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Implementing a novel self-care clock strategy as part of a trauma awareness intervention in a university setting

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Abstract

Purpose: This study compared post- and preintervention trauma-informed care attitudes, explored relationships among outcomes, and identified self-care behavior changes participants are willing to make.

Design and Methods: A quasi-experimental study with content analysis was conducted with 96 adults that took part in a Trauma Awareness Intervention including a novel self-care clock.

Conclusions: Participants' trauma-informed care attitudes improved ($p \leq 0.05$) compared to baseline and were positively related to their post-intervention compassion scores ($p < 0.05$). Qualitative analyses revealed self-awareness, self-care, empathy, applying a trauma lens, changing the narrative, and student-centeredness as the main themes in participants' responses.

Practical Implications: This university-based initiative had a positive impact on attitudes toward trauma and should be explored in other settings, as there is an unmet need for trauma-informed care strategies at the community level.

KEYWORDS
attitudes, self-care behaviors, trauma-informed

1 | INTRODUCTION

According to the available estimates, four or more traumatic stress exposures are reported by approximately 30% of individuals worldwide (Benjet et al., 2016). Traumatic experience typically occurs in situations in which harm is perceived or safety is threatened, which are ascribed as personally meaningful, and have lasting multidimensional effects on an individual's well-being (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014). Moreover, it is well established that adverse childhood events combined with community-level historical event traumas lead to the accumulation of traumatic stress. Such experiences are damaging to the wellness of individuals, communities, and entire populations (Ellis & Dietz, 2017).

The cumulative physical effects associated with trauma exposure such as increased cortisol production, social consequences such as disrupted relationships, and mental health sequelae such as hyperarousal are associated with increased inflammation and a heightened risk of health problems, such as cancer, depression, addiction, cardiovascular disease, and premature death (Anda et al., 2010; Felitti et al., 1998). Ample empirical evidence also shows that those who care for individuals who have been traumatized may develop similar effects and sequelae (Carmassi et al., 2020, 2021; Johnson et al., 2019; Levine et al., 2021; Stamm, 2009a, 2010).

In particular, caregivers experience vicarious trauma, defined as the distress caused by witnessing or helping a traumatized person (Cohen & Collens, 2013; Sabin-Farrell & Turpin, 2003), as well as secondary traumatic stress, which arises as a result of exposure

to an event due to a relationship with the primary person (Stamm, 2009b, 2010).

Therefore, there is a need for trauma-informed care across various settings, but it is a skillset that must be learned and repetitively practiced for it to be effective (Schimmels & Cunningham, 2021). This type of training should be offered to caregivers and persons who may encounter individuals with traumatic stress exposure, as such initiatives have the potential to generate greater public understanding of how to help traumatized persons. Often, people come to such training programs because they feel they need it as they have little or no experience with providing care and may not have been aware of previous encounters with traumatized persons, although such persons surround them in society. Hence, when designing the training program content, no prior knowledge about the principles of trauma-informed care on behalf of the participants should be assumed.

We chose a university setting for the present study because we wished to ascertain the effectiveness of the intervention from the perspective of respondents that are presently or can be expected to be exposed to trauma as a part of their professional duties. We drew from McLeroy et al. (2003) community-based participatory research principles of engagement and empowerment. Engagement and empowerment are important drivers of social change, particularly for complex system challenges like psychological trauma exposure.

Our decision to focus on this specific cohort was also motivated by the findings yielded by extant research conducted in tertiary institutions confirming that university students frequently report psychologically distressing symptoms (Anders et al., 2012; Frazier et al., 2009). Specifically, a survey conducted by Anders et al. (2012) using the Traumatic Life Events Questionnaire (TLEQ; Kubany, 2004) revealed that 99% of the respondents endorsed exposure to at least one Criterion A1 and one non-A1 event in their lifetime. Similarly, in their study conducted at four tertiary institutions in the United States, Frazier et al. (2009) assessed the lifetime prevalence of trauma, incidence of traumatic events at college, and trauma-associated symptoms among college students. According to their findings, 85% of the study participants reported having experienced a traumatic event in their lifetime, while 21% of the sample also indicated that such an event took place in the preceding 2 months. Thus, we believe that engaging the employees and students of our academic institution could contribute to this specific research stream, but also immediately benefit them with practical knowledge and experiences.

Self-care is a broad concept that encompasses abilities, actions, and processes that promote and maintain the various dimensions of health (Matarese et al., 2018). Self-care practices, whether personal or professional, have the potential to partially ameliorate the traumatic stress that caregivers experience as a result of trauma exposure (Lee & Miller, 2013). Thus, it can be expected that those working with individuals who have been traumatized would benefit from developing self-care plans to maintain their own wellness (Barnett & Cooper, 2009; Cohen-Katz et al., 2004; Godfrey et al., 2010; Howard, 2008; Jordan, 2010; Matarese et al., 2018).

Trauma Awareness Intervention is an approach that combines the principles of trauma-informed care with self-care strategies. It is an interactive program that focuses on aspects of trauma-informed care and includes flyers, a detailed intervention protocol (see Table 1), a train-the-trainer curriculum, a self-care clock, and an evaluation form (Alive and Well Communities, 2021; SAMHSA, 2014). A previous program evaluation of the Alive and Well St. Louis Initiative, as a part of which 351 community members and 14 ambassadors were surveyed, demonstrated positive outcomes, as majority of the participants showed marked improvements and indicated a desire for further engagement in community outreach programs (University of Missouri-St. Louis Missouri Institute of Mental Health, 2019).

