International Journal of Mental Health Nursing

International Journal of Mental Health Nursing (2022) ••, ••–•• doi: 10.1111/inm.13048

Review Article

The impact of trauma-informed suicide prevention approaches: A systematic review of evidence across the lifespan

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ABSTRACT: *Trauma is associated with an increased likelihood of experiencing suicidality, indicating the need for and potential value of trauma-informed suicide prevention strategies. The aim of this study is to systematically review published literature regarding trauma-informed approaches for suicide prevention, and the impact on suicide outcomes. Systematic searches were conducted in eight databases (Medline, Embase, PsycInfo, Emcare, Nursing, and JBI in the Ovid platform; as well as ProQuest Psychology Database and The Cochrane Library) in March 2022, with no publication date limit. Four studies met the inclusion criteria: two randomized controlled trials and two quasi-experimental studies. Two studies reported reductions in ideation, intent, and behaviour among youth and a cultural minority group. Few studies directly reporting suicide outcomes were identified, all were quantitative, and heterogeneity prevents generalizability across population groups. Currently, there is limited evidence focusing specifically on trauma-informed suicide prevention across the lifespan. Additional research, incorporating lived experience voices, is needed to understand the potential of this approach, as well as how mental health nurses can incorporate these approaches into their practice.*

KEY WORDS: *lifespan, suicide prevention, systematic review, trauma-informed.*

Suicide is a significant global public health concern. It is estimated that more than 700 000 people die by suicide globally every year (World Health Organization 2021) and that for everyone that dies from suicide up to 135 people are exposed (know the person) (Cerel *et al*. 2019). In 2020, 3139 people in Australia died by suicide, representing an average of nine people per day. The age-standardized mean suicide rate in 2020 was 12.1 per 100 000 population. In 2020, 454 young people aged 15–24 died by suicide, representing 21.2 deaths per 100 000 people. Over one-third of deaths in 15–24 year olds are due to suicide. Suicide was the most common cause of death for adults aged 15–44, with 1612 deaths by suicide in this group (Australian Bureau of Statistics 2021; Suicide Prevention Australia 2021). Recent data on suicide deaths in Australia also reveal high prevalence rates in regional and rural areas (Austin *et al*. 2018), as well as among people who belong to minority groups, such as Aboriginal and Torres Strait Islander people (Suicide Prevention Australia 2021) and members of the LGBTIQ+ community (LGBTIQ+ Health Australia 2021).

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Declaration of conflict of interest: All authors declare they have no conflict of interest.

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Accepted July 19 2022.

People who die by or attempt suicide and those who engage in self-harm have elevated rates of trauma exposure (Asarnow *et al*. 2020). The experience of individual trauma can result 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 social, emotional, physical functioning, and mental or spiritual well-being (Procter *et al*. 2017). Trauma may include interpersonal violence (e.g. sexual, physical, or emotional abuse and neglect), unexpected loss, terrorism, war and displacement, natural disasters, and/or witnessing others experience these same traumas (Substance Abuse and Mental Health Services Administration 2014). While it is not the case for all people who experience trauma, many will experience trauma that is repetitive and prolonged, with pervasive impacts on the individuals themselves, as well as families, communities, and services (Substance Abuse and Mental Health Services Administration 2014).

We recognize the many potential complex outcomes from early trauma and disruptions to attachment, and difficulties experienced into adult life (Ford *et al*. 2021). People with trauma backgrounds do not respond to stress in the same way as those without trauma backgrounds. When stressed or experiencing a heightened state of emotional stimulation, they can experience feelings likened to be being re-traumatized from retrieval and re-living of traumatic memories, sensory information, or behaviours associated with earlier traumatic experiences (Van der Kolk 1994). The body's stress response system overstimulates arousal regulation which influences affect and behavioural regulation (Warner *et al*. 2013).

