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ORIGINAL PAPER

An Umbrella Review of Systematic Reviews on Trauma Informed Approaches

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Abstract

Trauma and adversity significantly impact on morbidity and mortality. Hence, trauma-informed care is proliferating practice and research contexts. However, the evidence base for organisational wide trauma-informed care is far from conclusive, with the extant literature providing low quality and conflicting evidence. The purpose of this umbrella review of systematic reviews, is to summarise the existing evidence on trauma-informed care implemented at the organisational level. The preferred reporting items for systematic review and meta-analyses (PRISMA) was used to conduct an umbrella review. Six databases were searched; Academic Search Complete, APA Psych Articles, Cochrane Library, Embase, Scopus, and the Web of Science, supplemented with bibliography searches. Articles were included if they were peer reviewed in the English language from inception to 2024 and reported on trauma-informed care with an implementation context. The Joanne Briggs Institute Critical Appraisal Checklist for Systematic Reviews and Research Syntheses was used to assess the quality of the included reviews. Findings are mapped to the 10 trauma-informed care implementation domains described by the Substance Use and Mental Health Service Administration (SAMHSA) and reported using a narrative synthesis. The search strategy yielded 5,297 articles, of which (N = 14) systematic reviews are included. The reviews had a combined study count of (N = 311), with a total sample size of (N = 157,724). Most reviews used a narrative synthesis to report results, with no meta-analyses. Critical appraisal categorised the reviews as 28% high quality, 22% moderate quality, and 50% as low quality. Most reviews (50%), were conducted on youth populations, with school settings being the most studied context. There was a great deal of heterogeneity across the reviews, with 62 different models of trauma informed approaches discussed. The composition of the individual studies included in each systematic review were generally of low quality with mixed findings of effectiveness and implementation. Findings are discussed for moving forward with trauma-informed care implementation. Trauma-informed care is proposed as a system wide intervention to improve outcomes for service users, however the research base is still under scrutiny. Emerging research identifies the benefit of using the 10 trauma-informed implementation domains to shift cultural practices. Further research needs to be undertaken in various contexts with different populations.

Keywords Trauma informed care · Trauma informed practices · Trauma informed approaches · Implementation · Systematic review

Introduction

There is increasing recognition that many people accessing a range of health and social care services may have suffered past events that can lead to traumatic experiences (Felitti et al., 1998). Much of the contemporary ideas about trauma-informed care can be traced back to the Adverse Childhood Experiences (ACE) study (Felitti et al., 1998). This research was a major retrospective study of over 17,000 mainly White middle-class Americans found not only that childhood trauma is prevalent, but also that it influences physical, mental, and emotional health, impacting morbidity and lifetime mortality (Felitti et al., 1998; Hughes et al., 2017; Hopper et al., 2010). Later research confirmed and replicated the impact of adversity on lifelong health outcomes (Madigan et al., 2023). Traumatic experiences have a cumulative impact on the individual with the more experiences a person has been exposed to, the higher the correlation with

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later physical and mental health problems (Read et al., 2007; Shevlin et al., 2008).

Survivors of trauma and adversity, especially during the formative years, are significantly more likely to experience health issues such as, heart, liver and chronic lung disease, in addition to depression, tobacco, alcohol, and substance use, and sexually transmitted diseases. Such experiences are thought to induce a cascade of neurobiological factors that may impact how a child and later adult regulate emotions through vulnerability to stressful events (Giotakos, 2020; Michaels et al., 2021). Childhood trauma is also linked to premature mortality (Rogers et al., 2021), and increases in health and social service costs (Hughes et al., 2017).

In addition, the impact of traumatic experiences on employees in the American workforce resulted in 3.6 days per month lost, costing over US$3 bn annually (Magruder et al., 2017). Similarly, the annual costs attributable to Adverse Childhood Experiences (ACE) were estimated to be US$581bn in Europe (Bellis et al., 2019). As such, healthcare systems and policy makers are increasingly recognising the need to have trauma-informed and responsive organisations.

Notwithstanding the importance of the ACE study, there are several limitations to this research insofar as the sample used, the type of adversity measured, the lack of acknowledgement of protective factors, and the simple notion that not all adversity is experienced as trauma or diagnosable. For example, personality type, social supports, attachment type, and coping ability may all help buffer against the onset of trauma after an adverse event or series of events (Barazzone et al., 2019; Campodonico et al., 2021; Fritz et al., 2018). As such, one way to distinguish adversity from a trauma response, is based on diagnosis. Type 1, or single incidence trauma such as accidents and natural disasters are often casual factors in diagnostic criteria for post-traumatic stress disorder (American Psychiatric Association, 2013).

Whereas type 11 or complex post-traumatic stress disorder results from prolonged, recurring, multiple, or cumulative events generally within interpersonal relationships in which there is limited time to recover between incidents (World Health Organisation, 2019). Krupnik (2019) adds to the categorical and dimensional diagnosis with two further vital components, trauma as a "stress response" and overwhelming effect of trauma on one's coping ability, resulting in a sense of powerlessness or "loss of control over a situation". However, a broader, non-clinical definition is provided by Substance Use and Mental Health Service Administration (2014, p. 8) "Individual trauma results from an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being".

In a 2016 study, Benjet et al. (2016) report that more than 70% of 68,894 individuals from 24 countries identified as having experienced a traumatic event, 30.5% of whom had exposure to 4 or more multiple traumatic events.

This epidemiological study argues that exposure to interpersonal violence has the strongest relationship with trauma experiences, and as such, in cases of limited resources, these may be best directed to those at risk of experiencing interpersonal violence.

Further complicating matters, structural inequalities across the social determinants of health may exacerbate effects of these traumatic experiences, and also make it more difficult to access and utilise supports to heal (Brown, 2008; Tummala-Narra, 2007). For instance, those from minoritized cultural, socioeconomic and gender demographics may find that mainstream services are not responsive to their needs (Marsella, 2010; Roberts et al., 2010; Wilson, 2007). This lack of responsiveness has the potential to further re-traumatise those accessing services.

Trauma-informed care as an organisational approach is the universal application of trauma-informed care with all service users and employees, that is, it is a method of service delivery. The rationale for the universal approach is based on the prevalence of trauma experienced by both service users and employees in health and social care sectors, and that these organisations often re-traumatise service users due to how they deliver care.

> the public institutions and service systems that are intended to provide services and supports to individuals are often themselves trauma-inducing. The use of coercive practices, such as seclusion and restraints, in the behavioral health system; the abrupt removal of a child from an abusing family in the child welfare system; the use of invasive procedures in the medical system; the harsh disciplinary practices in educational/school systems; or intimidating practices in the criminal justice system can be re-traumatizing for individuals who already enter these systems with significant histories of trauma (SAMSHA, 2014, p. 1).

To help mitigate against some of these issues researchers argue for the adaption of trauma-informed care as an organisational wide response (Bloom, 2017; Harris & Fallot, 2001; Mahon, 2022a, 2022b; Menschner & Maul, 2016; Raja et al., 2015; SAMHSA, 2014). Harris and Fallot (2001) identify safety, trustworthiness, choice, collaboration, and empowerment to be core principle-based values. The Substance Abuse and Mental Health Administration (SAMHSA) added two further principles, peer support, and cultural, historical and gender experiences.

