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Engaging teacher's mental health self-care early through a trauma-informed microcredential

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Abstract

Purpose – The purpose of this study was to examine how beginning teachers' participation in a microcredential based on trauma-informed classroom management and restorative discipline (TIMRD) practices might enhance their self-efficacy (SE), through an understanding of their own trauma response, its neurobiological basis and classroom interventions that focus on student wellness and teacher self-care.

Design/methodology/approach – Using a single case study design, participants completed a pre- and post-assessment before and after completion of a TIMRD microcredential.

Findings – A total of seven teaching fellows completed the microcredential process. Results indicate that the use of a microcredential for professional learning assisted with decreasing sense of burnout while increasing professional SE, SE related to classroom management and instructional strategies (ISs).

Originality/value – New teachers commonly struggle with a lack of professional efficacy for a variety of reasons, yet all teachers present with their own personal trauma. Increasing new teachers' sense of resilience through addressing their own trauma and the impact of student trauma is integral to increasing teaching SE and reducing rates of burnout.

Keywords Teacher self-efficacy, Trauma-informed classroom management, Restorative discipline, Cross-institutional professional development, Microcredentials, Teacher burnout

Paper type Research paper

The promotion of behaviors and mindsets that improve teaching efficacy is an integral task involved in the preparation of highly effective educators. Teacher self-efficacy (TSE) influences instructional practices, pedagogical styles and effort, among other factors, which significantly impact student engagement and learning outcomes (Duffin *et al.*, 2012). As a result, teaching efficacy has become a research area of both national and global interest. Efficacy for teaching has been defined as a belief in one's own "capabilities to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (Tschannen-Moran *et al.*, 1998, p. 233). Teaching efficacy is intimately connected to teacher emotional exhaustion, a facet of burnout.

Bandura's (1997) social cognitive theory suggests that creative mastery experiences and experiences modeling the behavior of others enhance self-efficacy (SE). SE is central to adaptation to external and internal demands, as it provides a sense of control over an individual's adaptive coping ability. Sense of SE is inherently linked with initial trauma

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experiences, as well as the challenges associated with the post-traumatic environment (Benight & Bandura, 2004), as it acts as a mediator between initial trauma distress and future symptom development (Park & Ai, 2006; van der Kolk, van der Hart, & Marmar, 1996).

Assisting teachers with developing an enhanced sense of TSE requires time spent focused on their past trauma distress, current level of symptom development and level of self-awareness. Teachers come to school carrying their personal trauma with them, and just like students, teachers are not always able to check their personal experiences at the door (Lancaster, 2021). Teachers' unchecked, or unregulated, trauma experiences act as a driver of teachers' level of SE in the classroom, with potential impacts on student success.

Research on TSE, specifically, indicates a positive correlation between TSE, instructional outcomes, instructional behavior, teacher well-being, work satisfaction, work commitment and teacher effectiveness (Mok & Moore, 2019). TSE has also been found to be a mediator of teacher innovative work behavior (TIWB), or the ability to "create new ideas, adopt them, apply them in the school context, and then communicate them to other members of the organization in order to achieve a communal benefit" (Gkontelos *et al.*, 2023, p. 1).

Studies suggest that approximately 50% of helping professionals, including teachers, are at high risk of secondary trauma. The COVID-19 pandemic is one example of a potentially traumatic experience that brought increased responsibilities at home and school and disrupted self-care routines for educators, leading to manifestations of secondary traumatic stress and burnout, as well as decreased TSE and retention (McMakin *et al.*, 2023). Individuals who work with children and have been exposed to students' stories of violence, abuse or crises and those who have experienced their own trauma may be at increased risk for secondary traumatic stress (National Child Traumatic Stress Network, 2011). Unfortunately, one area that is often overlooked is the inclusion of teachers' own experiences with direct or indirect trauma, or shared trauma experienced with students, which have an impact on TSE and rates of burnout, as well as personal self-care methods. Trauma-informed approaches tend to focus on the needs of students and how teachers might support student resilience in the face of adverse experiences, with far less research focusing on teacher resilience in the face of adversity (Kim *et al.*, 2021), indicating a substantial need to broaden our understanding of what helps teachers stay resilient in the presence of trauma.