Yatchmenoff *et al*. (2017) summarize through a narrative evidence review trauma-informed principles across three domains, safety, power, and self-worth, to address complex emotions and distress experienced by people dealing with a history of trauma and parallel experiences of fear, powerlessness, and a sense of feelings of worthless. Trauma-informed approaches seek to avoid re-traumatization by empowering individuals in decision making, creating safety and trust, choice and collaboration, and building strengths and skills in personal problem solving and mental health. Substance Abuse and Mental Health Services Administration (2014) describe the following as core principles of trauma-informed practice: establishing physical and psychological safety; trustworthiness and transparency; peer support; collaboration and mutuality; empowerment, voice, and choice; taking full account of intersectionality related to cultural, historical, and gender issues. A trauma-informed mental health nurse, health service or support system is one that is trauma aware and actively resists re-traumatization. Being trauma-informed at individual or system levels involves making conscious effort to understand and be responsive to the deeply personal impact and meaning a person ascribes to their experience of trauma, helping people who have been affected by it to feel physically and psychologically safe and to rebuild a sense of control and empowerment. To do this, finding ways to bring empowerment into all interactions with individuals can be both comforting and supportive.

Symptoms of trauma can be described as physical, cognitive, behavioural, and emotional. Physical symptoms can be exhibiting excessive alertness, on the lookout for signs of danger, fatigue/exhaustion, disturbed sleep, and difficulty getting through in certain circumstances. Cognitive (thinking) symptoms involve intrusive thoughts, memories and visual images of the event, nightmares, poor concentration and memory, disorientation, and confusion (Substance Abuse and Mental Health Services Administration 2014). Additionally, behavioural symptoms can be described as avoidance of places or activities that are reminders of the event, social withdrawal, isolation, and loss of interest in normal activities. Emotional symptoms can include grief, detachment, depression, guilt, anger, anxiety, and panic. The combinations of physical, cognitive, behavioural, and emotional symptoms are all normal reactions to trauma. However, they can also be distressing to the individual and their loved ones.

People may present to healthcare services with a complex range of difficulties and distress related to past trauma. If mental health nurses and other practitioners do not recognize these difficulties as being related to the trauma, the service response may be uninformed and fragmented, which could potentially re-traumatize the individual (Wall *et al*. 2016), reinforce feeling unsafe and undermine how mental health provide support (Isobel *et al*. 2021). For Aboriginal and Torres Strait Islander Australians, dispossession, generational trauma, grief, and loss following colonization permeate systems of care and contribute to mistrust (Geia *et al*. 2020). Re-traumatization is linked to additional mental, social, and emotional distress. A range of factors can be re-traumatizing for individuals and not accurately responsive to their trauma history, including the physical and social environment and manner of questioning by staff. Service providers can be

inadvertently invalidating someone's experiences and therefore re-enforcing distressing behaviours and coping experiences (Levenson 2014). For example, historically, it has been common practice to utilize seclusion and restraint as interventions to respond to people who display behaviours associated with trauma, including distress and aggression (Te Pou o et Whakaaro Nui 2011). However, the use of these strategies, as well as the environment within an emergency department, for example, can be re-traumatizing for the individual and the staff members involved and are likely to impact the person's degree of comfort or willingness to re-engage in such services (Molloy *et al*. 2020). This may destabilize a person's treatment and care and perhaps most significantly the therapeutic alliance between the individual and primary practitioners (Muskett 2014; Wigham & Emerson 2015). We use this example to highlight the potential for certain practices to be re-traumatizing for people.

This has major implications for suicide prevention. Mental health nurses and other first point contacts for people experiencing suicide-related distress have an important role to play in actively resisting or reducing re-traumatization, which can in turn prevent the onset, or worsening, of distress. Given the known dose–response relationship between trauma exposure and later adverse outcomes (Grummitt *et al*. 2022), and the established connection between trauma and suicidal behaviour, it is timely to review trauma-informed interventions for suicide in order to best inform evidence-based, trauma-informed suicide prevention practice. The aim of this systematic review is to examine the international, peer-reviewed evidence of the impact of trauma-informed approaches to suicide prevention for people across the lifespan.

METHODS

This systematic review followed the PRISMA 2020 guidelines (Page *et al*. 2021).

Search strategy and information sources

A comprehensive search of several resources was undertaken to maximize the inclusion of all relevant studies. The search (developed by SO) was conducted on 11 March 2022 (MF), in eight databases: Medline (1946-current), Embase (1947-current), PsycINFO (1806-current), Emcare (1995-current), Nursing (1946-current) and JBI (1997-present) in the Ovid platform; as well as ProQuest Psychology Database (1920-current) and The Cochrane Library (1996-current). No date limits were placed on the search. Google Scholar was also searched to locate further potential results, as well as pearling of reference lists of the included studies. An example of the search strategy is in Appendix A.

