.I.]</i>	Pre-training/ 3-month follow-up <i>d [95% C.I.]</i>	Pre-training/ Post-training <i>d [95% C.I.]</i>	Pre-training/ 3-month follow-up <i>d [95% C.I.]</i>
Previous trauma care training				
No	1.47 [1.22; 1.73]	0.86 [0.62; 1.09]	-0.48 [-0.77; -0.20]	-0.45 [-0.73; -0.17]
Yes	1.12 [0.78; 1.47]	0.58 [0.25; 0.91]		
Seeing patients with PTSD				
Never or sometimes	1.49 [1.25; 1.72]	0.82 [0.60; 1.03]	-0.50 [-0.83; -0.17]	-0.31 [-0.63; 0.02]
Often	0.91 [0.48; 1.34]	0.61 [0.19; 1.02]		
Seeing patients with traumatic experiences				
Never or sometimes	1.31 [1.06; 1.56]	0.69 [0.45; 0.92]	0.18 [-0.10; 0.45]	0.32 [0.04; 0.59]
Often	1.39 [1.05; 1.74]	0.89 [0.56; 1.22]		
Work experience				
<10 years	1.51 [1.21; 1.82]	0.76 [0.49; 1.04]	-0.15 [-0.41; 0.11]	0.06 [-0.20; 0.32]
>10 years	1.19 [0.91; 1.47]	0.74 [0.47; 1.00]		

Note. d = effect size; PTSD = Posttraumatic stress disorder.

higher perceived competencies. However, having no previous training experience was associated with a higher increase in perceived competencies measured with the RTEPS after the training, and at a 3-month follow-up, with small effects (Cohen's d from -0.45 to -0.48). Professionals who reported seeing PTSD patients often had significantly higher RTEPS scores at baseline, but specialists rarely seeing PTSD patients demonstrated a higher increase in the RTEPS scores after the training, with a medium effect size (Cohen's $d = -0.50$) (See Table 4). Surprisingly, professionals who reported often seeing clients with a history of traumatic experiences had significantly lower RTEPS estimates at baseline compared to professionals rarely treating trauma-exposed clients (See Table 3).

Specialists' professional experience in years was not associated with the RTEPS estimates at the baseline or changes at post-training, and at a 3-month follow-up; the Wald test showed no significant differences in the mean RTEPS scores between groups after the training and three months later. These results indicate that work experience was not related to perceived trauma care competencies at baseline or the outcomes of training.

4. Discussion

The results of our study suggest that even brief training can improve perceived trauma care competencies among mental health professionals, and training effects remained significant at a 3-month follow-up. In our study, mental health professionals felt more confident in all three measured perceived trauma care competencies, assessment, treatment, and affect tolerance, following the brief online training. Therefore our results indicate that even a brief trauma-focused training course can have prolonged effects on clinicians' perceived competencies in trauma care. Overall, these findings are in line with previous studies, which found that training increases trauma care competence and self-confidence in clinicians (Henrich et al., 2023; Lueders et al., 2022). However, we found that changes and significant effects are seen even after a brief online training programme.

The positive outcomes of training on perceived trauma care competencies were observed independently of the previous training in trauma care, frequency of encounters with traumatised patients in everyday practice, or work experience. However, we found some associations between work-related characteristics and perceived trauma care competencies at baseline. In our study, previous experience of trauma care training was associated with higher perceived trauma care competencies before the training. Not surprisingly, specialists with no trauma care training experience felt benefitting from the current training more, as the current training aimed at providing basic

knowledge on trauma care and screening of trauma-related disorders. Furthermore, among professionals who reported frequent encounters with PTSD patients in their clinical practice, the levels of perceived trauma care competencies before the training were higher compared to those who rarely see PTSD cases in their practice. Therefore, the results suggest that activation of trauma care knowledge and skills in practice might help to boost confidence in professionals' trauma care competencies. However, it is also possible that better-trained clinicians are more effective in recognising PTSD in their practice, so they do not underestimate the prevalence of PTSD among their clients, as often happens with not-as-well-trained practitioners (Ehlers et al., 2009). Frequent encounters with trauma-exposed clients were, on the contrary, associated with lower baseline perceived trauma care competencies. These results might reflect that practitioners who see more trauma-exposed clients in their practice are more frequently confronted by their lack of competencies to help these clients and thus perceive themselves as less competent in trauma care.

The results of our study also demonstrated that professional experience in terms of years spent in clinical practice was neither associated with pre-training perceived competencies nor with the outcomes of training. This indicates that clinical experience as such is insufficient to build self-confidence in specific areas of clinical practice, such as trauma care. Specific knowledge about trauma, its consequences, and evidence-based treatment is required (Cook et al., 2019; Schäfer et al., 2018), and therefore these skills should be acquired via specialised training. Previous research showed that clinicians with more than 10 years of work experience were less likely to complete Trauma-Focused – Cognitive Behavioural Therapy online training programme, compared to users with less than five years of work experience (Kasparik et al., 2022). Therefore, it is crucial to inform professionals that even experienced clinicians may significantly benefit from post-diploma training, and it is essential to regularly improve specific trauma care competencies. However, it is important to keep in mind that we have identified two groups in terms of participants' clinical experience in the study. It might be that a more detailed analysis of the clinical experience of professionals could reveal additional insights into the effects of perceived competency changes after training.