A working definition of TIC underpinned by the "4R's" is provided by SAMHSA;

> A program, organization, or system that is trauma-informed realizes the widespread impact of trauma and understands potential paths for recovery; recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system; and responds by fully integrating knowledge about trauma into policies, procedures, and practices, and seeks to actively resist re-traumatization (SAMHSA, 2014, p. 9)

The application of the 4 R's in trauma-informed care is essential, and they need to be integrated into the culture of the organisation, across leadership, administration, and frontline practice. Trauma-informed organisations realise the prevalence of trauma and adversity, as well as how trauma impacts individuals, families, employees and the organisation. Organisations are able to recognise trauma responses in service users and employees, they understand trauma responses and symptoms, and respond by integrating trauma principles into practice and policies across the whole organisation. Trauma informed organisations do this in order to resist un-intentionally re-traumatising service users and employees due to inadequate practices and service delivery methods (Harris & Fallot, 2001; Menschner & Maul, 2016; SAMHSA, 2014).

Trauma-informed care is increasingly put forward as the ideal intervention to prevent re-traumatisation across populations in healthcare settings (Goldstein et al., 2024; Stillerman et al., 2023), educational settings (Day et al., 2015; Dorado et al., 2016a, 2016b; Perry & Daniels, 2016), substance use settings (Walter et al., 2023), forensic settings (Maguire & Taylor, 2019), homelessness settings (Hopper et al., 2010), and community and residential mental health settings (Dubay, 2018; Kimberg & Wheeler, 2019). Moreover, efforts are also being made to implement trauma-informed care at state and country level (ACE Hub Wales, 2022; Holmes et al., 2023).

Systematic reviews have found mixed evidence of the effectiveness of these programs, with implementation factors often identified as blocks and barriers (e.g. Avery et al., 2021; Lewis et al., 2023). Acknowledging the inherent difficulties with implementation, SAMHSA (2014) have identified 10 implementation domains for trauma-informed care; governance and leadership; policy; physical environment of the organization; engagement and involvement of people using services, cross-sector collaboration; screening, assessment, and treatment services; training and workforce development; progress monitoring and quality assurance; financing, and evaluation.

Implementing Trauma-Informed Care

Research underpinning trauma-informed care is often of a low quality, mixed findings, or does not comprehensively consider organisational implementation factors. For example, Hanson and Lang (2016) identify that the least likely components of trauma-informed care in their research to be implemented were those measuring employee effectiveness, a defined leadership approach, written policies, and secondary traumatic stress in employees. Mahon (2022a, 2022b) took an ecological lens to implementation and found that cultural competency and peer support were absent from all studies included in the scoping review.

Galvin et al. (2021) suggest four enablers of implementation; creativity and flexibility; shared trauma-informed knowledge; leadership and champions and structures, while barriers included being poorly resourced; infidelity to the model, and a lack of refresher training. In their systematic review, Avery et al. (2021) suggest that future trauma-informed research should consider using an implementation science approach. Implementation science is the adaption, application and systematic integration of research evidence into practice (Allotey et al., 2008; Fixsen et al., 2005; Glasgow et al., 2022; Peters et al., 2013), and it is an ideal framework for researching organisational trauma-informed care.

While there has been a number of systematic reviews conducted across the last several years, the extent to which these implementations domains have been considered in systematic reviews has not yet been examined. Thus, the purpose of this umbrella review of systematic reviews is to synthesis existing reviews that report on the implementation of trauma-informed care where there is also a focus on implementation with reference to at least one of the implementation domains. The specific research questions guiding this umbrella review are;

1. What outcomes are associated with trauma informed care when implemented as a service delivery model.
2. What trauma-informed implementation domains are used to support the uptake of trauma-informed care in organisations.

Methods

An umbrella review of systematic reviews informed by a preferred reporting items for systematic review and meta-analyses (PRISMA) was conducted. The Joanne Briggs Institute Critical Appraisal Checklist for Systematic Reviews and Research Syntheses (Aromataris et al., 2020) was used to assess the quality of the included studies. Findings are analysed using the 10 trauma-informed care implementation

domains described by (SAMHSA) and reported using a narrative synthesis.

Inclusion Criteria

Inclusion criteria was developed using the population, concept context (Table 1) framework (Peters et al., 2020; Pollock et al., 2023). The reason this inclusion method was chosen is based on the multiple levels involved in implementing trauma-informed care as it is an organisational wide approach, as opposed to a clinical intervention more suited to randomized control trials, and thus, the population, intervention, comparison and outcome (PICO) model is more suited. Studies were included if they were systematic reviews of peer reviewed trauma -informed care, with youth or adults, had an implementation focus, and were published in English. Other types of reviews such as scoping, narrative and integrative reviews were excluded. Reviews must of had as their focus trauma-informed care with young people or adults, and must of made reference in some way to implementation or had trauma-informed care as an organisational intervention. Reviews where the focus was on trauma focused therapies exclusively, or where only client outcomes were reported on were excluded.

Search Strategy

Six databases, Academic Search Complete, APA Psych Articles, Cochrane Library, Embase, Scopus, and Web of Science supplemented with bibliography searches was conducted. In addition, searches were carried out in Google Scholar and ResearchGate. The search strategy was employed in March 2024, no exclusion criteria were applied to the search. The following keywords were used in Academic Search Complete, with variations used in the other databases. The full database search can be found in (Table 2).

Study Selection

The search strategy yielded 5297 articles, of which (N = 14) systematic reviews are included. Articles from the search strategy were downloaded into Mendeley for appraisal by the author. After duplicates were removed, the title and abstract of relevant articles were appraised based on the inclusion criteria (PCC). See Fig. 1 PRISMA flowchart (Page et al., 2021) for the reduction process.

Quality Appraisal

Although the AMSTAR 2 is considered ideal for umbrella reviews, the questions are more suited to randomised and non-randomised control trials. Thus, The Joanne Briggs Institute Critical Appraisal Checklist for Systematic Reviews and Research Syntheses (Aromataris et al., 2020) was used to assess the quality of the included systematic reviews. This protocol is recommend for use in umbrella reviews Aromataris et al., 2020). The JBI protocol has 11 questions and

Table 1 Population, concept and context

	Inclusion criteria	Exclusion criteria
Population	Service users, adults, young people, employees, leaders, practitioners in organisations where trauma informed approaches are implemented	Non trauma informed organisations
Concept	Organisational trauma informed interventions with adults or young people which have at least implementation domain as described by SAMSHA	Trauma specific interventions only. Trauma focused therapies. Trauma intervention without implementation factors. Not defined as trauma informed
Context	Organisations, or city level implementation. Schools, early education, health and social care, mental health, criminal justice, substance use, homelessness, hospital and community settings. Any organisation in public, private or NGO	NA
Type of studies	Systematic reviews and meta-analyses	
Quantitative outcomes	Reviews including a reproducible, systematic search strategy, and clearly defined inclusion/exclusion criteria and risk of bias assessment for all included primary studies	Scoping review, narrative review, integrated review, single studies, grey literature. Reviews with only service user outcomes reported without implementation considerations, reviews without quality appraisal
Qualitative phenomenon	For qualitative reviews: reviews including a reproducible, systematic search strategy and defined inclusion/exclusion criteria	
Time frame	From inception to 2024	No limiters applied
Language	English	Papers in non-English

Table 2 Search strategy

Database	Keywords
Academic Search Complete	*trauma informed care OR trauma informed practice OR trauma OR trauma informed approach AND systematic reviews OR meta-analysis OR meta-analysis*
APA Psych Articles	*trauma informed care OR trauma informed practice OR trauma OR trauma informed approach AND systematic reviews OR meta-analysis OR meta-analysis*
Scopus	*trauma AND informed AND care OR trauma AND informed AND practices OR trauma AND informed AND approach AND systematic AND review OR meta AND analysis*
Web of Science	*trauma informed care OR trauma informed practice OR trauma OR trauma informed approach AND systematic reviews OR meta-analysis OR meta-analysis*
Embase	*trauma informed care OR trauma informed practice OR trauma OR trauma informed approach AND systematic reviews OR meta-analysis OR meta-analysis*
Cochrane Library of Systematic Reviews	*trauma informed care OR trauma informed practice OR trauma OR trauma informed approach AND systematic reviews OR meta-analysis OR meta-analysis*

each question was allocated 1 point for a total score of 11. Appraisal was categorised in the following way; 0–3 critically low; 4–6 low; 7–9 moderate, and 10–11 high.