Selection process

Titles and abstracts of all results were imported to EndNote 20 (The EndNote Team 2013), where duplicates were manually identified and removed. The remaining results were uploaded online into Covidence (Veritas Health Innovation Ltd 2018). HM and MF independently screened results at two stages: title and abstract, and full-text. Disagreements were discussed until a consensus was reached.

Eligibility criteria

Studies were considered eligible for inclusion if: they assessed and explored the impact of a trauma-informed approach, intervention or strategy for suicide prevention; the method was quantitative or qualitative (any design); the participants were of any age or background, and had received a trauma-informed approach to suicide in any setting (e.g. school, community, mental healthcare centre, and emergency department), provided by any health professionals, or qualified/trained educators; outcome measures included individuals' suicidal behaviours (ideation, thoughts, intent/attitudes) after receiving trauma-informed interventions or strategies; they were published in English language. Studies were excluded if: they were not primary research articles (e.g. discussion papers, editorials, conference abstracts, and books); there was no specific trauma-informed intervention, approach, or strategy to suicide prevention; the outcomes were not suicide-specific (e.g. broader mental health or health outcomes); they were not published in English language.

Data collection process

Data extraction was undertaken by SO, following established procedures (Othman *et al*. 2018), and was checked and reviewed by AP and MF. This included study citation and country, design and methods, sample size and setting(s), interventions, relevant outcome measures (i.e. suicide-specific), relevant findings (i.e. suicide-specific outcomes), conclusions, and recommendations.

Risk of bias assessment

Studies were assessed for risk of bias at the study level in duplicate (SO and AP), using two Joanna Briggs Institute critical appraisal tools (Tufanaru *et al*. 2020): randomized controlled trials (13 items) and quasi-experimental studies (nine items). Each item is rated as yes, no, unclear, or not applicable, with a total score given.

Synthesis of results

Due to the clinical heterogeneity of the included studies (e.g. interventions, study designs, and outcome measures), a meta-analysis could not be conducted. Therefore, the findings are presented in a narrative format, whereby the relevant results (i.e. suicide-specific outcomes) of each study are presented and discussed in text format, rather than performing any statistical synthesis.

RESULTS

A total of 430 articles resulted from searching eight databases. After removing duplicates, 347 results were screened, and one result was obtained from Google Scholar; subsequently, 22 results were eligible for full-text screening. No further results were obtained through pearling the reference lists of included studies. Figure 1 outlines the screening process and reasons for exclusion. A total of four studies were deemed eligible for inclusion.

Study characteristics

The included studies were published between 2019 and 2021, with three conducted in the United States (Hahm *et al*. 2019; Tyler *et al*. 2019, 2021), and one in Australia (Taylor *et al*. 2020). There was clinical