Beginning teachers and resilience

Teaching is one of few careers in which beginners are required to carry out the same set of responsibilities as their higher-paid, seasoned colleagues (Tait, 2008). Complicating matters, they are often assigned more difficult course loads and teach students who exhibit challenging behaviors. The adversity these beginning teachers face can be intensified or eased, depending on the type and level of support received (Joiner & Edwards, 2008). According to Bernard (2003), novice teachers can enhance resilience by fostering nurturing, positive relationships with those who can empathize with the challenges they are experiencing, reinforce their value and offer support. One way to provide support and build resilience, is by implementing evidence-based practices, such as comprehensive induction programs (Eirich & Wildesen, 2023), which include the use of microcredentials as professional learning tools to enhance SE. Universities and local school districts can create partnerships to provide this critical support, with microcredentials offering a promising method of individualized, place-based training and support. Specifically, place-based learning must start systematically and include professional development opportunities which focus on enhancing TSE in the face of cumulative trauma exposure, address teachers comfort level with managing student trauma in their classrooms and focuses on increasing awareness of the toll the work takes on educators (Lancaster, 2021; Miller & Flint-Stipp, 2019).

Teacher self-efficacy and professional development

Existing literature recognizes the significance of SE and ways to explore methods for enhancing it. There are indications within this body of evidence that suggest a promising relationship between professional development activities and TSE (Gumus & Bellibas, 2023; Ross & Bruce, 2007; Tschannen-Moran & McMaster, 2009). Personalized, well-designed professional development can positively impact teachers' SE, leading to improved pedagogical practices, which ultimately impacts student outcomes including, motivation, engagement and achievement (Caprara *et al.*, 2006). Professional development is considered an important mechanism for enhancing teacher quality and improving student learning (Cochran-Smith *et al.*, 2020; Guskey & Yoon, 2009; Nabhani *et al.*, 2014; Tack *et al.*, 2018). Darling-Hammond and Richardson (2009) caution that, to be effective, professional development must be on-going, job-embedded, collaborative and involve significant inquiry and reflection to enhance teachers' learning and practices.

Freeman *et al.* (2014) conducted a mixed-methods longitudinal study, collecting data from 10 schools in five Canadian districts. After surveying 800 teachers and interviewing 400 of them, they found that "a collaborative culture could be formed by effective professional learning and that collaborative professional learning had a greater influence on both self-efficacy and collective efficacy" (p. 72). Likewise, Posnanski (2002) employed a mixed-methods approach to analyze data from 31 elementary public school teachers in Milwaukee, all of whom participated in school-based professional development. He concluded that professional development, which included initial training followed by on-going meetings, collaboration and feedback from coaches or mentors, significantly increased teachers' SE.

Gumus and Bellibas (2023) conducted a multi-country study which employed two-level hierarchical linear modeling. Results indicated that in 24 of the 32 countries/regions, teachers who engaged in job-embedded professional learning, which promoted professional learning communities (including coaching/mentoring, collaboration and action research), were likely to have higher perceptions of SE. In most countries, teachers participating in more traditional types of professional learning, based on a training-based model (including workshops, courses and conferences), were not as likely to have increased SE, providing credit to the benefits of more collaborative efforts.

Microcredentials provide a flexible, targeted, personalized approach to professional learning. They allow teachers to focus on specific skills and competencies relevant to their needs and goals. Through a targeted approach, teachers can gain expertise in areas that directly impact their teaching practices (DeMonte, 2017). In the personalized approach, which includes partnerships between mentors and fellows, a perceived higher level of social support occurs, leading to feelings of solidarity and belonging. This sense of support assists individuals in redefining a difficult situation as less threatening. It enhances regulation of emotions such as mistrust, anxiety and fear (Sippel *et al.*, 2015), commonly experienced in the face of trauma.