Considering the relatively small number of included reviews, quality appraisal was conducted not to exclude reviews, but to rate their quality. See Table 3 for full quality appraisal protocol and questions. The outcome of the critical appraisal was that reviews were rated as, 28% high quality, 22% moderate quality, and 50% as low quality.

Data Extraction

An adapted version of the JBI Data Extraction Form for Review for Systematic Reviews and Research Syntheses (Aromataris et al., 2015) was developed. Data was extracted across the following headings; author and year; aim of study and setting; total sample size; number of studies included in review; characteristics/model/interventions; if there were comparisons/control groups; and findings. Table 4 illustrates the data extraction process. In addition, further relevant data were extracted from reviews and uploaded to NVivo for analysis using the 10 implementation domains as the level of analysis, and reported using a narrative synthesis (Popay et al., 2006).

Results

This umbrella review of systematic reviews included (N = 14) papers. The reviews had a combined study count of (N = 311), with a total sample size of (N = 157,724). Most reviews used a narrative synthesis to report results, with no meta-analyses. Critical appraisal categorised studies as 28% high quality, 22%, moderate quality, and 50% as low quality. Overall the evidence of the effectiveness of trauma-informed care as an organisation intervention is mixed, of a low quality, and difficult to make comparisons from due to heterogeneity across 62 models.

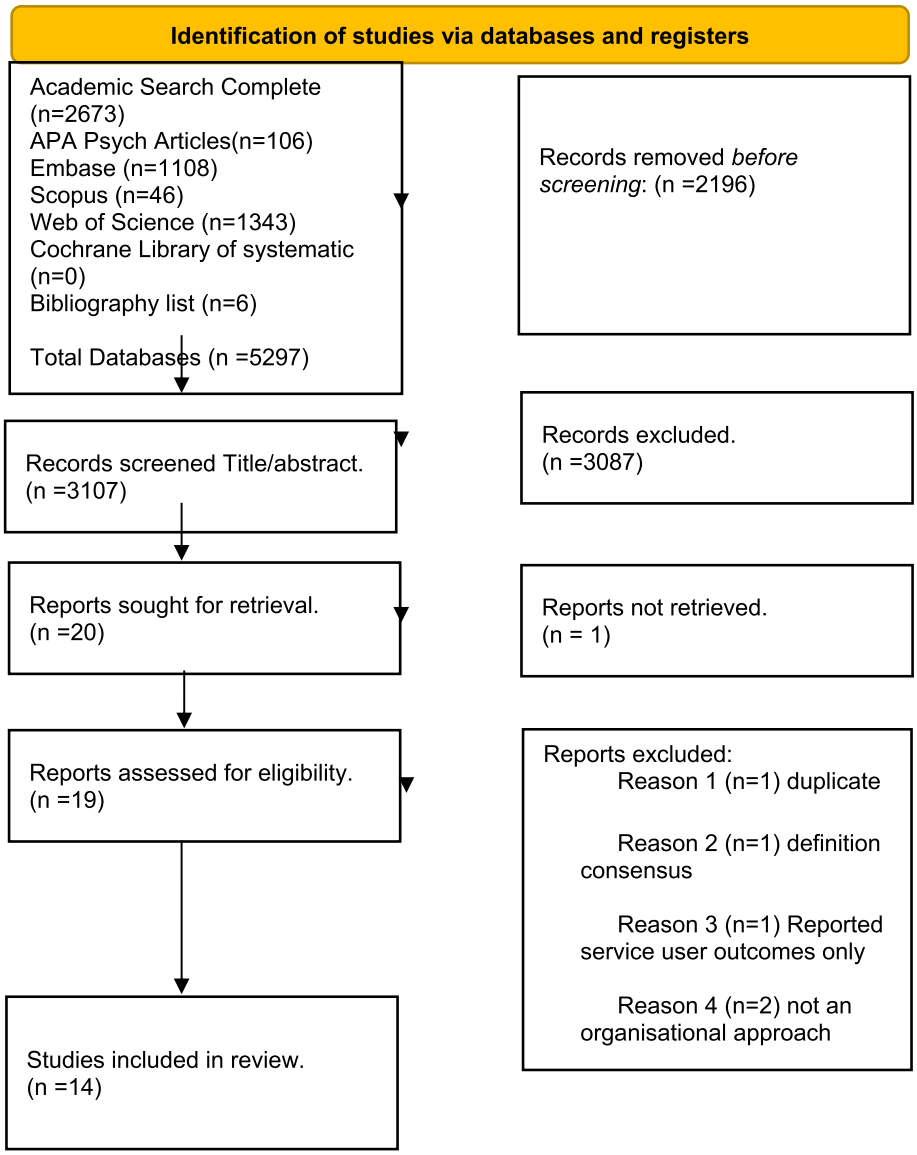
General Findings

In this section, the umbrella review reports on service user and employee outcomes before moving onto implementation domains. Trauma-informed care was implemented (N = 7) with youth populations (Avery et al., 2021; Bailey et al., 2019; Berger, 2019; Berger et al., 2023; Bryson et al., 2017; Newton et al., 2024; Roseby & Gascoigne, 2021). Of these, (N = 4) were conducted in educational settings (Avery et al., 2021; Berger, 2019; Newton et al., 2024; Roseby & Gascoigne, 2021), with reviews assessed as being of a low to moderate quality.

While Berger (2019) found little by way of evidence for the effectiveness of trauma-informed care, Roseby and Gascoigne (2021) found positive results for attendance, disciplinary referrals, suspension, and academic achievement, as well as student resilience, school attachment, and emotional presentation, while Newton et al. (2024) described improved relationships and learning environments. These reviews were rated as moderate to low quality.

Three other reviews examined trauma informed care with young people outside of school settings. Berger et al. (2023) assessed Trauma-Informed Physical Activity programs for young people and reported on positive emotional, social, behavioural, and academic outcomes. However, Bailey et al.

Fig. 1 PRISMA flowchart



(2019) review found limited information was provided on the effectiveness of the organisational wide models for out of home care, while Bryson et al. (2017) found evidence for implementation strategies in psychiatric and residential settings. However, all three reviews were of low quality, and the individual studies rated within the three reviews were assessed as high risk of bias. Overall, reviews conducted with youth populations within and outside of educational settings had two moderate quality, and five low quality studies, suggesting the limited evidence of effectiveness and that findings need to be interpreted with caution.

Several studies in various health and social care contexts demonstrated a positive benefit on a range of service user and employee outcomes (Brown et al., 2022; Coyle et al., 2019; Fernández et al., 2023; Lewis et al., 2023; Purtle, 2020). Lewis et al. (2023) found mixed benefits across service user satisfaction, provider and service user safety, and improvement in functioning in mental health and substance use. Fernández et al. (2023) suggests a positive trend in the effectiveness of trauma -informed care on service user functioning, quality of service and enhanced access, with Brown et al. (2022) reporting similar positive outcomes for service users and clinicians. The quality of evidence in these reviews were some of the strongest, with two studies rated as high, and one as moderate. Overall, the evidence for impact on service user outcomes is mixed, inconsistent and of different methodological quality.