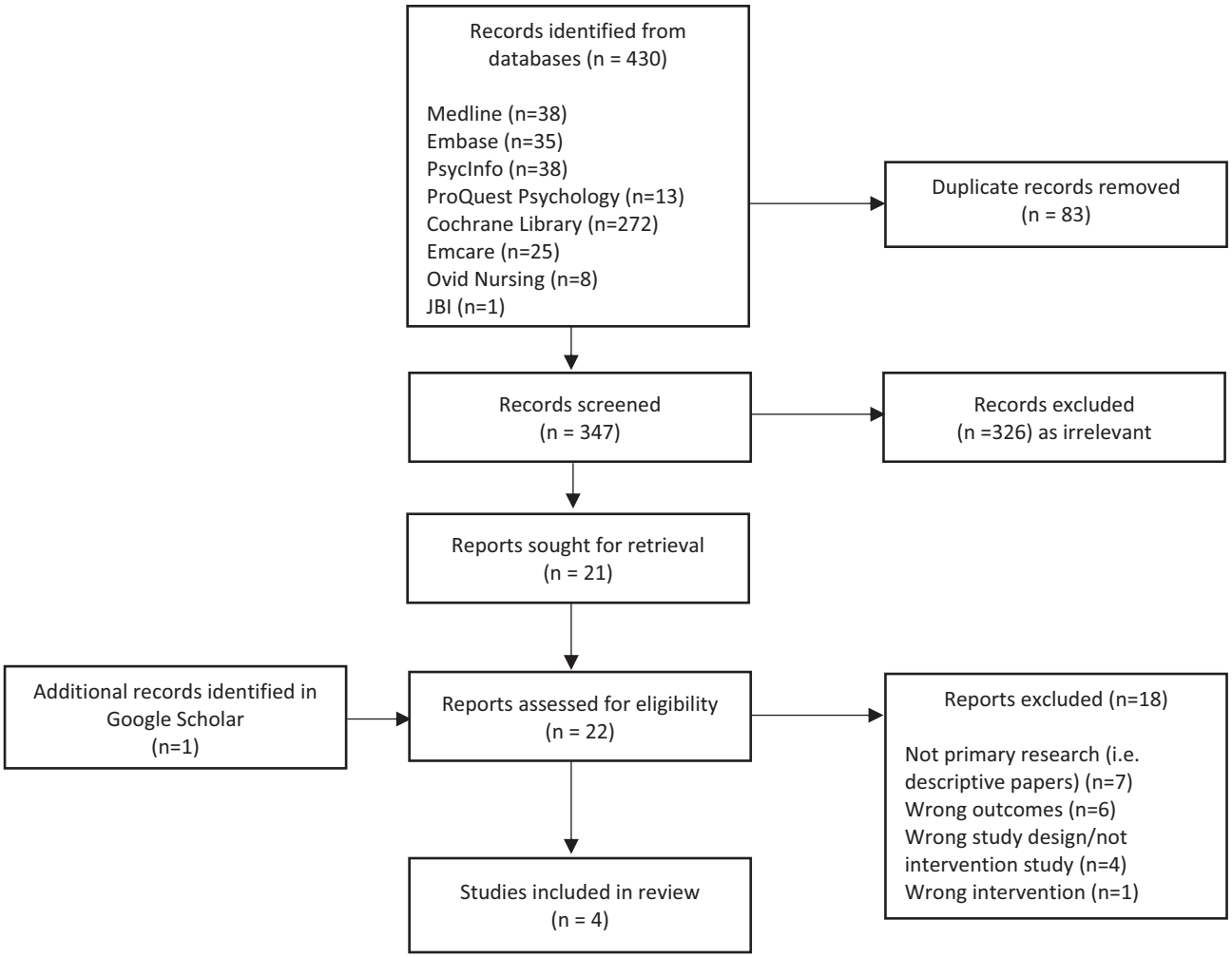

FIG. 1 Flowchart of screening process and reasons for exclusion.

heterogeneity of the included studies, such as study designs, participants, interventions, and outcome measures. The included studies were of a high level of evidence, with study designs including randomized controlled pilot trials (Hahm *et al*. 2019; Taylor *et al*. 2020), and quasi-experimental retrospective studies (Tyler *et al*. 2019, 2021). No qualitative studies met the criteria for inclusion.

All samples were participants who had been exposed to or experienced some form of trauma. Participants and sample sizes varied, from $n = 21$ junior doctors (Taylor *et al*. 2020) and $n = 63$ Asian American women (Hahm *et al*. 2019) in the two RCTs, to $n = 667$ (Tyler *et al*. 2021) and $n = 1096$ (Tyler *et al*. 2019) youth in the quasi-experimental studies.

As per the inclusion criteria, all studies evaluated interventions involving a trauma-informed approach. Trauma-informed interventions include identification of distress triggers, use of praise and encouragement to promote self-efficacy and empowerment, facilitation of calm and nurturing environments, and emphasis on relationship building. These programs varied from an 8-week, in-person gender- and culture-specific and trauma-informed group psychotherapy program (Hahm *et al*. 2019); to an 8-week, personalized and private, individualized trauma-informed yoga program (Taylor *et al*. 2020); to live-in, trauma-informed youth group homes (Tyler *et al*. 2019, 2021).

The studies used suicidal ideation (thoughts) and self-injurious behaviour as measures of suicide outcomes. In two cases, these were participant-reported, including the Columbia Suicide Severity Rating Scale (CSSRS; Hahm *et al*. 2019) and the Suicidal Ideation Attributes Scale (SIDAS; Taylor *et al*. 2020), whereas in the remaining two studies these were staff reported behavioural incidents (including self-destructive behaviour, suicidal ideation, and suicide attempt) (Tyler *et al*. 2019, 2021).

Key characteristics of included studies are summarized in Table 1.