The Maryland accelerates partnership

Maryland Accelerates, a federally funded Teacher Quality Partnership grant, is a collaborative, cross-institutional initiative between Frostburg State University (FSU) and Garrett County Public Schools (GCPS). The partnership is grounded in the Nine Essentials (NAPDS, 2021) with specific emphasis on Essential Three. Key personnel collaborated to develop and implement a comprehensive and robust induction experience, known as the Teaching Fellowship. This induction program benefitted beginning, in-service teachers, referred to as fellows, all of whom were graduates of FSU and established teachers who mentored and coached the fellows over a two-year period. The professional learning was offered to fellows representing all three levels of instruction: elementary, middle and high

school. Their coaches were carefully selected after being nominated by building level administrators or district level supervisors. They were required to have a minimum of five years of successful teaching experience, be rated as effective or higher on the most recent evaluation, have participated in professional development on the critical elements of effective mentoring, possess a positive attitude and disposition and have excellent communication skills. The fundamental goals of the induction experience were to provide career advancement for the teaching fellows and their coaches through sustained, strategic mentoring; on-going, job-embedded professional development; and validated, competency-based microcredentials (Eirich & Wildesen, 2023).

Trauma-informed classroom management and restorative discipline microcredential

Through evidence-based activities and high-impact pedagogies, the Trauma-Informed Classroom and Behavior Management and Restorative Discipline (TIMRD) microcredential provided the opportunity for beginning teacher fellows to (1) identify and evaluate principles and strategies related to trauma-informed classroom management; (2) apply and reflect on restorative discipline practices in their own classrooms; (3) demonstrate competency and value of equitable behavior management and responsive discipline in their classroom and school; and (4) evaluate and reflect on the impact of equitable behavior management and restorative discipline to support diverse student learning and inform the professional development of colleagues.

The TIMRD microcredential included three sections. Section I, Explore and Define, prompted the educators to identify trauma-informed classroom practices and strategies, as well as explore how restorative discipline practices can support student learning and achievement in a classroom with diverse student populations. In the Observe and Synthesize section, the fellows observed their coaches, with the goal of improving the fellows' understanding of best practices of TIMRD. The fellow-coach pair then reflected upon how trauma-informed management practices impacted their instructional decision-making, a facet of TSE. In the Act and Reflect section of the microcredential, fellows and coaches synthesized knowledge and implemented the skills of TIMRD practices in their own classrooms and then shared the knowledge with their colleagues. Weaved within all three components were opportunities for the fellows to reflect on their personal experiences and the triggers impacting their mental health and well-being, sense of instructional efficacy and how to manage these personal aspects of their roles, while simultaneously rallying around the needs of their students.

Microcredential enhancement

The microcredential work was enhanced with cross-institutional professional development co-planned and co-facilitated by FSU and GCPS, grounded in Essential Three: Professional Learning and Leading. The leadership team initially met weekly to collaborate on plans for the professional learning to ensure it was a personalized, job-embedded experience. This consistent collaboration significantly strengthened the partnership, which spans over two decades. Based on the distinct interests and needs of GCPS, which differed from the university's partnership with other local education agencies, professional learning was structured to support teachers in a rural, impoverished area. The administration of the GCPS opted for in-person, full day professional learning, monthly, whereas the other partnering districts opted for virtual evening sessions instead, which occurred three times per semester. The TIMRD microcredential was not initially included in the two-year plan for the induction program, but the coaches requested additional professional learning in this area, and after many thoughtful conversations and planning sessions between partners, it came to fruition.

The study

This study focused on examining how fellows' participation in a microcredential based in trauma-informed classroom management and restorative discipline (TIMRD) practices might enhance their SE, through an understanding of their own trauma response, its neurobiological basis and classroom interventions that focus on student wellness as well as teacher self-care. TSE, which includes professional SE, classroom management and instructional strategies (ISs) efficacy, were examined pre- and post-intervention using the Teacher Self of Efficacy Scale (Tschannen-Moran & Woolfolk, 2001). Rates of burnout, which include disengagement and exhaustion, were also assessed using the Oldenburg Burnout Inventory (OLBI) (Demerouti, 1999; Demerouti & Nachreiner, 1998) pre- and post-intervention and compared to SE scores.

The following research questions were used to guide the study:

RQ1. How does participation in the TIMRD microcredential impact mean differences in pre- and post-scores and their subset scores?

RQ2. How does participation in the TIMRD microcredential impact mean differences in OLBI pre- and post-scores and subset scores?

RQ3. How does participation in the TIMRD microcredental impact mean differences in OLBI and TSE post-scores and subset scores?