Newton et al. (2024) describes similarities in the theoretical foundations, design, and implementation, indicating the use of a unified framework.

Avery et al. (2021) found that the models of implementation in their study shared core elements of trauma-informed staff training, organization-level changes, and practice change, this would indicate that organisations

Table 3 Joanne Briggs Institute Critical Appraisal Checklist for systematic reviews and research syntheses

Yes, no, can't tell, not applicable							
JBI Questions	Reviews						
	Newton et al. (2024) 8	Berger et al. (2023) 5	Fernández et al. (2023) 7	Lewis et al. (2023) 10	Huo et al. (2023) 10	Brown et al. (2022) 10	Coyle et al. (2019) 7
1. Is the review question clearly and explicitly stated?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2. Were the inclusion criteria appropriate for the review question?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. Was the search strategy appropriate?	Yes	No	Yes	Yes	Yes	Yes	No
4. Were the sources and resources used to search for studies adequate	Yes	No	No	Yes	Yes	Yes	Yes
5. Were the criteria for appraising studies appropriate?	Yes	Yes	Can't tell	Yes	Yes	Yes	Yes
6. Was critical appraisal conducted by two or more reviewers independently?	No	No	Yes	Yes	Yes	Yes	Yes
7. Were there methods to minimize errors in data extraction?	Can't tell	Can't tell	Yes	Yes	Yes	Yes	Can't tell
8. Were the methods used to combine studies appropriate?	Yes	Can't tell	Can't tell	Yes	Yes	Yes	Can't tell
9. Was the likelihood of publication bias assessed?	No	No	No	No	No	No	No
10. Were recommendations for policy and/or practice supported by the reported data?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11. Were the specific directives for new research appropriate?	Yes	Yes	Yes	Yes	Yes	No	Yes

Table 3 (continued)

JBI questions	Reviews						
	Roseby and Gascoigne (2021) 6	Avery et al. (2021) 8	Berger (2019) 5	Purtle (2020) 4	Bryson et al. (2017) 5	Oral et al. (2020) 5	Bailey et al. (2019) 6
1. Is the review question clearly and explicitly stated?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2. Were the inclusion criteria appropriate for the review question?	Yes	Yes	Yes	No	Yes	Yes	Yes
3. Was the search strategy appropriate?	Yes	Yes	Can't tell	No	Can't tell	Yes	Yes
4. Were the sources and resources used to search for studies adequate	Yes	Yes	Yes	Yes	Yes	No	Yes
5. Were the criteria for appraising studies appropriate?	Can't tell	Yes	Can't tell	No	Can't tell	Can't tell	No
6. Was critical appraisal conducted by two or more reviewers independently?	No	Can't tell	No	No	Can't tell	Can't tell	Can't tell
7. Were there methods to minimize errors in data extraction?	No	Can't tell	No	No	No	Can't tell	Can't tell
8. Were the methods used to combine studies appropriate?	Can't tell	Yes	Can't tell	Can't tell	Yes	Can't tell	Yes
9. Was the likelihood of publication bias assessed?	No	No	No	No	No	No	No
10. Were recommendations for policy and/or practice supported by the reported data?	Yes	Yes	Yes	Yes	Yes	Yes	No
11. Were the specific directives for new research appropriate?	Yes	Yes	Yes	Yes	No	No	Yes

Table 4 Data extracted from studies

Author and year	Aim and setting	Total sample N	Primary studies N	Characteristics/models of interventions	Control groups	Findings	JBI quality appraisal
Newton et al. (2024)	Trauma-informed programs in Australian schools, design, implementation and efficacy	Not available	(N = 4) 1 qualitative 1 quantitative 2 mixed methods	2 Reframing Learning and Teaching Environments 1 Trauma-Informed Behavior Support (TIBS) 1 Trauma-Informed Positive Education	N/a	All studies reported positive effects of the implemented trauma-informed programs. Differences in the focus of staff training and program implementation were also found. similarities in the theoretical foundations, design, and implementation, indicating the use of a unified framework	8 Moderate
Fernández et al. (2023)	Effectiveness of trauma-informed care interventions at the organizational level	(N = 1216)	(N = 15) 10 quantitative pre-post 5 quantitative multiple post	1 SAMHSA principles, 1 Harris and Fallot model 1 PACTS, 1 HEARTS, 2 CONCEPT, 2 Sanctuary model, 1 SANE, 1 PFI model 1 TI family preservation model 1 Project Kealahou	N/A	All the studies utilized one to six organizational components, the most frequent related to presence of a defined leadership, procedures against re-traumatization and provision of strength-based services. A positive trend in relation to the effectiveness of the interventions with an improved functioning of beneficiaries, enhanced accessibility, and quality of services. low quality and high heterogeneity of the studies make it difficult to draw conclusions with certainty	7 moderate

Table 4 (continued)

Author and year	Aim and setting	Total sample N	Primary studies N	Characteristics/models of interventions	Control groups	Findings	JBI quality appraisal
Lewis et al. (2023)	The effects of trauma-informed approaches on psychological, behavioural, and health outcomes in health-care providers and adult patients in primary care and community mental healthcare	(N = 117,303)	(N = 6) 4 qualitative 3 quantitative non-RCT 1 Mixed method	1 Trauma-informed Service Systems model 1 Sanctuary Model 1 Trauma-informed Primary Care framework 1 EQUIP 4 Tailored TIC	N/A	The most common components were budget allocation, workforce development, identi-3cation/response to violence and trauma, and evaluation The empirical evidence base for the effectiveness of trauma-informed organisational change interventions in primary care and community mental healthcare is very limited	10 High

while using different'brand name' models, may be implementing shared underlining ingredients.

Implementation Domains

As noted in the methods section, while service user and employee outcomes were included in the criteria for this umbrella review, they must have been reported within the context of a review that also considered at least one of the implementation domains as described by SAMHSA. This section of the results focuses on these implementation aspects and reviews are analysed in this context. Across the (N = 14) reviews all domains were included, range (3–14) per review.

Domain 1: Leadership and Governance

The leadership domain was discussed in (N = 9) reviews as an important component of trauma-informed organisational care (Avery et al., 2021; Berger et al., 2023; Brown et al., 2022; Bryson et al., 2017; Fernández et al., 2023; Huo et al., 2023; Lewis et al., 2023; Newton et al., 2024; Oral et al., 2020). Securing senior leadership buy in is essential (Brown et al., 2022; Bryson et al., 2017). Leadership is essential for developing buy in for implementation from employees (Avery et al., 2021; Huo et al., 2023; Newton et al., 2024). Leadership is important for resourcing and incorporating trauma-informed training into organisations (Oral et al., 2020; Purtle, 2020). When leaderships in an organisation is committed to trauma-informed care, then organisational practices across training, policy and hiring will likely change to align with this approach (Oral et al., 2020). However, Lewis et al. (2023) note that the leadership domain was least common in their review. While governance was not explicitly discussed across reviews, it is implicit in how implementation was undertaken in the included domains. The included reviews, while of various quality, illustrate that leadership is essential to the implementation of trauma-informed care.