Risk of bias within and across studies

All included studies achieved 'Yes' for at least 69% of the critical appraisal checklist questions. The two RCTs (Hahm *et al*. 2019; Taylor *et al*. 2020) both scored moderately (9/13), but were limited in that treatment allocation concealment was either absent or unclear; blinding of participants and those delivering treatment was absent; and blinding of assessors could not be determined. The quasi-experimental studies (Tyler *et al*. 2019, 2021) scored equally (7/9), with both lacking a control group and it not being possible to determine whether there were multiple measurements of the outcome. Full critical appraisal results at the study level can be found in Appendix B.

Impacts of trauma-informed suicide prevention approaches on suicidality

This review solely included studies which employed suicide-specific outcome measures. Suicidal ideation and intent were individually assessed in two studies, with only one of these finding significant improvements. Hahm *et al*.'s (2019) randomized controlled trial compared the Asian Women's Action for Resilience and Empowerment (AWARE) intervention – an 8-week, culture-specific and trauma-informed group psychotherapy program – with a wait-list control. For those in the intervention group ($n = 32$), there were significant reductions in suicidal ideation between baseline and post-intervention ($n = 22$ vs $n = 5$ participants, $P < 0.0001$) and between baseline and 3-month follow-up ($n = 22$ vs $n = 4$, $P < 0.0001$); and similar reductions in ideation between baseline and post-intervention ($n = 7$ vs $n = 0$, $P = 0.02$), and between baseline and 3-month follow-up ($n = 7$ vs $n = 0$, $P = 0.02$). Of note, similar reductions in ideation and intent were found within the control group between baseline and post-intervention, with no further reductions after completion of AWARE. In contrast, Taylor *et al*.'s (2020) single arm pilot RCT, exploring the impact of an 8-week trauma-informed personalized yoga program for junior doctors ($n = 21$), found no difference in suicidal ideation either between or within the intervention and control groups pre- and post-intervention.

Two studies by Tyler *et al*. (2019, 2021) examined changes in staff-reported self-injurious incidents – which included self-destructive behaviour, suicidal ideation, and suicide attempt – among youth living in trauma-informed group homes. Results were not separated for each of these three outcomes, but rather combined as the total number of incidents each month over a 1-year period. As such, it is not possible to determine whether these results relate more to ideation or actual behaviour. In the first study (Tyler *et al*. 2019), youth ($n = 1096$) demonstrated a significant initial deceleration in incidents in the first month ($P = 0.004$), but a non-significant reduction over the remaining 11 months. In the second study (Tyler *et al*. 2021), there was a similar, but non-significant