Method

Professional development implementation and sequence

The TIMRD Microcredential occurred over a four-month period in Spring 2023. Fellows and their coaches attended three in-person workshop days and completed observational and reflective assignments before meeting one, as well as between each of the monthly meetings.

Pre-session one. Prior to session one, participants were encouraged to begin their TIMRD journey through reading articles on (1) School Climate and the Brain (Stuffler, 2011) and (2) The Impact of Conscious Discipline on TSE and Burnout (Cooper, 2019). These articles introduced concepts such as the brain's automaticity in assessing for safety, collective responsiveness to our social environments, affective resonance in the context of school as a community and cognitive constructs within American culture that impact students' and educators' sense of belonging and self-worth. Additionally, participants were introduced to the idea of restorative, or holistic approaches to discipline and were asked to consider why these concepts were successful or might not have worked. To tie the articles together and provide a visual introduction to trauma-informed practices, students watched a video presented by the Pennsylvania Training and Assistance Network (https://youtu.be/9osT4QnMIQA?si=6kn1-76IHx1-GVkd), which oriented fellows and coaches to how meaningful classroom management strategies can be in addressing non-academic barriers to learning.

Session one. Session one was used to foster consensus and increase understanding of what trauma is from a neuroscientific, attachment-based lens. Fellows and coaches were introduced to the concepts of neuroplasticity and adaptability; the brain's bias towards negativity and impact of early priming experiences; and the impact of one-time, versus complex trauma experiences on our abilities to form safe and attached relationships with others (Gaskill & Perry, 2012; Van der Kolk, 2014). Additionally, concepts of poverty diversity (American Association of University Women, 2020) and its relationship to our triggers and perceptions of others were introduced. Time was designated for discussion and processing, which included a reflection of fellows' and coaches' own struggles with past and current trauma exposure and their resulting sense of efficacy in various aspects of their lives.

Following the psychoeducation and processing section of session one, fellows and coaches completed Deliverable A.1: Needs Analysis and Interpretation. Fellows and coaches were divided into school-based groups to discuss their findings and takeaways from reviewed sources and how they might apply to their specific schools. Coach and fellow groups then completed an initial brainstorm of a Needs Analysis and Interpretation (see Appendix 1) to synthesize their new understanding of TIMRD practices. Each group verbally shared their initial Needs Analysis with the larger group and spent time discussing common areas of need, as well as their perception of their abilities and limitations with managing these needs in their schools.

Pre-session two. Following session one, and before session two, fellows and coaches assessed their school environments and identified the actionable trauma-informed management and restorative discipline needs present. They compared their initial brainstormed ideas to the reality of the needs observed in their schools. They became further acquainted with the methods of classroom management and discipline currently being enacted in the various environments within their schools. Using the Needs Analysis and Interpretation form, coach and fellow groups documented their visual diagnostics and returned to session two with their observations and reactions.

Session two. During session two, fellows and coaches shared their needs assessments, discussed their findings and were provided time to emotionally process areas of strength and improvement that they found in their schools. This included their own sense of TSE, its relationship to previous and current experiences, relationships with partners and supports. Following the processing period, they were provided with additional psychoeducation on the typical range of attachment and belonging-based responses that may be viewed in others, or that they might find in themselves, tying their needs assessment observations back to session one learning. Time was spent addressing potential functions of the behaviors exhibited in students and other educators, as fellows and coaches shared examples of interactions they observed during their exploration.

Following this exploration, the ongoing planning and problem-solving cycle was introduced as a concept that applies to academic success, as well as social and emotional success. The ongoing planning and problem-solving cycle intersect with the four R's of trauma-informed discipline: Realize, Recognize, Respond and Resist Re-Traumatization (Kentucky Department of Education, 2021). Coaches and fellows worked to identify how they could use the ongoing planning and problem-solving cycle and the four R's to enhance their TSE, through increased self-awareness of potential triggers in their classrooms, the impact of these triggers on themselves and their students and possible methods of enhancing their ability to plan for the four R's.

Fellows and coaches then created TIMRD Practices Checklists (see Appendix 2) of their perceptions of the best practices in TIMRD. They indicated what they could apply within the learning environment to support diverse learners, providing equitable learning experiences, empowering students and promoting brave spaces. Following its creation, the fellows and coaches discussed the checklists and chose dates for the fellow to observe a classroom learning environment using the provided checklist as a reference.