We contribute to this initiative by introducing the participants to a novel self-care clock strategy aimed at helping them focus on self-care, as an example of a mindfulness-based approach to managing stress. Kabat-Zinn (2003) described mindfulness as being conscious in the present moment. Thus, the goal of self-care clock was to remind the participants to take (however limited) time for addressing their well-being while around or caring for others experiencing traumatic stress. As shown in Figure 1, caregivers are provided with a 2-, 5-, 10-, or 30-min timeframe and are invited to consider how that time should be spent to allow them to have a restorative break (Alive and Well Communities, 2021). Even though there is a large body of literature on mindfulness-based approaches aimed at stress management (Banks et al., 2015; Burton et al., 2017; Chiesa & Serretti, 2009; Kelly & Garland, 2016; Rudaz et al., 2017; Taylor et al., 2020), the self-care clock strategy as a component or as a stand-alone intervention has never been investigated.

Similarly, there is paucity of research on short-term trauma-informed interventions with self-care strategies in school settings. Some related studies were conducted in precollegiate settings (preschool, primary, and secondary education), but none focused on higher education (Dorado et al., 2016; Kim et al., 2021; Parker et al., 2020; Perry & Daniels, 2016; Whitaker et al., 2019). Moreover, their findings are inconsistent as, for example, Parker et al. (2020) and Kim et al. (2021) reported positive outcomes such as significantly improved attitudes related to trauma-informed care, while Whitaker et al. (2019) did not. In addition, generalization of these results to a higher education setting may be problematic.

Therefore, there is an evident need for research focusing specifically on caregivers or those who might become caregivers in the future to promote trauma-informed care. Moreover, as in most extant studies attitudes related to trauma-informed care and compassion satisfaction are adopted as the main outcomes (Baker et al., 2021; Cohen-Serrins, 2021), little is known about the relationship between compassion satisfaction and attitudes related to trauma-informed care. These gaps in pertinent literature have motivated the present study, as a part of which a university-based initiative was implemented to (a) compare caregivers' post- and preintervention attitudes toward trauma-informed care, (b) explore if preintervention compassion satisfaction is associated with postintervention attitudes toward trauma-informed care, and (c) identify specific self-care behavior changes participants are willing to make.

TABLE 1 Intervention and procedures.

Phase of intervention	Description
Introductions	First hour: Begin establishing rapport • Provide packets and crayons, markers, and color sheets • Welcome to the session • Provide agenda • Build safety protocol Cocreate rules to promote trust and sense of safety • Establish group norms
The Circle	First hour: Create restorative justice Circle • Introduce name, feeling, and goal for learning • Provide an opportunity for participants to establish equality • Provide a space for listening and sharing • Dissipate tension through movement
Information session and self-care clock	First hour: Introduce basic trauma concepts and prevalence data • Give interactive presentation of material that starts simply • Provide definition of trauma • Discuss types of trauma • Describe the stress response system • Identify the prevalence of trauma Second hour: Connect and illustrate relationships among brain architecture and human attachments; build capacity to serve vulnerable populations; explore principles of self-care • Describe brain development • Discuss responses to trauma across the life span • Apply the trauma lens to minority populations • Introduce the five core principles of trauma informed care • Identify one positive relationship as key intervention • Teach and discuss self-care practices necessary for resilience • Create self-care clocks
Return to the Circle	End of second hour: Share around the Circle a self-care practice that will be tried within the next few hours

2 | METHODS

2.1 | Design and sample

This pilot research study relied on data obtained from 96 adults (9 Doctor of Nursing Practice students, 41 undergraduate pre-Bachelor of Science in Nursing students, and 46 faculty and staff members) which was thematically analyzed (47 additional individuals were present at the training, but either provided incomplete data, or did not wish to participate in the study). It was conducted in a higher education setting at a Midwestern public university after obtaining the IRB approval and written consent from all participants.

All participants were recruited using convenience sampling, which involved distribution of IRB-approved flyers inviting all interested staff and students to take part in free training providing a framework for understanding how trauma affects well-being and activating communities to heal. Participation was voluntary and was open to all employees and nursing students enrolled in two courses and no exclusion criteria were imposed. All individuals that expressed interest in partaking in the research were provided training. However, only data provided by individuals that that signed a written informed consent form and that completed all elements of the intervention (including evaluation instruments) were included in the analyses.

FIGURE 1 Self-care clock (courtesy: Alive and Well Communities, 2021).

2.2 | The intervention

The Trauma Awareness Intervention was developed by Alive and Well Communities (2021), which is a nonprofit organization with a mission of educating groups such as public school teachers and administrators about how trauma affects the brain and the body. Its content and design is based on the conceptual understandings of relationship development and group process theory (Corey et al., 2014), restorative justice principles (Gavrielides, 2014; Jordan, 2014; Liebmann, 2007; Mehl-Madrona & Mainguy, 2014), and an ambassador/train-the-trainer program, allowing participants to plan, develop, and implement the intervention, as outlined in Table 1. The researcher who delivered the intervention in focus of this study received 16 h of training to become an ambassador and subsequently completed 12 h of continuing education as a refresher before delivering the intervention.

2.2.1 | Introductions

When individuals entered the intervention session, they began a relational process of orientation called, "Begin establishing rapport" (see Table 1). Each person created his/her own name tent and received a packet of materials which contained handouts of slides for notetaking and a graphic coloring sheet with the word "Breathe." The researcher used a dedicated, intentionally prepared space, as well as artistic and creative sensory materials (markers, crayons, handouts), to facilitate the development of relational skills and self-care wellness practices and to promote acquisition of basic knowledge about trauma symptomatology. Participants were welcomed into the session with a statement about the purpose of the intervention and an invitation to take excellent care of themselves by stepping out or checking out as needed throughout the session. An agenda for the half-day session was also posted.

Consistent with the principles of relationship development and trauma recovery, and disaster preparedness in particular, participants cocreated a safety protocol. This protocol consisted of creating group rules or norms that would govern the session. Agreements were set for confidentiality, respect, listening, and a process of learning and interaction that included frequent breaks.