TABLE 1 *Summary details of* n = *4 included studies*

Study	Study design	Setting (Country)	Aim	Participants	Intervention details	Relevant outcome measures*	Relevant findings*
Hahm *et al.* (2019)	2-arm RCT	Private university in large urban city (USA)	To test the Asian Women's Action for Resilience and Empowerment (AWARE) program's feasibility, preliminary efficacy, and safety	*n* = 63 Asian American women with past history of interpersonal trauma (intervention: *n* = 32, age m = 23.63 year (SD = 3.84); control: *n* = 31, age m = 24.00 yr (SD = 3.00))	Intervention: AWARE intervention, with 2 components: (1) face-to-face, 8-week gender- and culture-specific and trauma-informed group psychotherapy program; (2) short, daily text messages ('AWARE' stories – Asian-American women's stories about their mental and sexual health; takeaways from the face-to-face sessions; and upcoming session reminders) Control: Wait-list.	Columbia-Suicide Severity Rating Scale (C-SSRS), assessing lifetime suicidal outcomes and outcomes of the past 30 days; at baseline (T0), post-intervention (T1), and 3 months post-intervention (T2)	Intervention: Significant reductions in suicidal ideation between T0 (*n* = 22) and T1 (*n* = 5), and T0 and T2 (*n* = 4), and intent between T0 (*n* = 7) and T1 (*n* = 0), and T0 to T2 (*n* = 0) Control: Significant reductions in suicidal ideation between T0 (*n* = 22) and T1 (*n* = 4), and intent between T0 (*n* = 6) and T1 (*n* = 0); with no further reduction after completion of AWARE
Taylor *et al.* (2020)	Single arm pilot RCT	Hospital (Australia)	To compare the effects of trauma-informed personalized yoga to group-format fitness training on burnout, traumatic stress and suicidality	*n* = 21 junior doctors (intervention: *n* = 11, age m = 30.00 year, (SD = 5.00) 91% female; control: *n* = 10, age m = 30.00 yr (SD = 4.00), 60% female)	Intervention: 8x 1 h private trauma-informed, individualized hatha yoga sessions (over 8 weeks), plus a 4-h workshop/retreat, 2 eHealth video classes, and audio-guided breathing and relaxation; plus 2 h of homework Control: 8x 45-60 min group fitness (interval and/or 'box fit' training) sessions (at least one per week); plus 2.5 h of homework	Suicidal Ideation Attributes Scale (SIDAS), pre- and post-intervention	No change in SIDAS score (possible range 0–50) within or between groups over time (intervention: pre m ± SD 9 ± 3 vs post 11 ± 1; control: pre m ± SD 11 ± 6 vs post 10 ± 4)
Tyler *et al.* (2019)	Retrospective study of archival records	Group home services in a large social service agency (USA)	To determine associations with behavioural incidents (including suicide) of youth in trauma-informed group homes	*n* = 1096 recipients of group home services (age m = 15.70 yr (SD = 1.60), 66% male)	Participants resided in and received trauma-informed group home services, based on a modified version of the evidence-based Teaching-Family Model Professionally trained staff (family–teachers) resided with the youth, teaching pro-social skills, relationship building, motivation skills, self-government, problem solving and moral/spiritual development Trauma-informed components included: staff training to identify/understand impacts of trauma, importance of a calm and nurturing environment to ensure physical and emotional safety. Various strategies, including promoting self-advocacy, health decision making, etc.	Self-injurious incidents (e.g. self-destructive behaviour, suicidal ideation, suicide attempt) recorded by staff using the Daily Incident Report (number of incidents summed monthly for 12 months for each youth)	Significant initial deceleration (in the first month) in self-injurious behaviours; overall time trend non-significant In the first month of the program, those with high-trauma symptoms and those with high clinical impression at intake engaged in significantly more self-injurious behaviour than those with low-trauma symptoms and low clinical impression, while those with high trauma exposure and male gender had significantly fewer self-injurious behaviours than those with low exposure and female gender
Tyler *et al.* (2021)	Retrospective study of archival records	Group home services in a large social service agency (USA)	To examine social skills training related to outcomes for youth with high levels of trauma symptoms who were receiving group homes services	*n* = 677 recipients of group home services (age m = 15.70 yr; (SD = 1.53) 67.9% male)	All participants received a multi-component trauma-informed group services program (a modified version of the evidence-based Teaching–Family Model) Professionally trained staff resided with the youth and provided individualized social skills training to help improve social behaviour and reduce emotional problems. The model included various trauma-informed components (e.g. trauma screening and assessment, using praise and encouragement to promote self-efficacy/ empowerment)	Self-injurious incidents (e.g. self-destructive behaviour, suicidal ideation) recorded by staff using the Daily Incident Report (number of incidents summed monthly for 12 months for each youth)	Non-significant deceleration of self-injurious behaviours during the first month, and non-significant slower decrease for the remaining 11 months

m, mean; SD, standard deviation.

*Most studies included a range of outcome measures and results; however, only suicide-specific outcome measures and results are reported here.

trend for an initial deceleration in youth (n = 677) incidents in the first month, and a slower decline over the remaining 11 months. Tyler *et al*. (2019) further explored dimensions of trauma related to study outcomes during the first month of the program, finding more engagement in self-injurious behaviour among those with high-trauma symptoms ($P < 0.001$) and high clinical impression ($P < 0.05$) at intake compared with those with low-trauma symptoms and low clinical impression. Further, those with high trauma exposure ($P < 0.05$) and male gender ($P < 0.05$) had significantly fewer self-injurious behaviours than those with low exposure and female gender.

DISCUSSION

This systematic review aimed to examine the impact of trauma-informed approaches to suicide prevention on suicide outcomes. We identified four studies for inclusion, published between 2019 and 2021. There was notable heterogeneity in study design, participants, intervention, and outcome measures, and while half of the studies reported improvements in suicidal ideation, intent, and behaviour (Hahm *et al*. 2019; Tyler *et al*. 2019), the other two did not (Taylor *et al*. 2020; Tyler *et al*. 2021). As such, the limited evidence to date makes it difficult to draw conclusions about the impact of trauma-informed suicide prevention strategies. Where positive outcomes were identified, it is also difficult to determine which aspects of the trauma-informed strategies contributed to these.