Between sessions two and session three. Observation of other. Between sessions two and three, fellows and coaches observed a classroom to identify the TIMRD practices and strategies used during instruction and/or displayed in the classroom environment. During their observations, coaches and fellows recorded notes on the TIMRD checklist. They were encouraged to add additional items to the checklist that fell into one of the three areas of instruction, learning environment and assessment but may not have been listed initially. Additionally, they were asked to consider if there were checklist items that were initially added, but based on observation, would not be meaningful or appropriate to their setting, tying back to the concepts of what might not work from session one. Coaches and fellows

completed take-away questions regarding their experience, which were uploaded to a data collection platform in addition to their artifacts.

Observation of self. After reviewing the TIMRD Practices Checklist created in session two, fellows were asked to plan and teach a lesson in which they worked to integrate TIMRD practices into their own classroom. Lessons were video recorded after parental consent was obtained. After the fellow taught the lesson and viewed the video, they used the TIMRD Practices Checklist to reflect on their instruction and the classroom environment. They were encouraged to ask their students what they thought was impactful during the lesson and recorded those responses. Fellows then planned a session with their coach to view the video together. Following the conclusion of their session with their coach, fellows were asked to reflect on the practices that (1) they observed in their video, (2) they felt most comfortable implementing with their student groups and (3) prevented further implementation of strategies.

Session three. Fellows took video segments of their instruction to the session, which were reviewed as a group. Session three was devoted to processing the questions posed between sessions two and three, with specific focus on the fellows' limitations and level of comfort with implementing TIMRD practices in the classroom. Fellows discussed the responses they received from their students. All of these areas were informed by their presentation of updated checklists.

Data collection

Given the single case study design, convenience sampling was used. Participants were required to be first- or second-year teaching fellows engaged in the Maryland Accelerates induction experience that was co-planned by the district and the partnering university. Participants received an email invitation that included a link to the pre- and post-questionnaire collected through QualtricsXM (Qualtrics, 2020). Fellows were asked to complete the survey before the first in-person session of the TIMRD microcredential and then again following their completion of the microcredential. Participants completed a consent form, in addition to the pre- and post-intervention questionnaires containing the OLBI and the Teacher Sense of Efficacy Scale. In addition to these quantitative assessments, the researchers also collected qualitative artifacts completed by fellows throughout the microcredential, including the Environmental Analysis and Needs Assessment, TIMRD Checklists and video observations. These were uploaded by fellows to the university's data collection site.

Quantitative measures

Oldenburg burnout inventory (OLBI). The 16-item OLBI was originally constructed and validated among different German occupational groups (Demerouti, 1999; Demerouti & Nachreiner, 1998). It assesses the two core dimensions of burnout: exhaustion and disengagement (from work). Exhaustion is defined as a consequence of intensive physical, affective and cognitive strain (i.e. as a long-term consequence of prolonged exposure to certain job demands) (Demerouti, 1999). The eight items of the exhaustion subscale are generic and refer to general feelings of emptiness, overtaxing from work, a strong need for rest and a state of physical exhaustion. The eight items on the disengagement subscale refer to distancing oneself from the object and the content of one's work and to negative, cynical attitudes and behaviors toward one's work in general. For both subscales, a 4-point response format is used (1 = strongly disagree, 4 = strongly agree). Four items in each subscale are positively worded and four items are negatively worded (Demerouti, 1999). The OLBI English translation demonstrates acceptable reliability (test–retest reliability and internal

consistency) as well as factorial, convergent and discriminant validity (Halbesleben & Demerouti, 2005).

Teacher sense of efficacy scale: Long form (TSES). The TSES has become the predominant measure of teacher efficacy throughout the world (e.g. Klassen *et al.*, 2009; Knoblauch & Woolfolk Hoy, 2008; Poulou, 2007; Tsigilis *et al.*, 2010; Hoy and Spero, 2005). Previously called the Ohio State Teacher Efficacy Scale (OSTES), it uses a 9- point response scale, and the responses are anchored with the descriptors 1-nothing, 3-very little, 5-some influence, 7-quite a bit and 9-a great deal (Tschannen-Moran & Woolfolk, 2001).