2.2.2 | The Circle

Participants were invited to "create a restorative justice circle" at the center of the room. The aim of this relational strategy is to facilitate healing in situations in which individuals have been harmed, as it allows the participants to develop a sense of being seen, recognized, and heard. The participants were prompted to come to the Circle and state their first name, one feeling, and their interest in participation. Three questions (Who are you? Why are you here? and What do you want to get out of the session?) were posed.

2.2.3 | Information session and the self-care clock

After sharing in the Circle, participation shifted to an interactive discussion called "Introduce basic trauma concepts and prevalence data" aided by a video and a presentation provided by the researcher. The remainder of the first hour consisted of an easily understandable interactive presentation of material, which included a definition of trauma and trauma types, description of the stress response system, and current data on the prevalence of trauma. During the latter portion of this phase, participants were guided through a didactic session using increasingly higher-level scaffolded learning processes.

In the second hour of the training program, denoted as "Connect and illustrate relationships among brain architecture and human attachments; build capacity to serve vulnerable populations; explore principles of self-care," didactic information was presented with interactive strategies such as slides, video, and hands-on activities. Content included a description of brain development from birth and throughout life, responses to trauma across the lifespan, description of the "trauma lens" perspective (an understanding of how trauma is associated with behaviors), an application of the trauma lens to minority populations, an introduction of five core principles of trauma-informed care, identification of one positive relationship as a key strategy to mitigate the effects of trauma, and teaching about self-care practices, including the self-care clock to build resilience.

Participants were given an opportunity to learn about self-care practices that take small amounts of time. They were also provided a model self-care clock worksheet titled "Finding the Time for Self-Care" and a blank worksheet to introduce them to the self-care clock strategy. As shown in Figure 1, each quadrant in the clock worksheet provides suggestions for using time, such as 2-, 5-, 10-, or 30-min slots in a daily schedule. The blank worksheets similarly offered the corresponding prompts, that is, "if you have 2 minutes," "if you have 5 minutes," "if you have 10 minutes," and "if you have 30 minutes" for participants to present their self-care plans on their own clock. Participants were encouraged to (a) create their plans with imagination, (b) borrow strategies from the clock, and (c) share their ideas with the group.

2.2.4 | Return to the circle

During the final activity called "Share around the Circle a self-care practice that will be tried within the next few hours," the researcher invited participants back into the restorative justice circle to discuss how they felt and what types of self-care practice they would try.

2.3 | Instruments

The Attitudes Related to Trauma-Informed Care (ARTIC) Scale is a 45-item instrument that measures the degree to which an individual subscribes to a core set of attitudes about trauma-informed care (Baker et al., 2016). It comprises of seven subscales, respectively

focusing on the underlying causes of problem behavior and symptoms, responses to problem behavior and symptoms, on-the-job behavior, self-efficacy at work, reactions at work, personal support of trauma-informed care, and system-wide support for trauma-informed care. All items in the instrument require responses on a 7-point Likert-type scale anchored at 1 (strongly disagree) and 7 (strongly agree). All participants completed the questionnaire and their responses were scored in accordance with the ARTIC scoring instructions (Baker et al., 2016, 2021) before the items were averaged by subscale (with higher scores indicating a more positive attitude). Internal consistency reliability ($\alpha = 0.93$) as well as test–retest reliability ($r = 0.84$ at 120 days, $r = 0.80$ at 121–150 days, and $r = 0.76$ at 151–180 days) of this instrument have been previously established (Baker et al., 2016). Moreover, both construct and criterion-based validity of the ARTIC were tested previously by calculating correlations between the ARTIC items and participant demographics, basic knowledge of trauma-informed care, and staff- and system-level thoughts or actions that demonstrated trauma-informed approaches to care. The referenced mean score for the ARTIC is 5.36. Thus, a score at or above this level indicates a positive attitude related to trauma-informed care in adults who are educators, healthcare professionals, or other human service workers (Baker et al., 2021).

The Professional Quality of Life Scale (ProQOL) is a 30-item instrument that measures self-reported positive and negative aspects of caring, compassion satisfaction, and compassion fatigue. In this context, compassion satisfaction refers to the pleasure one derives from helping others (Stamm, 2009a). In the present study, only the 10-item ProQOL compassion satisfaction subscale was used, requiring responses on a 5-point Likert-type scale anchored at 1 (strongly disagree) and 5 (strongly agree). All participants completed the questionnaire and their responses were scored in accordance with the ProQOL scoring instructions (Stamm, 2010), with higher scores indicating greater compassion satisfaction. Once all ratings were summed, the overall subscale score was converted to a t-score. Construct validity of the instrument has been previously established (Stamm, 2010).

The Trauma Awareness Intervention evaluation form is brief and captures participants' reactions to the intervention and asks about changing one's behavior.

3 | DATA COLLECTION PROCEDURES

The university students that took part in this study were recruited either through a Psychiatric and Mental Health Program Intensive within the Doctor of Nursing Practice curriculum or a Cultural Diversity course comprising the undergraduate pre-Bachelor of Science in Nursing program. Additional participants were engaged through a collaboration with the Director of the Des Lee Collaborative Vision/Community Engagement, a unique university program, and Alive and Well Communities flyers. Written informed consent was obtained from all participants before commencing the study. The researcher administered all previously described data collection instruments at baseline (which took 20 min to complete in total), that is, before delivering the planned, standardized curriculum, after which all instruments were administered again.

4 | DATA ANALYSIS

Bivariate regression was used to analyze differences between pre- and postintervention ARTIC measures. Each subscale was considered as an outcome variable, whereas the categorical variable, time of the intervention (pre vs. post), was considered as an independent variable. In addition, bivariate regression analysis was conducted to explore if the compassion satisfaction score at baseline predicted the post-intervention ARTIC subscale scores.