Domain 2: Workforce Training and Development

All reviews (N = 14) had some findings related to workforce development (Avery et al., 2021; Bailey et al., 2019; Berger, 2019; Berger et al., 2023; Brown et al., 2022; Bryson et al., 2017; Coyle et al., 2019; Fernández et al., 2023; Huo et al., 2023; Lewis et al., 2023; Newton et al., 2024; Oral et al., 2020; Purtle, 2020**;** Roseby & Gascoigne, 2021). Training in trauma-informed care is one of the first steps to implementation (Berger et al., 2023; Fernández et al., 2023; Huo et al., 2023), and can help organisational readiness for implementation through changes in attitudes, knowledge and skills (Lewis et al., 2023; Oral et al., 2020; Roseby & Gascoigne, 2021).

Table 4 (continued)

Author and year	Aim and setting	Total sample N	Primary studies N	Characteristics/models of interventions	Control groups	Findings	JBI quality appraisal
Berger et al. (2023)	To explore current evidence-based, Trauma-Informed Physical Activity programs for young people	(N = 622)	(N = 19) 1 Cohort study 4 Qualitative 1 Quasi-experimental 1 Mixed method quasi experimental 2 Mixed method pre-post 1 Mixed method 2 Quant descriptive 3 Case study 2 Quant pre-post 1 RCT	1: 12-week 60-min yoga sessions 2: 14-week yoga-based psychotherapy program with trauma-informed mental health treatment 1 Sports-based intervention (Do the Good Curriculum) with regular treatment 6 Trauma-informed yoga intervention 1 General physical activity—Not a specific program 1 EFT-CT 1 yoga and mindfulness intervention (Mind Body Self-Regulation Yoga)—developed as a trauma-informed intervention 1 Family Enrichment Adventure Therapy (FEAT) in addition to individual, group, and family therapy (talk therapy) 1 trauma-informed practices with Bounce Back League (BBL) program 1 Doc Wayne Sports/ Behavioral therapy program—Chalk Talk sports-based group therapy program 1 Proprioceptive Activities to Lower Stress (PALS) program		Most Trauma-Informed Physical Activity programs reviewed resulted in positive social, emotional, behavioral, and academic outcomes for children and adolescents. Program facilitators reported on the benefits of support and professional development opportunities for trauma awareness to administer Trauma-Informed Physical Activity programs. A limitation of the studies is the apparent lack of high-quality research concerning TIPA	5 Low

Table 4 (continued)

Author and year	Aim and setting	Total sample N	Primary studies N	Characteristics/models of interventions	Control groups	Findings	JBI quality appraisal
Huo et al. (2023)	Factors that promote or reduce the implementation of TIC in healthcare settings	(N = 27 organisations)	(N = 27) 9 Case study 2 Case study pre-post 3 Case series 4 Cross-sectional 7 Single group pre-post 1 Single group longitudinal 1 interrupted time series	Strategies used to implement the principles of TIC were similar across the included studies. Mapped to the ERIC compilation of implementation strategies, all but one study included some form of staff education and training, ranging from a single educational meeting (e.g., implementing train-the-trainer strategies providing regular clinical supervision creating learning collaboratives modelling change developing educational materials for new employees to conducting ongoing training. Some programs identified and prepared 'champions', who received (or had pre-existing) a higher level of training and were available as peer mentors while others committed resources to the ongoing availability of experts for consultation. Most studies paired staff training and education with other implementation strategies to embed TIC throughout services		The barriers and facilitators of implementing trauma-informed care were categorised as follows: intervention characteristics (perceived relevance of trauma-informed care to the health setting and target population), influences external to the organisation (e.g. interagency collaboration or the actions of other agencies) and influences within the organisation in which implementation occurred (e.g. leadership engagement, financial and staffing resources and policy and procedure changes that promote flexibility in protocols). Other factors related to the implementation processes (e.g. flexible and accessible training, service user feedback and the collection and review of initiative outcomes) and finally the characteristics of individuals within the service or system such as a resistance to change Limitations included that most of the included studies were case studies describing a discrete implementation site or region, without a control condition	10 High

Table 4 (continued)

Author and year	Aim and setting	Total sample N	Primary studies N	Characteristics/models of interventions	Control groups	Findings	JBI quality appraisal
Brown et al. (2022)	The range of TIC interventions in emergency medicine with a focus on patient and clinician outcomes, and identifies gaps in the current research on implementing TIC	(N = 677)	(N = 10) 2 RCT 1 Mixed methods 1 Participatory action research 1 Case study 1 Needs assessment education intervention design	2 Needs assessment education intervention 1 Educational intervention to decrease use of restraints in ED 1 Web-based training on general TIC principles for paediatric patients 1 Modular didactic education on TIC and mental health in ED 1 victims of human trafficking (HEAL Toolkit) 1 TIC response to the Boston Marathon bombings 1 TIC assessment and intervention for suicide prevention 1 Assessment, case management, mentoring, psychoeducational groups, case review	1 control group 1 treatment as usual	Themes within TIC interventions that emerged included educational interventions, collaborations with allied health professionals and community organizations, and patient and clinician safety interventions. Educational interventions included lectures, online modules, and standardized patient exercises. Collaborations with community organizations focused on addressing social determinants of health. All interventions suggested a positive impact from TIC on either clinicians or patients, but outcomes data remain limited Trauma-informed care is a nascent field in EM with limited operationalization of TIC approaches	10 High

Table 4 (continued)

Author and year	Aim and setting	Total sample N	Primary studies N	Characteristics/models of interventions	Control groups	Findings	JBI quality appraisal
Avery et al. (2021)	Empirical evidence for school-wide trauma-informed approaches that met at least two of the three essential elements of trauma-informed systems defined by SAMSHA	(N = 1586)	(N = 4) 1 Single group pre-post 1 Multiple group pre-post 1 qualitative 1 Mixed methods	1 The Healthy Environments and Response to Trauma in Schools (HEARTS) Model 1 The Heart of Teaching and Learning (HTL): 1 Compassion, Resiliency, and Academic Success Model 1 The New Haven Trauma Coalition (NHTC) and The Trust-Based Relational Intervention	N/A	Although heterogeneous, the models shared core elements of trauma-informed staff training, organization-level changes, and practice change, with most models utilizing student trauma-screening. Generalizability of the findings was low given the small number of studies, the mix of mainstream and specialist schools and high risk of bias	8 Moderate
Roseby and Gascoigne (2021)	Trauma-informed education programs and their impact on academic and academic-related outcomes	(N = 5711)	(N = 15) 10 Quantitative 5 Qualitative	Eight different trauma-informed theories and models were identified 1 Attachment, self-regulation and competency (ARC) model 1 Berry St education model (BSEM) 1Multitiered system of supports 1 PACE Centre for Girls 1 Risking connection 1 School-based collaboration 1 The heart of teaching and learning: 1 Individualized model	N/A	Academic and academic-related outcomes reported included attendance, disciplinary referrals, suspension, and academic achievement, as well as student resilience, school attachment, and emotional presentation. Review findings highlight that trauma-informed education programs can improve students' academic and academic-related outcomes; however, results were not consistent across the studies	6 Low

Table 4 (continued)

Author and year	Aim and setting	Total sample N	Primary studies N	Characteristics/models of interventions	Control groups	Findings	JBI quality appraisal
Purtle (2020)	Studies that evaluated the effects of organizational interventions that included a "trauma-informed" staff training component	(N = 16,328)	(N = 23) 17 pre-test/post-test design, 5 randomized controlled design, 1 quasi-experimental design with a non-randomized control group	The duration of trauma-informed trainings ranged from 1 h to multiple days		Staff knowledge, attitudes, and behaviors related to trauma-informed practice improved significantly pre-/posttraining in 12 studies and 7 studies found that these improvements were retained at ≥ 1 month follow-up. Eight studies assessed the effects of a trauma-informed organizational intervention on client outcomes, five of which found statistically significantly improvements There were serious limitations related to study design, measurement, and analysis in many of the evaluations. In 12 of the studies, staff knowledge, attitudes, and/or behaviors were assessed using questionnaires that were developed by the intervention developers for the purpose of the evaluation	4 Low