Total scores on the OSTES were positively related to both the Rand items (r ¼ 0:35 and 0:28; po0:01) as well as to both the personal teaching efficacy (PTE) factor of the Gibson and Dembo measure (r ¼ 0:48; po0:01) and the general teacher efficacy (GTE) factor (r ¼ 0:30; po0:01) (Tschannen-Moran & Woolfolk, 2001). Factorial analysis consistently showed three factors: Efficacy in Student Engagement (StE), Efficacy in Instructional Practices (IP) and Efficacy in Classroom Management (CM) subscales (Billali, 2015). Additionally, the TSES has been found to have good convergent validity (Tournaki *et al.*, 2023).

Data analysis

A series of *t* tests (Table 1) were used to examine the relationships between study outcomes (TSES totals and subscales and OLBI subscales of Disengagement and Exhaustion) from before (baseline) and after completion of the microcredential (post-intervention). Statistical analyses were completed using JASP (2022). Cohen's *d* values were included in Table 1 to indicate the effect size of the data. Effect sizes allow researchers to provide an interpretable, quantitative description of the size of an effect and a description of the size of observed effects (Fritz *et al.*, 2012). It has been suggested that a value of 0.2 or less should be considered a small effect, a value between 0.2 and 0.5 as a medium effect size and a value of 0.8 or larger as a large effect (Aarts *et al.*, 2014).

Results

Participant characteristics

A total of seven teaching fellows completed the pre- and post-surveys. Six identified as female and one identified as male. They all identified as Caucasian, residing in Western Maryland. All participants were completing their first or second year of teaching, with an assigned coach and were participants in the Maryland Accelerates induction experience. Mean age of participants was 24.43 (standard deviation (SD) = 0.53).

Measure 1		Measure 2	*t*	*df*	*p*	Mean difference	SE difference	Cohen's *d*	SE Cohen's *d*
PRE TSES	–	POST-TSES StE	9.53	6	<0.001	112.14	11.75	3.61	1.69
PRE TSES	–	POST-IS	9.58	6	<0.001	102.85	10.72	3.62	1.59
PRE TSES	–	POST-CM	9.15	6	<0.001	105.85	11.56	3.46	1.82
OLBI DIS POST	–	POST-CM	−9.80	6	<0.001	−37.14	3.79	−3.71	1.77
OLBI DIS POST	–	POST-IS	−13.43	6	<0.001	−40.14	2.98	−5.08	1.41
OLBI DIS POST	–	POST-TSES StE	−5.43	6	0.002	−30.85	5.68	−2.05	1.23

Source(s): Authors' own creation/work

Table 1. TSES and OLBI paired-samples *t* tests

Paired samples t *tests.* A series of paired-samples *t* tests were conducted to analyze the mean change between pairs of variables. The researchers specifically looked at the change in mean scores among pre- and post-data, as well as post-data for specific factors (see Table 1).

TSES – post TSES self-efficacy (SE). A paired-samples *t*-test was performed to compare TSES and subscale scores in pre- and post-intervention participants. There was a significant difference between the Pre TSES total scores and Post-TSES SE Scores; 9.539(6) = [9.539], p = [<0.001], with a mean difference of 112.143. Cohen's d = 1.69, indicating a large effect size.

TSES pre-post TSES instructional strategies (ISs). A paired-samples *t* test was performed to compare TSES and subscale scores in pre- and post-intervention participants. There was a significant difference between the Pre TSES total scores and Post-TES Instructional Strategy Scores; 9.587(6) = [9.587], p = [<0.001], with a mean difference of 102.857. Cohen's d = 1.59, indicating a large effect size.

TSES pre-post TSES classroom management (CM). A paired-samples *t* test was performed to compare TSES and subscale scores in pre- and post-intervention participants. There was a significant difference between the Pre TSES total scores and Post-TES CM Scores; 9.155(6) = [9.155], p = [<0.001], with a mean difference of 105.857. Cohen's d = 1.82, indicating a large effect size.

OLBI dis post-post TSES classroom management (CM). A paired-samples *t* test was performed to compare TSES and OLBI subscale scores in post-intervention participants. There was a significant difference between the POST-TSES CM total scores and Post-OLBI Dis Scores; −9.804(6) = [9.804], p = [<0.001], with a mean difference of −37.143. Cohen's d = 1.77, indicating a large effect size.