Narrative responses about behavior changes were subjected to content analysis, which entailed reading all participants' written responses, transcribing the text into a spreadsheet, grouping similar responses together, creating conceptual labels (themes), organizing themes and creating definitions, and finally organizing themes with corresponding text excerpts (Braun & Clarke, 2014; Elo et al., 2014).

5 | RESULTS

As shown in Table 2, there was a significant improvement in total ARTIC scores after the intervention compared to baseline ($F[1, 118] = 25.43$, $p < 0.001$), as well as in all ARTIC subscale scores, including underlying causes of problem behavior and symptoms ($F[1, 118] = 16.14$, $p < 0.001$), responses to problem behavior and symptoms ($F[1, 118] = 13.54$, $p < 0.001$), on-the-job behavior ($F[1, 118] = 19.28$, $p < 0.001$), self-efficacy at work ($F[1, 118] = 6.54$, $p < 0.05$), reactions at work ($F[1, 118] = 21.34$, $p < 0.001$), personal support of trauma-informed care ($F[1, 118] = 7.69$, $p < 0.01$), and system-wide support for trauma-informed care ($F[1, 118] = 8.66$, $p < 0.01$). Compassion satisfaction at baseline was positively related to the ARTIC total score after the intervention ($\beta = 0.03$, SE = 0.009, $p < 0.05$).

5.1 | Qualitative responses

Based on the information provided by the participants in relation to the prompt "Please identify one behavior you will change as a result of this training," six themes were found. The first theme was named *self-awareness*, defined as taking the time to notice one's own behavior. One participant stated, "My behavior could trigger someone. Work harder to create an environment that minimizes the chances." The participant reflected understanding that one's actions could inadvertently cause a reaction, elicited by sensory cues such as sights, sounds, smells, or touch that are present in the environment. This participant affirmed a key principle of trauma-informed approaches, that is, it is important to try to reduce the likelihood of retraumatization.

TABLE 2 Attitudes related to trauma-informed care (ARTIC).

ARTIC	Baseline		Postintervention	
	Mean	Standard error	Mean	Standard error
Total score	5.42	0.09	5.99	0.09
Underlying causes of problem behavior and symptoms	5.07	0.13	5.70	0.11
Responses to problem behavior and symptoms	5.50	0.13	6.06	0.11
On-the-job behavior	5.55	0.10	6.02	0.10
Self-efficacy at work	5.50	0.16	6.01	0.11
Reactions at work	5.56	0.13	6.13	0.10
Personal support of trauma- informed care	5.58	0.16	6.20	0.13
Systemwide support for trauma-informed care	5.08	0.23	5.94	0.14

The second theme was named *self-care*, defined as focusing on caring for self and self-compassion. One participant reflected "It's okay to take a break," while another stated, "It's okay to take time to slow down." A third participant stated, "Consistent self-care so I can help others." Another participant stated, "To prioritize self-care, slowing down, taking time to evaluate myself and others fully through an empathic lens during high-stress events." These statements reflect understanding and realization that self-care is essential to be able to help others.

The third theme was named *empathy*, defined as reflecting on and trying to understand what has occurred. A participant stated an intention to "be more aware of others; trauma impacts nearly half the people I will interact with, especially those in minority communities." This participant demonstrated a compassionate acknowledgment of community suffering and a commitment to bear witness and listen to those who are most vulnerable.

The fourth theme was named *applying a trauma lens*, defined as learning more about trauma and spreading information to others about this perspective. One participant stated the intention to "seek out more information about trauma-informed approaches." Another participant stated, "I will try to ask specific questions in order to understand the mindset of a person in before engaging in a conversation/consultation." Another participant shared the intention to apply "the trauma lens to more interactions with people in general." The need to learn more and spread a universal trauma-informed approach conveys a desire to understand more about this topic and reflects the widespread prevalence of trauma.

The fifth theme was named *changing the narrative*, defined as reframing the idea that something is wrong with a person and instead considering what happened to them. Seven participants wrote, "change the question to 'What happened to you?' not 'What's wrong with you?'" The shift from blaming and shaming individuals who have unusual behaviors to wondering what might have happened to them in the past that leads to behavioral responses is a central tenet of the trauma-informed approach.

The sixth theme was named *student centeredness*, defined as changes in thoughts and practices related to students. A participant stated, "Nurturing students more…" Another participant stated, "How I interact with my first-year students in the classroom (e.g., invite self-care into the classroom)." This theme of changing thoughts and practices corroborates trauma-informed beliefs and attitudes related to trauma-informed care.

6 | DISCUSSION

Interventions focusing on trauma-informed approaches and use of self-care strategies aim to equip participants with the necessary knowledge, attitudes related to trauma-informed care, and skills to respond effectively to those who experience traumatic stress. As their benefits have been widely established, the intervention adopted in the current study, including the self-care clock, could become an integral part of an essential tool kit. This clock, with its lists of possible strategies focusing on finding the time for self-care, is useful, practical, and inexpensive, and is especially important for people who care for traumatized individuals on a daily or near-daily basis (Alive and Well Communities, 2021).

All 96 participants that took part in the current study were committed to making a change in self-care behavior. It is particularly noteworthy that their comments were thoughtful, abstract, and applied to trauma-informed care in general or related to persons with trauma experiences and stressors. In that sense, the intervention was beneficial in prompting the participants to consider a balanced and empathic approach and apply a trauma-informed lens to each individual encountered. One participant expressed the need to take time and slow down to be able to evaluate others through an empathic lens in times of intense stress. Wanting to reduce the likelihood of retraumatization was clearly a goal of many participants. These findings in response to the self-care clock strategy add new information to the caregiver literature.