It is important to note that the participants of our study were the least confident in their trauma treatment competencies, as compared to assessment and affect tolerance competencies, at all assessment time points. The online training was aimed at providing only basic knowledge on trauma care and mostly focused on the assessment of trauma-related disorders, so it did not intend to develop trauma treatment skills. Trauma treatment competencies are far more complex than assessment, requiring more

training, supervision, and practice for the practitioners to perceive themselves as competent in this field. These results are in line with other research showing that, according to clinicians, brief training programs are not enough to address the training requirements for the treatment of complex trauma (Kumar & Brand, 2022). Also, training alone is usually not enough, as implementing knowledge and skills in practice often requires supervision (Barwick et al., 2012; Henrich et al., 2023). On the other hand, it is not surprising that the participants were more confident in their trauma treatment competencies after the brief online training. All the measured perceived competencies are interrelated, and the general knowledge of trauma care and assessment skills are a part of the treatment competency. As a result, after the training, participants perceived themselves as more confident that the acquired knowledge and skills would help them to provide better treatment. However, it also seems that professionals remained realistic, and their confidence in trauma treatment competencies was lower in comparison to assessment or affect tolerance competencies, and reflected a need for specific thorough training in trauma treatment.

Interestingly, after evaluating the mean changes of different perceived trauma care competencies over time, we also noticed that the levels of self-confidence in affect tolerance went significantly up after the training, and this gain remained relatively stable at a 3-month follow-up. However, the levels of perceived competencies in trauma care assessment and treatment were higher at a three-month follow-up compared to the baseline level but lower when compared to the levels just after the training. The results demonstrate that some competencies, such as affect tolerance, might have more substantial long-lasting effects, and others, like assessment and treatment, might require more regular and extensive training. Nevertheless, it is important to note that such issues as burnout, compassion fatigue, or secondary traumatic stress may also be present when working with trauma-exposed clients, so continued training or supervision might be essential in such situations (Cook et al., 2019).

The results above encourage offering trauma care training programs for mental health practitioners. It is suggested that training should be ongoing and implemented at multiple points in a professional's career, including pre-service (university), in-service, and continuing education (Kenny & Abreu, 2015). It is essential that mental health professionals are sufficiently trained to recognise people at risk for PTSD and would be able to identify posttraumatic reactions to best guide PTSD patients to the most appropriate treatment options and resources (Smith et al., 2020). Early PTSD recognition and intervention can ensure that trauma survivors receive the treatment they need without delays.

4.1. Limitations

The results suggest important implications for improving trauma care competencies in clinical practice. However, they should be interpreted in light of the study's limitations. First of all, the study sample was predominantly female. Although generally more women work in mental healthcare in Lithuania, more participants identifying themselves with different gender would make the results more generalisable. Furthermore, we measured work-related characteristics only at the baseline assessment. It would be important to investigate the role of the changes in measured factors between the different assessment points. Also, it would be useful to include more different work-related and other psychosocial characteristics in future studies. It is also important to note that in the current study, the participants registered for the training themselves, meaning they probably were motivated to participate. Lack of motivation and suboptimal engagement in training are seen as potential barriers to training success (Barwick et al., 2012). Thus, the results might be different in samples with less motivation. Finally, we only investigated participants' confidence in their trauma care competencies in the current study. Although feeling confident in one's abilities is an important factor leading to a sense of control in terms of the ability to change behaviour (Albright et al., 2016; Kasparik et al., 2022) and is associated with treatment outcomes (Espeleta et al., 2022), it would be very useful to evaluate the effectiveness of training using additional methods, such as how it transfers into actual clinical practice and treatment outcomes (Cook et al., 2019). The inclusion of various other less subjective study outcomes, for example, knowledge questionnaires, case formulation examples, treatment plan outlines, evaluations of clinical performance by experienced clinicians in case analysis and supervision, and the use of patient data could provide a broader picture of the outcomes of training programs. Furthermore, the study design, which includes control groups, would enable achieving more thorough results on the effectiveness of the training programs in future studies.

Despite the limitations mentioned above, the results of our study show that brief online-delivered professional training in trauma care has long-term effects on increasing clinicians' confidence. Further research of factors associated with the effects of training for different professional groups in various cultural contexts might help to increase the effectiveness of the training programs.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Data availability statement

The detailed sociodemographic information of the dataset does not fully protect the anonymity of the respondents. For this reason, the entire dataset cannot be made publicly available. However, excerpts of the data on a higher aggregation level can be provided upon justified request by the first author, OG.

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