This small and diverse body of literature, with inconclusive impacts on suicidality, indicates that evaluations of trauma-informed suicide prevention approaches are in their infancy. Currently, this body of literature appears to be focusing more on feasibility and implementation at this early stage. We identified several papers that discuss novel trauma-informed suicide prevention strategies but that did not meet the criteria for inclusion in this review, either because the papers were descriptive or because they did not include suicide-specific outcome measures. These included suicide prevention programs in schools (O'Neill *et al*. 2021), and trauma-informed family interventions for youth in the emergency department and acute care (Asarnow *et al*. 2020; Giles *et al*. 2021; Tunno *et al*. 2021). Despite a lack of evaluation data, these papers offer valuable insights into the components of trauma-informed approaches that may contribute to improvements in suicide outcomes. These include: trauma-informed screening and risk assessment and safety planning; strengths-based approaches; strategies for managing emotions; trauma-informed safety planning; collaboration with family/caregivers; follow-up after discharge and connecting to appropriate, evidence-based, and trauma-informed care; and the importance of well-trained staff (Asarnow *et al*. 2020; Giles *et al*. 2021; O'Neill *et al*. 2021; Tunno *et al*. 2021).

We also identified some qualitative studies, which again did not meet our inclusion criteria due to not focusing on specific suicide outcomes, but which nonetheless provide insights into both the experiences of being involved in trauma-informed suicide prevention approaches and the aspects of these that might contribute to positive outcomes (Inscoe *et al*. 2021; Taylor *et al*. 2021). For example, Inscoe *et al*. (2021) interviewed 13 caregivers of youth with co-occurring traumatic stress and suicidality, with key findings indicating that important aspects of trauma-informed approaches include caregiver involvement, clinician characteristics such as authenticity, genuineness, and warmth, as well as clinician knowledge of the impact of trauma on suicide risk.

Strengths and limitations

The strengths of this systematic review include the comprehensive search strategy, including numerous databases, the wide date range, the specific focus on suicide prevention across a range of settings and across the lifespan, and the rigorous study selection processes. The review team were independent researchers with extensive previous experience conducting systematic reviews, lived experience of suicide-related distress, an in-depth knowledge of trauma-informed practice and suicide prevention. Despite the comprehensive search strategy, a very small number of diverse studies (n = 4) was identified, limiting the generalizability of findings. While the articles included in this review were either RCTs or quasi-experimental studies, and therefore of a high level of evidence, it is also important to acknowledge that although we sought qualitative studies, none met the eligibility criteria. This is unfortunate given that qualitative data are important for a holistic understanding of the lived experiences of suicide prevention strategies. Further, exclusion of studies not published in English or grey literature may mean that some relevant studies may have been excluded.

Implications and future research

Given the diversity of drivers and context surrounding critical moments of the suicide experience, current

findings are limited by the heterogeneity of study participants and trauma-informed interventions. Future research is needed to understand the precise nature of helpful interventions to mitigate critical moments of the suicide experience from suicidal ideation to attempted suicide. The progression of a trajectory towards suicide can be very rapid. It can involve a full spectrum of thought and behaviour, ranging from an individual wishing they were dead, turning into suicidal ideation, progressing to thinking about how and when to attempt suicide and finally, putting this plan into action (Bryan 2022). A person experiencing suicide-related distress can also describe their attempt as hasty and immediate and deny experiencing any suicidal thoughts or plans leading up to the behaviour. Fluctuating states of suicidality and differing amounts of emotional distress and shifts in reasons for living also feature. Precisely how trauma-informed approaches operate within such scenarios is unclear. It can be difficult for people to disentangle motivational elements involved at the time of onset, worsening, and/or re-occurrence of suicide-related distress. Future studies could examine mediating the effects between traumatic stress symptoms, suicidality and the nature and scope of specific trauma-informed practices and/or programs considered most beneficial by individuals. We stress the need for a greater focus on trauma-informed interventions that are optimally matched to the individual needs of people experiencing suicidal thoughts and engaging in self-injurious behaviour. From there it will be possible to advance more robust reviews of evidence to assess the impact of targeted interventions. For example, trauma-informed approaches could be incorporated with suicide prevention strategies with established effectiveness, such as safety planning (Ferguson *et al*. 2021; Nuij *et al*. 2021). Research could examine the component parts of safety planning considered trauma-informed and helping individuals mitigate distress triggers, to distract and resist suicidal thoughts, make their situation safer and reinforce beliefs related to reasons for living. Longer term follow-up for changes in suicide-related distress and risk over time should feature in study design.