Difficulty arises when trying to compare the current study findings with those yielded by other short-term interventions. First, while systematic reviews on trauma-informed care in schools have proliferated (Berger, 2019; Fondren et al., 2020), programs in higher

education settings and those disseminating trauma awareness information to the general public through university initiatives are rarely examined. Second, available short-term studies focusing on school professional staff lacked details about the self-care aspects of the trauma awareness interventions (Dorado et al., 2016; Perry & Daniels, 2016). These gaps in pertinent literature demonstrate the need for researchers to conduct well-designed studies on staff/caregiver self-care. Moreover, none of the extant studies focused on Doctor of Nursing Practice nurse providers, nursing students, or university faculty and staff, as their cohorts comprised of professional staff from preschool, elementary, and secondary education settings. Therefore, it remains to be established if the results obtained in these educational contexts also apply to a higher education setting.

In the current study, attitudes related to trauma-informed care were significantly improved after the intervention. A similar finding was reported by Parker et al. (2020) in relation to a manualized program about trauma in a primary school setting. On the other hand, as Kim et al. (2021) implemented the MindUP app over a 2-year period, a direct comparison of findings is difficult. Nonetheless, these authors also found that attitudes related to trauma-informed care are not fixed and can be improved. By using an intervention rooted in a restorative justice framework, we add to the body of knowledge regarding what works in promoting trauma-informed care. It is noteworthy that the mean total scores on the ARTIC at baseline were slightly above the referenced mean score of 5.36, suggesting that our study participants already had a positive attitude related to trauma-informed care. This is expected, given that the nursing students and professionals that took part in the training program may be sensitized to some trauma-informed information (Baker et al., 2021; Parker et al., 2020).

Self-care can help reduce or offset the impact of traumatic stress as well as cultivate compassion (Schuman-Olivier et al., 2020). In addition to the self-care clock, our participants were introduced to other strategies that support the cultivation of compassion and the prevention of burnout, such as mindfulness meditation, yoga, support group affiliation, practicing spirituality, creating art, gardening, reading fiction or nonfiction literary works, and reading or writing poetry. Interventions that target predictable challenges, strengthen organizational structural supports, and employ evidence-based practices hold potential for strengthening community-level well-being (Administration for Children and Families, 2012). It follows that one must possess compassion to derive a sense of satisfaction from caring for those who are traumatized. Yet, compassion satisfaction has never been examined as specific outcome of short-term trauma awareness programs. Thus, it is significant to recognize that, in the current study, baseline compassion satisfaction was positively correlated with postintervention attitudes related to trauma-informed care. Still, as this is only a preliminary investigation involving a small and homogenous sample, more research using larger and more diverse samples is needed to confirm these results.

Maynard et al. (2019) provided evaluation questions that can be adapted to build future projects about trauma-informed care, with "How do trauma-informed systems help alleviate trauma symptoms, improve socio-emotional outcomes and behavior (especially self-care behavior) at individual, community, and population levels?" being most pertinent to the current investigation. Teaching communities how to cultivate compassion satisfaction is another promising avenue for future intervention work. Furthermore, because traumatic stress exposure may lead to vicarious traumatization or secondary trauma for caregivers, further research incorporating self-care components into trauma awareness interventions is warranted. System support that prioritizes well-being should also be communicated via formal policy and procedures (Alive and Well Communities, 2021; SAMHSA, 2014). Finally, personal factors, such as a history of trauma and increased risk of secondary traumatic stress in health-care professionals, require further examination (Barleycorn, 2019).

Several study limitations should be noted when interpreting the findings reported here. First, convenience sampling was used, limiting their generalizability. As the present study was not based on a controlled trial design, we cannot generalize the impact of the self-care clock alone, as it was only one component of the intervention. A further limitation relates to not capturing demographic data from this convenience sample and not including long-term follow-up into the study protocol. Strengths of this study were based on a train-the-trainer presentation developed by experts to enhance outreach to the community, and using a novel clock approach to help participants find the time for self-care.

6.1 | Quality standards

Quality standards were applied to several components of the overall design and implementation of research (Miles et al., 2014, p. 311). These categorized quality standards are presented across five domains: objectivity, reliability, internal validity, external validity, and application.

Objectivity: The first domain, objectivity, is described by Miles et al. (2014, p. 311) as "relative neutrality, freedom from unacknowledged researcher bias and explicitness about inevitable bias." Potential researcher bias is tempered by the researcher attempting to be as transparent as possible in each stage of data collection, detailing each step of methods used, keeping an audit trail, and using the analytic process described by Braun and Clarke (2014) during the data analysis phase.

Reliability: The second domain is a related standard: reliability. In applying quality standards, "consistent and reasonably stable data collection methods [are employed] over time and across researchers and methods" (Miles et al., 2014, p. 312). There are several ways in which reliability can be achieved in this mixed methods study. By ensuring the research questions are clear and the methods of data collection logically follow from the research questions, the principle of consistency is maintained (Miles et al., 2014).

The use of an audit trail enhances objectivity and reliability (Merriam, 2002; Miles et al., 2014). The audit trail is a way of describing the methods in such fine detail, that a person outside the study can follow the events, what methods, procedures, and

decisions were made during a research study (Miles et al., 2014). This is to increase the trustworthiness of the report that is generated from the study (Merriam, 2002). By keeping detailed records of the process of research, it is possible to explain how conclusions were drawn.

Internal validity: The third domain is a concept called internal validity which addresses truth value. Internal validity means that the researcher's analysis is accurate and representative of what really happened during data collection (Merriam, 2002, p. 25). One way to ensure internal validity is to look at the findings of the study; they should make sense, should be credible to the people studied, members of the research community, and others (Miles et al., 2014).

Peer review is a process that involves asking an expert or colleague to review the research to ensure it is sensible (Merriam, 2002). Peer review was achieved by presenting a preliminary report of findings at an international conference and obtaining feedback from experts in the field of psychiatric nursing at the advanced practice level before publishing the results. Also, by submitting the analysis of results to a senior researcher and holding dialogs with the coauthors about study findings, the entire research process is subjected to peer review. This panel of experts reviews the findings and corroborate that findings make sense.