Table 4 (continued)

Author and year	Aim and setting	Total sample N	Primary studies N	Characteristics/models of interventions	Control groups	Findings	JBI quality appraisal
Oral et al. (2020)	How trauma-informed care is being implemented in healthcare settings nationally. We then review efforts by states to implement TIC in multiple systems of care including healthcare, education, juvenile justice, and child welfare settings	Not available	(N = 144) Methodology of included studies not available	59 articles discussed TIC and ACEs 38 articles discussed the implementation of TIC in healthcare, 14 articles discussed changes in practice related to TIC, 19 articles discussed the impact of TIC on child and family health outcomes, 29 articles discussed statewide TIC efforts, 8 articles discussed primary prevention of childhood adversity and trauma, 8 articles discussed barriers and gaps related to implementation of TIC	N/A	Findings and limitations are unclear. No extracted data proforma	5 Low
Bailey et al. (2019)	To investigate the current empirical evidence for organisation-wide, trauma-informed therapeutic care models in out of home care	(N = 1089)	(N = 7) 2 Quantitative evaluation naturalistic data 1 Quantitative correlational 1 Interrupted time series 1 N/A 1 Qualitative 1 Mixed methos quasi experiential pre-post	1 Attachment Regulation and Competency framework (ARC), 1 Children and Residential Experiences programme (CARE) 3 The Sanctuary Model	1 comparison group	Only limited information was provided on the effectiveness of the models identified through this systematic review, although the evidence did suggest that trauma-informed care models may have significantly positive outcomes for children. Risk of bias was high in six of the seven studies	6 Low

Table 4 (continued)

Author and year	Aim and setting	Total sample N	Primary studies N	Characteristics/models of interventions	Control groups	Findings	JBI quality appraisal
Coyle et al. (2019)	Trauma-related training relationship with, or impact on, mental health professionals' frequency of asking about, or detection of, trauma history	(N = 780)	(N = 9) 2 Experiential 2 Quasi-experimental (pre-post) 1 Quasi-experimental/file audit analysis 1 Cluster randomised control design 1 Survey evaluation 3 Cross-sectional	Various trainings and various duration, all content not available	3 controls	Two-thirds of studies reported statistically significant evidence to suggest that trauma-related training is related to (1) increased frequency of asking about trauma history and (2) greater detection of trauma history. Limited number and variable quality of studies, as well as the failure to detect statistical significance in all studies	7 Moderate
Berger (2019)	To explore evidence on multi-tiered, trauma-informed approaches to address trauma in schools	(N = 3467)	(N = 13) 1 Post evaluation 3 pre-post 6 pre–post-evaluation 1 Qualitative 1 RCT 1 experimental	2 Healthy Environments and Response to Trauma in Schools (HEARTS) 1 Health of Immigrant Families and Adolescents (SHIFA) 1 Skills for life (SFL) 1 Rural school-based trauma treatment program Louisiana Rural Trauma Services Centre 2 Head Start Trauma Smart (HSTS) 1 Response to intervention (RTI) pyramid model 1 TGCT intervention 1 Supportive trauma interventions for educators (STRIVE) 1 Clifford beers clinic (CBC) 1 Partnership Program for Early Childhood Mental Health and Project		One of the main limitations of research on multi-tiered models of trauma care in schools is the lack of inclusion and evaluation of school staff training within these frameworks. Findings indicated that further research, guided by empirical evidence of the effectiveness of multi-tiered and trauma-sensitive approaches in schools, is required	5 Low

Table 4 (continued)

Author and year	Aim and setting	Total sample N	Primary studies N	Characteristics/models of interventions	Control groups	Findings	JBI quality appraisal
Bryson et al. (2017)	Effective strategies for implementing trauma-informed care in youth inpatient psychiatric and residential treatment settings	(N = 8923)	(N = 13) 1 Retrospective analysis of organisations data 3 Pre-post 1 Qualitative 1 Longitudinal pre-post 5 Quantitative 1 Quasi experimental	1 Attachment, self-regulation, and competency framework 1 Trauma-informed program self-assessment 2 Six Core Strategies 2 Collaborative Problem Solving 1 Sanctuary Model 2 Risking Connection 1 Fairy Tale Model 1 Devereaux's safe and positive approaches 1 Quality plus program 1 Restraint reduction meeting		Five factors were instrumental in implementing trauma informed care across a spectrum of initiatives: senior leadership commitment, sufficient staff support, amplifying the voices of patients and families, aligning policy and programming with trauma informed principles, and using data to help motivate change Findings of the review should thus be approached with scepticism and applied with caution	5 Low

Training was provided to employees and leadership in various models and trauma-informed practices (e.g. Avery et al., 2021; Brown et al., 2022; Newton et al., 2024; Purtle, 2020), or developed for specific populations of service users (Brown et al., 2022). Coyle et al. (2019) review demonstrated that training in trauma-informed care improves how practitioners ask about trauma experiences, and also helps to detect more trauma in service users, while Oral et al. (2020) found that training quadrupled the proportion of trauma screening provided to service users. Other workforce development provided in organisations was of a more self-care/professional development variety, and included, for example, reflective practise (Bailey et al., 2019), the prevention of vicarious trauma (Lewis et al., 2023; Oral et al., 2020; Purtle, 2020) and employee supports (Bryson et al., 2017), such as trauma informed supervision (Lewis et al., 2023). In a low quality review, Purtle (2020) demonstrated that trauma-informed employee training impacted positively on service user outcomes, while two other reviews further report that employee training in trauma informed care changed employee attitudes and behaviours towards service users (Coyle et al., 2019; Purtle, 2020).

Domain 3: Screening, Assessment and Treatment

Six reviews (N = 6) made reference to the screening and treatment domain (Brown et al., 2022; Coyle et al., 2019; Fernández et al., 2023; Lewis et al., 2023; Oral et al., 2020; Roseby & Gascoigne, 2021). Universal screening was discussed as an important component of trauma informed care (Brown et al., 2022; Coyle et al., 2019; Lewis et al., 2023; Oral et al., 2020). However, in the Lewis et al. (2023) review, it was reported that screening for prior trauma can be considered 'controversial', and some employees show 'resistance' to screening.

From a trauma specific treatment perspective, (N = 4) reviews reported on psychotherapeutic services as part of the wider organisational approach (Fernández et al., 2023; Lewis et al., 2023; Oral et al., 2020; Roseby & Gascoigne, 2021). In addition, other than Avery et al. (2021) there was no mention of cultural competencies in the reviews.

Domain 4: Policy

Six reviews (N = 6) reported on the importance of changing or adapting organisation policy to help implement trauma -informed care. When policy is aligned more closely with the principles and practices of trauma informed care, then organisations will be more successful with its uptake and implementation as these policies can help support cultural change (Bryson et al., 2017; Fernández et al., 2023; Huo et al., 2023; Lewis et al., 2023; Oral et al., 2020; Purtle, 2020).

Domain 5: Physical Environment

The physical environment in which trauma-informed care is being considered for implementation remain important, and were the focus of (N = 5) reviews (Berger et al., 2023; Fernández et al., 2023; Lewis et al., 2023; Oral et al., 2020; Roseby & Gascoigne, 2021). Adaption to the physical environment included more gender responsive spaces for women and children (Lewis et al., 2023; Roseby & Gascoigne, 2021), development of safe spaces (Fernández et al., 2023), redesigning spaces and opening times (Lewis et al., 2023), and consideration of where services are located and impact on service user access (Berger et al., 2023; Oral et al., 2020).