RELEVANCE FOR CLINICAL PRACTICE

Mental health nurses are at the forefront of care for people experiencing suicide-related distress and are ideally placed to practice trauma-informed suicide prevention across practice settings, including when supporting people at known risk of trauma such as asylum seekers and refugees (Kenny *et al*. 2021). Working in a trauma-informed way, mental health nurses should aim to work side by side with the person. This means learning in and listening in, while simultaneously being in the here and now, side by side, co-constructing care and support (Santangelo *et al*. 2018). Working side by side in a trauma-informed way supports mental health nursing practice as it promotes understanding of conceptualization of distress, distress triggers, rather than a formulaic response. The distinct nature and scope of trauma-informed mental health nursing during critical moments of the suicide experience takes place when a person is experiencing and disclosing their most intimate moments. This is where human connection that is informed forms part of the relational interplay between the nurse and the client that facilitates the nurse to craft compassionate, recovery-focused practices (e.g. safety planning). Mental health nurses are also well-placed to provide education to people in their care about evidence-based, trauma-informed suicide prevention strategies, and to incorporate avenues for accessing these into personalized care strategies.

CONCLUSION

While there is limited evidence which focuses specifically on trauma-informed suicide prevention across the lifespan, the studies included in this review highlight the potential for such an approach to contribute to reductions in suicidal ideation, intent and behaviour among youth, and a cultural minority group. More research is needed to understand the impact of such strategies on longer term suicide outcomes and the specific components of trauma-informed approaches that are most helpful – such understandings will best come from rigorous quantitative studies and the inclusion of lived experience voices.

ACKNOWLEDGEMENTS

An earlier version of this review (a rapid review) was supported by funding from the National Suicide Prevention Research Fund. The associated report can be found here: https://www.suicidepreventionaust.org/wp-content/uploads/2022/02/Report-Trauma-Informed-Approaches.pdf. Open access publishing facilitated by University of South Australia, as part of the Wiley - University of South Australia agreement via the Council of Australian University Librarians.

AUTHOR CONTRIBUTION

Study conceptualization: Nicholas Procter; Systematic searching, data extraction, and critical appraisal: Shwikar Othman, Rasika Jayasekara, Alexandra Procter, Heather McIntyre, Monika Ferguson; Drafting of manuscript: all authors.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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APPENDIX A:

EXAMPLE SEARCH STRATEGY CONDUCTED IN MEDLINE

1.	*Stress, Psychological/
2.	*Psychological Trauma/
3.	*Stress Disorders, Post-Traumatic/
4.	*Substance-Related Disorders/
5.	*Mental Disorders/
6.	(distress or suicidal distress or psychological distress or psychological trauma or stress disorder or post-traumatic or substance abuse disorder or mental disorder or mental illness).mp.
7.	1 or 2 or 3 or 4 or 5 or 6
8.	*Suicide/
9.	*Suicide, Completed/
10.	*Suicide, Attempted/
11.	*Self-Injurious Behaviour/
12.	*Suicidal Ideation/
13.	(self-harm or suicide or self inj*).mp.
14.	8 or 9 or 10 or 11 or 12 or 13
15.	(trauma-informed practice or trauma-informed care or trauma-informed or trauma-informed care or trauma-informed practice).mp.
16.	7 and 14 and 15

APPENDIX B:

CRITICAL APPRAISAL RESULTS

Critical Appraisal Checklist for Randomized Controlled Trial Studies

Author/year	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Score
Hahm *et al.* (2019)	Y	U	Y	N	N	U	Y	Y	Y	Y	Y	Y	Y	9/13
Taylor *et al.* (2020)	Y	N	Y	N	N	U	Y	Y	Y	Y	Y	Y	Y	9/13

Critical Appraisal Checklist for Quasi-Experimental Studies

Author/year	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Score
Tyler *et al.* (2019)	Y	Y	Y	N	U	Y	Y	Y	Y	7/9
Tyler *et al.* (2021)	Y	Y	Y	N	U	Y	Y	Y	Y	7/9