Another way to ensure internal validity is through the use of triangulation. Triangulation can be of paradigms or theoretical perspectives, data source, data type, data collection methods, data analysis methods, and researcher (Merriam, 2002; Miles et al., 2014). The general value of triangulation is to view all phases of the research process through to final analysis with a multidimensional lens (Merriam, 2002). The use of triangulation is a strength of the research methodology.

External validity: External validity is usually associated with quantitative studies in which probabilistic sampling is used. In qualitative research, the sampling is not probabilistic, but a related concept is transferability: the extent to which a research study's findings can be useful or informative in other contexts. Ways to increase external validity include use of rich, detailed description of processes and findings, so that the details of this study can be compared with other settings or theories.

Application: By considering the utility of the information that was gathered and its possible effects, the quality standard of "application" is met (Miles et al., 2014). Application is defined as the degree to which the knowledge gained is usable or worthwhile (Miles et al., 2014, p. 316). To be able to use the information it must be collected in an ethically informed manner. The lessons generated from the results of this study lead to recommendations for future practice and/or research.

7 | CONCLUSION

The findings of the current study suggest that attending a trauma-informed care training with a self-care clock was beneficial to the participants. Whether interventions to enhance compassion satisfaction might lead to more positive attitudes would, however, need to be tested in a purposeful sample of professionals or people with trauma experience, one that identifies information-rich cases. According to Patton (1990), "The logic and power of purposeful sampling lies in selecting information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, thus the term purposeful sampling" (p. 169). Teaching self-care strategies and reducing retraumatization are at the heart of the Trauma Awareness Intervention. An important theme that has emerged from this investigation—changing the narrative—is central to reducing retraumatization, as it suggests the benefits of refocusing attitudes from emphasizing what is wrong with people to wondering what happened to them that leads to behavioral responses. Providing public with trauma-informed care information and self-care strategies is thus critical in enhancing population-level well-being.

8 | IMPLICATIONS FOR NURSING PRACTICE

Findings yielded by the present study suggest that a short-term intervention focused on trauma awareness information and self-care practices improves attitudes related to trauma-informed care. They also point to two pragmatic approaches to extend this study, one of which involves implementing this intervention within collegiate core curriculum that requires service-learning projects. The corresponding question is: How do college students experience and apply the intervention lessons in their own service-learning projects? The second approach requires embedding the intervention into professional development programs in service-focused organizations. The corresponding question is: How do professional development programs orient service professionals to build and sustain trauma-informed communities?

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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REFERENCES

Administration for Children and Families. (2012). *Information memorandum. Log no: ACYF-CB-IM-12-04*. Promoting social and emotional well-being for children and youth receiving Child Welfare services. Administration for Children and Families. http://ACYF-CB-IM-12-04 (hhs.gov)

Alive and Well Communities. (2021). *Our history*. Retrieved from Our History—Alive & Well Communities. https://www.awcommunities.org/

Anda, R. F., Butchart, A., Felitti, V. J., & Brown, D. W. (2010). Building a framework for global surveillance of the public health implications of adverse childhood experiences. *American Journal of Preventive Medicine*, 39, 93–98. https://doi.org/10.1016/j.amepre.2010.03.015

Anders, S. L., Frazier, P. A., & Shallcross, S. L. (2012). Prevalence and effects of life event exposure among undergraduate and community college students. *Journal of Counseling Psychology*, 59(3), 449–457.

Baker, C. N., Brown, S. M., Overstreet, S., & Wilcox, P. D., New Orleans Trauma-Informed Schools Learning Collaborative. (2021). Validation of the attitudes related to trauma-informed care scale (Artic). *Psychological Trauma: Theory, Research, Practice and Policy*, 13, 505–513. https://doi.org/10.1037/tra0000989

Baker, C. N., Brown, S. M., Wilcox, P. D., Overstreet, S., & Arora, P. (2016). Development and psychometric evaluation of the Attitudes Related to Trauma-informed Care (ARTIC) Scale. *School Mental Health*, 8, 61–76. https://doi.org/10.1007/s12310-015-9161-0

Banks, K., Newman, E., & Saleem, J. (2015). An overview of the research on mindfulness-based interventions for treating symptoms of posttraumatic stress disorder: A systematic review. *Journal of Clinical Psychology*, 71, 935–963. https://doi.org/10.1002/jclp.22200

Barleycorn, D. (2019). Awareness of secondary traumatic stress in emergency nursing. *Emergency Nurse*, 27, 19–22. https://doi.org/10.7748/en.2019.e1957

Barnett, J. E., & Cooper, N. (2009). Creating a culture of self-care. *Clinical Psychology: Science and Practice*, 16, 16–20. https://doi.org/10.1111/j.1468-2850.2009.01138.x

Benjet, C., Bromet, E., Karam, E. G., Kessler, R. C., McLaughlin, K. A., & Ruscio, A. M. (2016). The epidemiology of traumatic event exposure worldwide: Results from the World Mental Health Survey Consortium. *Psychological Medicine*, 46, 327–343. https://doi.org/10.1017/S0033291715001981

Berger, E. (2019). Multi-tiered approaches to trauma-informed care in schools: A systematic review. *School Mental Health*, 11, 650–664. https://doi.org/10.1007/S12310-019-09326-0

Braun, V., & Clarke, V. (2014). What can "thematic analysis" offer health and wellbeing researchers? *International Journal of Qualitative Studies on Health and Well-Being*, 9, 26152. https://doi.org/10.3402/qhw.v9.26152

Burton, A., Burgess, C., Dean, S., Koutsopoulou, G. Z., & Hugh-Jones, S. (2017). How effective are mindfulness-based interventions for reducing stress among healthcare professionals? A systematic review and meta-analysis. *Stress and Health*, 33, 3–13. https://doi.org/10.1002/smi.2673