Domain 6: Cross-sector Collaboration

Seven reviews (N = 7) discussed the importance of collaboration with other practitioners and organisations to meet the needs of those who have experienced prior trauma (Berger, 2019; Berger et al., 2023; Brown et al., 2022; Fernández et al., 2023; Huo et al., 2023; Lewis et al., 2023; Oral et al., 2020).

Collaboration is seen as important to provide referrals to meet mental health and other social determinants of health needs (Berger, 2019; Brown et al., 2022; Fernández et al., 2023; Oral et al., 2020). Collaboration is essential to meet service users' needs, and was identified as both a barrier and facilitator to implementation (Huo et al., 2023).

Domain 7: Engagement and Involvement

Service user and engagement is integral to trauma-informed care. Six reviews (N = 6) underscored the importance of incorporating service user feedback and voice (Berger, 2019; Berger et al., 2023; Bryson et al., 2017; Fernández et al., 2023; Huo et al., 2023; Lewis et al., 2023), however it was not always clear how this was achieved. Lewis et al. (2023) describes the use of service users on committees and working groups, and also hiring those with lived experience as advisors to help form and direct programmes, however, it is unclear what mechanisms are used on a more local/intervention level to achieve these aims. While Oral et al. (2020) describes bringing stakeholder groups together to develop policy to inform implementation. Again, Huo et al. (2023) identify a lack of service user feedback as being a potential barrier to implementation.

Domain 8: Financing

There was little information on funding other than (N = 3) reviews reporting it as important to have a budget to resource implementation and resourcing for areas such as employee training and workforce development (Huo et al., 2023; Lewis et al., 2023; Roseby & Gascoigne, 2021). However, the use and financing of peer support was not a focus of any of the reviews. Huo et al. (2023) describe funding for trauma informed services as essential and that it can act as both a barrier and facilitator to successful implementation.

Domain 9: Progress Monitoring and Quality Assurance

Eight reviews (N = 8) reported on various methods of collecting information and data from service users and employees to help further and evidence trauma informed care within organisations (Avery et al., 2021; Berger, 2019; Brown et al., 2022; Bryson et al., 2017; Fernández et al., 2023; Huo et al., 2023; Lewis et al., 2023; Purtle, 2020).

A host of measurement tools were used to monitor and capture organisational wide implementation (Avery et al., 2021; Berger, 2019; Lewis et al., 2023). Fernández et al. (2023) report employee perceptions as the most prevalent measure, followed by safety management and psychological functioning. Similarly, service user outcomes are reported as being monitored by Brown et al. (2022) and Purtle (2020). The use of data to maintain fidelity to trauma informed principles and to motivate change was also discussed in (N = 2) reviews as important (Berger, 2019; Bryson et al., 2017).

Domain 10: Evaluation

Evaluation is an essential domain for trauma-informed organisations, and data can be used to improve and evidence the effectiveness of interventions, information can thus be used as part of a feedback cycle for further improvement. However, across the (N = 311) studies only (N = 7) evaluations were noted in (N = 3) reviews (Bailey et al., 2019; Berger, 2019; Coyle et al., 2019), suggesting that this domain is the least developed within the trauma informed care extant literature.

Discussion

This umbrella review sought to examine trauma-informed approaches that included at least one of the 10 trauma informed implementation domains. A total of (N = 14) systematic reviews are included that had a combined study count of (N = 311), with a total sample size of (N = 157,724). Critical appraisal categorised studies as 28% high quality, 22% moderate quality, and 50% as low quality. 62 different models of trauma informed care were discussed across the reviews. Most reviews (50%) were conducted with youth populations. Overall, a host of outcomes were described for service users, employees and implementation, however, the evidence is mixed, inconsistent, and of a low quality.

Implementing programs and evidence based practices is not without difficulty (Chapman et al., 2023; Fixsen et al., 2005), and implementing organisational trauma-informed care can be especially difficult as evidenced by this review. As such, the use of a framework or model supported by the implementation domains described here will likely help escalate the implementation process, this is especially the case is the monitoring and evaluation domains are leveraged to the fullest extent.

The model of trauma-informed care chosen will depend on the context, and whether providers are seeking to implement in educational settings (Avery et al., 2021; Berger, 2019; Newton et al., 2024; Roseby & Gascoigne, 2021), or other health settings (Bloom, 2017; Lewis et al., 2023; Mahon, 2022a, 2022b). It is likely that these models share core ingredients, so context may be more important than a specific model for implementation.

Support from leadership is essential for implementing trauma-informed care (Brown et al., 2022; Bryson et al., 2017; Fernández et al., 2023). Leaders can mobilise employees and resources, champion implementation and provide vision. Lewis et al. (2023) describes leadership as one of the least common components of trauma-informed care discussed in their review, indicating that not all research studies provide data on this domain. Leadership can act as a barrier or facilitator to implementation, therefore, it is essential to have leadership across systems of care involved in change efforts. Mahon (2022a, 2022b) uses an ecological model to promote trauma-informed implementation, and describes how servant leadership may be an ideal trauma-informed model of leadership. Other research supports this with a servant leadership model of supervision found to reduce burnout and secondary trauma in mental health practitioners (Grunhaus et al., 2023). Burnout and secondary trauma responses were identified as specific concerns for trauma-informed organisations in this review (Bailey et al., 2019; Lewis et al., 2023). Thus, when considering implementing trauma-informed care, organisations should identify the specific skills that they need from leaders, and provide training in these competencies, and servant leadership with its focus on psychological safety and burnout may be an ideal approach (Mahon, 2024).

Leaders should have some type of financial management skills to develop trauma-informed budgets, however, the availability of financial resources is crucial (Huo et al., 2023; Lewis et al., 2023; Roseby & Gascoigne, 2021). Leaders should also be proficient in policy development with an ability to align policy to trauma-informed principles (Fernández et al., 2023; Huo et al., 2023; Lewis et al., 2023). Furthermore, leadership need to take a collegial approach to involvement and engagement of service users, providing space for service users to have a voice on the design and implementation of services is essential (Lewis et al., 2023). One approach that may prove useful for service user involvement, and a core principle of trauma-informed care, is peer support work (Mahon, 2022a, 2022b), however, there was little by way of findings speaking to this in the current reviews.

Research suggests that peer support can be a helpful intervention across the health and social care settings, with peers instilling hope and helping marginalised service users access care. Indeed, a previous scoping review of peer support work with refugees and asylum seekers suggests that peer support can help this population heal from trauma (Mahon, 2022a, 2022b).

The training and development of the workforce remains an important and ongoing consideration. SAMSHA recommends initial training in trauma informed care principles, with ongoing and refresher training (SAMSHA, 2014). Indeed, training and refresher training can act as a facilitator during implementation (Huo et al., 2023). The purpose of training should be to build awareness, knowledge and skills in trauma -informed care to improve the outcomes of service users (Purtle, 2020). Training has demonstrated to have a positive impact on practitioners behaviour (Purtle, 2020), especially with regard to screening for trauma incidence and detecting such experiences (Brown et al., 2022; Coyle et al., 2019; Lewis et al., 2023; Oral et al., 2020). However, implementation efforts should consider the type of screening instruments used, and the composition of psychometric properties, especially for use in educational settings (Eklund et al., 2018). When trauma has been identified through screening, timely access to further assessment and referral through inter-agency collaboration is recommended (Berger, 2019; Brown et al., 2022; Fernández et al., 2023; Oral et al., 2020).