OLBI dis post-post TSES instructional strategies (ISs). A paired-samples *t* test was performed to compare TSES and OLBI subscale scores in post-intervention participants. There was a significant difference between the Post-TSES Instructional Strategy total scores and Post-OLBI Dis Scores; −13.437(6) = [−13.437], p = [<0.001], with a mean difference of −40.143. Cohen's d = 1.41, indicating a large effect size.

OLBI dis post-post TSES self-efficacy (SE). A paired-samples *t* test was performed to compare TSES and OLBI subscale scores in post-intervention participants. There was a significant difference between the Post-TSES SE total scores and Post-OLBI Dis Scores; −5.433(6) = [−5.433], p = [<0.001], with a mean difference of −30.857. Cohen's d = 1.23, indicating a large effect size.

Discussion

The purpose of this study was to examine how teaching fellows' participation in a microcredential based in TIMRD practices might enhance their SE, through an understanding of their own trauma response, its neurobiological basis and classroom interventions that focus on student wellness and teacher self-care. Through the promotion of positive and informed behaviors and mindsets, it was hypothesized that teaching efficacy and burnout rates would improve among fellows. Results of this study indicate that pre TES scores were positively correlated to post-SE, IS and CM, suggesting that fellows' total sense of SE prior to introduction impacted the effect of the microcredential on post-assessment subscale scores.

Interestingly, OLBI disengagement post-scores were negatively correlated with post-TES scores in all three subscales (SE, CM and Instructional Strategies). These results suggest that as rates of disengagement decrease, SE, efficacy in CM and efficacy in ISs increased. From these results, it can be deduced that the professional learning associated with the microcredential assisted with decreasing sense of burnout, while increasing professional SE, SE related to CM and ISs.

Increasing new teachers' sense of resilience through addressing their trauma, and the impact of student trauma, is integral to increasing TSE and reducing rates of burnout. Furthermore, addressing methods of management and classroom discipline, which are based in a more holistic view of the learner and the teacher, provides an avenue for teacher to promote the management of their trauma responses while simultaneously creating a harmonious classroom. Data collected from this microcredential indicates that this microcredential was successful.

Anecdotally, the content of this microcredential was so well received and inspirational to the participating fellows and coaches that the team elected to present the microcredential to all non-tenured teachers in the district (teachers in their first three years of teaching), as well as their mentors/coaches, this past fall. The microcredential was enhanced to include new components, such as a focus on mind-body skills and contemplative practices. Given that stress often results from an individual's perception and emotional response to a problem, which is then attributed to the identified problem (Brown, 2021), a new section was incorporated which addresses the sense of ambiguity and fear of change which comes from techniques found within motivational interviewing (DicClamente & Velasquez, 2002).

Limitations of the study

Given the single case study design used, a small number of participant data ($N = 7$) was analyzed. Future studies should work to utilize the microcredential in a larger population, from more diverse backgrounds, to inform whether a similar experience would benefit a wider range of new teachers. An additional limitation was that the study population consisted entirely of Caucasian individuals; therefore, these results may not speak to the diverse backgrounds of teachers nationally. While the microcredential was specifically designed for the current population demographic (teachers working in rural Appalachia), a future study might include an updated microcredential that has been created to suit the needs of teachers working in urban or suburban areas, in the spirit of incorporating microcredentials as a form of personalized learning (Ahmat *et al.*, 2021).

Recommendations for future research

It is commonly understood that trauma directly affects students' lives and their abilities in the classroom, and therefore, teachers are susceptible to the burdens associated with exposure to this trauma as well (Miller & Flint-Stipp, 2019). Given this knowledge, teacher induction, mentoring, and professional development programs should be designed to include SE-enhancing components, which may mitigate the impact of trauma exposure, and the effects of these professional development programs on subsequent teacher performance should be assessed. Leadership development programs should be constructed around methods of enhancing TSE (such as through coaching, feedback and planned competency improvement) and evidence on impacts on teacher performance should be collected (Heneman *et al.*, 2006). Given that teachers are often the first individuals, outside of family members, to learn about student trauma and feel its effects (Atkins & Rodger, 2016), programs or supports to help teachers develop the skills needed to manage these complex emotions are essential to enhancing TSE and resilience (Miller & Flint-Stipp, 2019).