Carmassi, C., Dell'Oste, V., Foghi, C., Bertelloni, C. A., Conti, E., Calderoni, S., Battini, R., & Dell'Osso, L. (2021). Post-traumatic stress reactions in caregivers of children and adolescents/young adults with severe diseases: A systematic review of risk and protective factors. *International Journal of Environmental Research and Public Health*, 18, 189. https://doi.org/10.3390/ijerph18010189

Carmassi, C., Foghi, C., Dell'Oste, V., Bertelloni, C. A., Fiorillo, A., & Dell'Osso, L. (2020). Risk and protective factors for PTSD in caregivers of adult patients with severe medical illnesses: A systematic review. *International Journal of Environmental Research and Public Health*, 17, 5888. https://doi.org/10.3390/ijerph17165888

Chiesa, A., & Serretti, A. (2009). Mindfulness-based stress reduction for stress management in healthy people: A review and meta-analysis. *Journal of Alternative and Complementary Medicine*, 15, 593–600. https://doi.org/10.1089/acm.2008.0495

Cohen-Katz, J., Wiley, S. D., Capuano, T., Baker, D. M., & Shapiro, S. (2004). The effects of mindfulness-based stress reduction on nurse stress and burnout: A quantitative and qualitative study. *Holistic Nursing Practice*, 18, 302–308. https://doi.org/10.1097/00004650-200411000-00006

Cohen, K., & Collens, P. (2013). The impact of trauma work on trauma workers: A metasynthesis on vicarious trauma and vicarious posttraumatic growth. *Psychological Trauma: Theory, Research, Practice, and Policy*, 5, 570–580. https://doi.org/10.1037/a0030388

Cohen-Serrins, J. (2021). How COVID-19 exposed an inadequate approach to burnout: Moving beyond self-care. In C. Tosone (Ed.), *Shared trauma, shared resilience during a pandemic. Essential clinical social work series* (pp. 259–268). Springer. https://doi.org/10.1007/978-3-030-61442-3_27

Corey, M. S., Corey, G., & Corey, C. (2014). *Groups: Process and practice* (9th ed.). Brooks/Cole, Cengage Learning.

Dorado, J. S., Martinez, M., McArthur, L. E., & Leibovitz, T. (2016). Healthy environments and response to trauma in schools (HEARTS): A whole-school, multi-level, prevention and intervention program for creating trauma-informed, safe and supportive schools. *School Mental Health*, 8, 163–176. https://doi.org/10.1007/s12310-016-9177-0

Ellis, W. R., & Dietz, W. H. (2017). A new framework for addressing adverse childhood and community experiences: The Building Community Resilience Model. *Academic Pediatrics*, 17, S86–S93. https://doi.org/10.1016/j.acap.2016.12.011

Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. (2014). Qualitative content analysis: A focus on trustworthiness. *SAGE Open*, 4, 4. https://doi.org/10.1177/2158244014522633

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., & Edwards, V. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, 14, 245–258. https://doi.org/10.1016/s0749-3797(98)00017-8

Fondren, K., Lawson, M., Speidel, R., McDonnell, C. G., & Valentino, K. V. (2020). Buffering the effects of childhood trauma within the school setting: A systematic review of trauma-informed and trauma-responsive interventions among trauma-affected youth. *Children and Youth Services Review*, 109, 104691. https://doi.org/10.1016/j.childyouth.2019.104691

Frazier, P., Anders, S., Perera, S., Tomich, P., Tennen, H., Park, C., & Tashiro, T. (2009). Traumatic events among undergraduate students: Prevalence and associated symptoms. *Journal of Counseling Psychology*, 56(3), 450–460. https://doi.org/10.1037/a0016412

Gavrielides, T. (2014). Bringing race relations into the restorative justice debate: An alternative and personalized vision of "the other". *Journal of Black Studies*, 45, 216–246. https://doi.org/10.1177/0021934714526042

Godfrey, C. M., Harrison, M. B., Lysaght, R., Lamb, M., Graham, I. D., & Oakley, P. (2010). Intervention strategies that support self-care activities: An integrative study across disease/impairment groupings. *JBI Library of Systematic Reviews*, 8, 1304–1350. https://doi.org/10.11124/01938924-201008330-00001

Howard, F. (2008). Managing stress or enhancing wellbeing? Positive psychology's contributions to clinical supervision. *Australian Psychologist*, 43, 105–113. https://doi.org/10.1080/00050060801978647

Johnson, C. C., Suchyta, M. R., Darowski, E. S., Collar, E. M., Kiehl, A. L., Van, J., Jackson, J. C., & Hopkins, R. O. (2019). Psychological sequelae in family caregivers of critically ill intensive care unit

patients. A systematic review. *Annals of the American Thoracic Society*, 16, 894–909. https://doi.org/10.1513/AnnalsATS.201808-540SR

Jordan, C. E. (2014). The safety of women on college campuses: Implications of evolving paradigms in postsecondary education. *Trauma, Violence and Abuse*, 15, 143–148. https://doi.org/10.1177/1524838014520635

Jordan, K. (2010). Vicarious trauma: Proposed factors that impact clinicians. *Journal of Family Psychotherapy*, 21, 225–237. https://doi.org/10.1080/08975353.2010.529003

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*, 10, 144–156. https://doi.org/10.1093/clipsy.bpg016

Kelly, A., & Garland, E. L. (2016). Trauma-informed mindfulness-based stress reduction for female survivors of interpersonal violence: Results from a stage I RCT. *Journal of Clinical Psychology*, 72, 311–328. https://doi.org/10.1002/jclp.22273

Kim, S., Crooks, C. V., Bax, K., & Shokoohi, M. (2021). Impact of trauma-informed training and mindfulness-based social–emotional learning program on teacher attitudes and burnout: A mixed-methods study. *School Mental Health*, 13, 55–68. https://doi.org/10.1007/s12310-020-09406-6

Kubany, E. (2004). *Traumatic life events questionnaire and PTSD screening and diagnostic scale*. Los Angeles, CA: Western Psychological Services.