A comprehensive assessment should be conducted prior to treatment provision, however, assessments should be carried out in a manner that limits the possibility of re-traumatisation. Sweeney et al. (2022) proposes survivor led guidelines for conducting psychological assessments which should be incorporated into organisations practices. Where trauma-focused psychotherapy is identified as needed, a range of evidence based therapies can be considered (Benish et al., 2008; Jericho et al., 2022; Thielemann et al., 2022). Almost exclusively absent from this review was a focus on cultural responsiveness (Avery et al., 2021), both the organisational approach (SAMHSA, 2014), and trauma therapies should be underpinned by cultural responsiveness, as should supervision for employees (Mahon, 2024).

Monitoring service user outcomes is essential. Several studies in this review provided some evidence that trauma informed approaches helped improve symptoms or quality of life (Brown et al., 2022; Purtle, 2020). However, the quality of this evidence needs to be considered with caution. Additionally, the type of outcomes assessed need to be thought

about carefully and based on trauma-informed principles such as choice and preference.

Providers can achieve some of these aims by developing a strong therapeutic alliance with clients, and offering a menu of options. For example, in two large studies with over 160,000 clients inclusive of adults, and young people and their carers, research demonstrated that using psychometrically sound therapeutic alliance and global distress measures to monitor treatment resulted in effective care, while providing a platform for incorporating service user choice, preferences and feedback (Mahon et al., 2023a, 2023b, 2024). In that study, where alliance ruptures were not identified and repaired, service users had outcomes up to 50% worse. This is not surprising as the therapeutic alliance is one of the strongest predictors of outcome in trauma treatment (Wampold & Imel, 2015).

The physical environment where trauma-informed care is delivered often needs adaptations. Gendered interventions and developing safe spaces within agencies have been identified as important components of trauma-responsive systems (Berger et al., 2023; Fernández et al., 2023; Lewis et al., 2023; Oral et al., 2020; Roseby & Gascoigne, 2021). Organisations should also consider how the location where they are based can help or hinder access by certain marginalised groups. Organisations who can provide behaviour and mental health services through a primary care system may mitigate some of the inherent difficulties with interagency approaches (Oral et al., 2020). Organisational climate remains an important feature of psychosocial care, where an organisation is located, and how it is structured and resourced can improve outcomes for service users (Mahon et al., 2023a, 2023b). This may be especially true for underserved or minoritised service users, and those impacted negatively by the social determinants of health (Brown et al., 2022).

Finally, developing evaluation methods to evidence trauma-informed implementation can be tricky (Hanson & Lang, 2016). The evidence of evaluation at the organisational level in this review is rather limited, with only scant focus on service evaluation. On the other hand, it is important to understand if trauma-informed systems are effective, or more effective than treatment as usual for young people, adults, and families (Hanson et al., 2018). Previous research has documented that trauma-informed care is more effective across various service user and cost effectiveness outcomes (Chung et al., 2009; Domino et al., 2005; Finkeistein & Markoff, 2004; Morrissey et al., 2005). As such, documenting these outcomes is essential for organisations implementing trauma -informed care. In their systematic review of measures to capture system wide implementation, Champine et al. (2019) highlight some of the problems with developing system measures and their psychometric properties.

However, their review identifies various instruments that can be used with youth, and adults within services and community contexts, and those implementing trauma wide care should assess this research to find the best fit, for their specific circumstances.

Implication for Practice

Implementing trauma-informed care at the organisational level is not without difficulty, and necessitates a cultural paradigm shift in how service provision is organised and delivered. Based on the finding from this umbrella review, the following evidence-based recommendations are provided. Organisational wide implementation should begin with a planning phase to assess the needs, resources, policy change and financing of implementation. Leadership should ensure an engaged approach to this process with stakeholder involvement, with a specific focus on lived experience representation. Leadership buy in is essential, leaders can champion implementation and provide the necessary guidance and support to employees.

Initial and ongoing training in how to identify and respond to trauma based on the '4R's' should be provided to those involved. Training should help change practices and attitudes, through the development of new knowledge, skills and competencies. Refresher trainings, and training for new employees should also be provided, supervisors and leadership will also need training specific to their roles and tasks. Core training should include the six principles of trauma-informed care proposed by SAMSHA, however, other models may be more suitable depending on the context and population of service users. Employee wellbeing should also be considered, with trauma-informed leadership and supervision providing the strongest evidence for mitigating against burnout.

The development of trauma-informed communities is recommended, this can be a helpful resource for interagency collaboration to refer service users for additional care. Universal screening should be conducted as part of a wider assessment and case management service that incorporates the principles of trauma-informed care in order to resist re-traumatisation. Care should be monitored accordingly using a range of outcome and therapeutic alliance measures. Measures should be based on strong psychometric properties, and the composition should ensure domains that are important to service users, and that service users have choice, preference and their feedback is listened to.

Evaluations should be conducted of implementation and ongoing service provision periodically, using appropriate measures. Organisational policy should underpin all of this work.

Limitations and Future Directions

While this is the first umbrella review of systematic reviews conducted in this area, it is not without limitations. Firstly, it is best practice to conduct evidence synthesis with more than one author, and while a limitation, the a priori design coupled with strict criteria from PCC and data extraction methods does go some way to mitigating possible bias. Secondly, it is possible that the research strategy did not find all systematic reviews that would have met inclusion, and that the search strategy may have missed important key words. Furthermore, it's likely that grey literature by way of reports not published are in the public domain. Thirdly, although there is positive findings across service user and organisational contexts from the individual systematic reviews included, this effectiveness needs to be interpreted with caution as 50% of the reviews were appraised as being of low quality. Moreover, most of the individual studies included in each review were at high risk of bias, further complicating assessment.

Based on the findings of this review, it is strongly recommended that more research is conduced across various contexts, populations and using differentiated methodologies. Trauma-informed care is a hot topic, and it is being promoted assertively in all contexts. However, a very detailed search failed to find any systematic reviews in substance use, homelessness or the criminal justice system, and half of the reviews were conducted on youth populations. While single studies are plentiful, evidence-based decision making should be informed by evidence synthesis; as such, more studies are needed in areas such as addiction, homelessness and criminal justice. In addition, while there were very little experiential studies or control groups included in the reviews this is not unexpected, as randomised control trials are extremely difficult to conduct on system wide interventions. Thus, further research using comparisons or control groups might only prove useful for specific components of trauma-informed care such as assessment and treatment, while organisational implementation may be more suited to evaluations, time series studies, pre-post longitudinal studies, and qualitative research to help improve implementation across the organisation. Finally, as a priority, future research should include cultural competencies and peer support works as both these areas are understudied principles of trauma-informed care.

Conclusion

This umbrella review of systematic reviews included (N = 14) studies. The reviews had a combined study count of (N = 311), with a total sample size of (N = 157,724). The quality of the included reviews was on average low, with mixed findings of effectiveness and implementation. Based on the findings from this review, we can conclude that organisational wide trauma-informed care is still an evidence based aspiration as opposed to reality. However, for organisations considering implementing this approach, using the 10 trauma-informed implementation domains described here will provide a framework and structure to assist with shifting the culture within systems of care.

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Declarations

Conflict of interest The authors declared that they have no conflict of interest.

Ethical Approval Ethical review and approval were waived for this study as per advice from the NHS Health Research Authority (UK) decision tool, since it is umbrella review of previously published literature.

Informed Consent Participant consent was waived since no members of the public were involved in thedesign, conduct of this study, or reporting of this research.

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