The TIMRD microcredential was offered in an in-person format, with work submitted through an online data collection tool. However, an online learning platform was not utilized to engage students prior to, or in between, sessions. According to The Friday Institute for Educational Innovation:

> use of an online platform assists with "know[ing] what the micro-credential seeks to measure, understand[ing] what they must do in order to earn the micro-credential, submit[ing] all of the

> necessary materials in order to earn the micro-credential, and get[ting] feedback and know[ing] why they did or did not earn a micro-credential (Acree, 2016, p. 8).

Use of an online learning platform might enhance future iterations of this microcredential by empowering fellows to take more initiative in their experience. Online platforms provide opportunities for more regular check-in and feedback between participants and those facilitating professional learning, enhancing the sense of belonging and social support essential to increased SE. Additionally, online learning platforms improve the facilitator's ability to collect more frequent data on engagement rates with TSE scores.

Conclusion

According to the Friday Institute for Educational Innovation (Acree, 2016), teachers who earn microcredentials want to earn more. By modifying the supportive structures available to them, this form of professional development encourages teachers to more confidently apply learned skills to their classrooms, as well as focus on self-care. While many questions still exist around microcredentials, this job-embedded method of professional learning connects to daily classroom skills, promoting behaviors and mindsets that improve teaching efficacy (Acree, 2016; Duffin *et al.*, 2012) and, ultimately, teacher resilience.

Currently, nine states, including Maryland, are utilizing microcredentials (Acree, 2016), offering personalized methods of place-based professional learning. School-university partnerships provide a promising avenue for microcredential creation and delivery, as well as data collection on the efficacy of individualized microcredentials. The findings of this study suggest that teaching fellows benefit from learning opportunities that consider their experiences and needs and consider how these needs impact their instructional efficacy. Key personnel in this partnership, including FSU administration and faculty, as well as administrators, supervisors and teacher leaders in the GCPS, are excited to continue collaborating and nurturing this highly valued school-university partnership, in an on-going, collaborative effort that focuses on the promotion and retention of resilient educators.

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Further reading

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(The Appendix follows overleaf)

Appendix 1

Environmental Analysis & Needs Assessment

First, groups will meet in session one to complete an initial "brainstorm" EA&NA. Following session one, and before session two, fellows and coaches will assess the school environment and identify the Trauma-Informed Management and Restorative Discipline needs present in the school. They will compare their initial brainstormed ideas to the reality of the needs in their schools. This assignment is an excellent opportunity to become acquainted with the methods of classroom management and discipline currently being enacted in various school environments. Fellows will accomplish these requirements through a "visual diagnostic." The information collected will fall within each of the four areas.

Section One: Observe

1. Classroom Observation
2. Lunchroom/Cafeteria Observation
3. Physical Facility
4. Climate of Safety

As you observe, consider the following to support your insight:

- General functioning of school environment (What do I See?)
  - Is there a level of respect?
  - What management techniques did you observe?
  - Do you notice differences in interaction between staff and diverse student populations?
  - Are students from diverse backgrounds present and what does their presence offer to the environment?
- General tone of the school environment (What do I hear?)
  - Is there a level of respect?
  - What management techniques did you observe?
  - Do you notice differences in interaction between staff and diverse student populations?
  - Are students from diverse backgrounds present and what does their presence offer to the environment?

Section Two: Interpret

During session two, you will convene with your coach and fellow school group to discuss your findings and compare them to the brainstorm and then complete the following two sections during the beginning of session two:

- Needs: How did your first impressions of the needs of this school compare to what you determined related to TIMRD?
- Summary/Reflection: Based on the above considerations and factors, what is your overall impression of current TIMRD practices in the school? What do you see as potential "manageable adjustments" that could be made in your classrooms and in the school milieu to create a more TIMRD system?

Appendix 2

TIMRD Practices Checklist

Carefully read the entire checklist. Place a check mark under Teacher if the practice/strategy is observed. Record the evidence for each practice/strategy.

Practices/Strategies	Teacher	Evidence & Comments
Instruction		

Source(s): Authors' own creation/work

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