Lee, J. J., & Miller, S. E. (2013). A self-care framework for social workers: Building a strong foundation for practice. *Families in Society*, 94, 96–103. https://doi.org/10.1606/1044-3894.4289

Levine, G. N., Cohen, B. E., Commodore-Mensah, Y., Fleury, J., Huffman, J. C., & Khalid, U., American Heart Association Council on Clinical Cardiology; Council on Arteriosclerosis, Thrombosis and Vascular Biology; Council on Cardiovascular and Stroke Nursing; and Council on Lifestyle and Cardiometabolic Health. (2021). Psychological health, well-being, and the mind-heart-body connection: A scientific statement from the American Heart Association. *Circulation*, 143, e763–e783. https://doi.org/10.1161/CIR.0000000000000947

Liebmann, M. (2007). *Restorative justice: How it works*. Jessica Kingsley Publishers.

Matarese, M., Lommi, M., De Marinis, M. G., & Riegel, B. (2018). A systematic review and integration of concept analyses of self-care and related concepts. *Journal of Nursing Scholarship*, 50, 296–305. https://doi.org/10.1111/jnu.12385

Maynard, B. R., Farina, A., Dell, N. A., & Kelly, M. S. (2019). Effects of trauma-informed approaches in schools: A systematic review. *Campbell Systematic Reviews*, 15, e1018. https://doi.org/10.1002/cl2.1018

McLeroy, K. R., Norton, B. L., Kegler, M. C., Burdine, J. N., & Sumaya, C. V. (2003). Community-based interventions. *American Journal of Public Health*, 93(4), 529–533.

Mehl-Madrona, L., & Mainguy, B. (2014). Introducing healing circles and talking circles into primary care. *Permanente Journal*, 18, 4–9. https://doi.org/10.7812/TPP/13-104

Merriam, S. B. (2002). Qualitative research in practice: Examples for discussion and analysis, Jossey-Bass.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). Qualitative data analysis: A methods sourcebook, Sage.

Parker, J., Olson, S., & Bunde, J. (2020). The impact of trauma-based training on educators. *Journal of Child and Adolescent Trauma*, 13, 217–227. https://doi.org/10.1007/s40653-019-00261-5

Patton, M. (1990). Qualitative evaluation and research methods, SAGE.

Perry, D. L., & Daniels, M. L. (2016). Implementing trauma-Informed practices in the school setting: A pilot study. *School Mental Health*, 8, 177–188. https://doi.org/10.1007/s12310-016-9182-3

Rudaz, M., Twohig, M. P., Ong, C. W., & Levin, M. E. (2017). Mindfulness and acceptance-based trainings for fostering self-care and reducing stress in mental health professionals: A systematic review. *Journal of Contextual Behavioral Science*, 6, 380–390. https://doi.org/10.1016/j.jcbs.2017.10.001

Sabin-Farrell, R., & Turpin, G. (2003). Vicarious traumatization: Implications for the mental health of health workers? *Clinical Psychology Review*, 23, 449–480. https://doi.org/10.1016/s0272-7358(03)00030-8

Schimmels, J., & Cunningham, L. (2021). How do we move forward with trauma-informed care? *Journal for Nurse Practitioners*, 17, 405–411. https://doi.org/10.1016/j.nurpra.2020.12.005

Schuman-Olivier, Z., Trombka, M., Lovas, D. A., Brewer, J. A., Vago, D. R., & Gawande, R. (2020). Mindfulness and behavior change. *Harvard Review of Psychiatry*, 28, 371–394. https://doi.org/10.1097/HRP.0000000000000277

Stamm, B. H. (2009a). *Professional quality of life: Compassion satisfaction and fatigue subscales, Version V (ProQOL). Center for Victims of Torture*. Retrieved from ProQOL Measure ProQOL

Stamm, B. H. (2009b). *Compassion satisfaction and compassion fatigue slide stock slides for public use*. Retreived from Presentation Slides ProQOL. https://proqol.org/presentation-slides

Stamm, B. H. (2010). *The concise ProQOL manual* (2nd ed). https://proqol.org/uploads/ProQOLManual.pdf

Substance Abuse and Mental Health Services Administration. (2014). *SAMHSA's concept of trauma and guidance for a trauma-informed approach*. HHS Publication No. (SMA) 14-4884. *Substance Abuse and Mental Health Services Administration*. https://ncsacw.samhsa.gov/userfiles/files/SAMHSA_Trauma.pdf

Taylor, J., McLean, L., Korner, A., Stratton, E., & Glozier, N. (2020). Mindfulness and yoga for psychological trauma: Systematic review and meta-analysis. *Journal of Trauma and Dissociation*, 21, 536–573. https://doi.org/10.1080/15299732.2020.1760167

University of Missouri-St. Louis Missouri Institute of Mental Health. (2019). *Alive and well St. Louis survey and focus group findings*. https://static1.squarespace.com/static/5afd9cd9365f026d73136d45/t/5bd518bce5e5f0d50169d90b/1540692170308/Ambassador%2Band%2BTraining%2BFocus%2BGroups%2BNovember%2B2017.pdf

Whitaker, R. C., Herman, A. N., Dearth-Wesley, T., Smith, H. G., Burnim, S. B., & Myers, E. L. (2019). Effect of a trauma-awareness course on teachers' perceptions of conflict with preschool-aged children from low-income urban households: A cluster randomized clinical trial. *JAMA Network Open*, 2:e193193. https://doi.org/10.1001/jamanetworkopen.2019.3193

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