Lessons Learned from Developing, Implementing, and Evaluating Interventions for Workplace Trauma in Rural and Tribal Settings

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Abstract

Trauma exposure is ubiquitous in victim service professions, which are broadly defined here to include social and community service, criminal justice, and healthcare. As a result, individuals, and the trauma-informed organizations they work for, are often desperate to reduce the myriad of negative consequences associated with trauma exposure in the workplace. Unfortunately, using a trauma-informed approach to developing, implementing, and evaluating effective interventions is challenging. These difficulties are exponentiated in rural and tribal areas. The aim of this study is to provide practical information and recommendations based on nearly a decade of experiences studying trauma and victim services in both rural and tribal contexts. This study draws on qualitative interviews, focus groups, quantitative surveys, and randomized controlled trials with rural and tribal workers who engage with traumatized others or potentially traumatic materials. Five lessons are offered that highlight a variety of challenges that arise when developing, implementing, and evaluating interventions needed to mitigate the impacts of workplace trauma.

Keywords: trauma-informed approach, workplace trauma, victim services, rural, tribal, interventions

Even though trauma exposure in the workplace is of significant interest to researchers and employees alike, implementing research and developing interventions for individuals exposed to trauma in the workplace presents many challenges. Although studying workplace trauma is not unusual (e.g., Cieslak et al., 2024; Hensel et al., 2015; Wang et al., 2023), few published studies exist to aid researchers (and their workplace collaborators) when preparing for this type of work, especially when conducted in rural or tribal settings where exposure to different types of traumas may be especially high (Brave Heart et al., 2011; Radford et al., 2021; Skewes & Blume, 2019). The purpose of this article is to provide those interested in conducting intervention research on workplace trauma with information and recommendations based on our experiences studying rural victim service providers—which we broadly defined to include a variety of community and social service, criminal justice, and healthcare workers who are frequently exposed to traumatized individuals or potentially traumatic material. The information and advice provided here may also be adaptable to the study of other populations (e.g., students), organizations (e.g., schools) and geographical contexts (e.g., urban settings).

We share the methods and relevant findings of our own studies and present five practical lessons that highlight a variety of research challenges that could arise from the work, including issues associated with: community-based participatory research (CBPR) methods, working with traumatized study samples, using a trauma-informed approach, evaluating efficiently and effectively, and prioritizing the manualization and dissemination of the work to help push the field forward. Although these lessons may apply to several types of traumatized populations, organizations, and geographical contexts, some unique considerations may be necessary when working with certain specialized groups (e.g., law enforcement and military). This article, therefore, offers these lessons as a basic starting point for studying and developing interventions for individuals exposed to trauma in the workplace.

Background: Historical Context and Scientific Foundation

Past scholarship has extensively examined individuals employed in stressful and potentially traumatizing workplaces (Adiaenssens et al., 2015; Alves et al., 2023; Elwood et al., 2011; Knight et al., 2018; Sabin-Farrell & Turpin, 2003). While a significant body of research has studied populations of traumatized workers, there are few available guides designed to help with the challenges of studying these workers, especially those working in rural and tribal settings. That said, there is an important body of work that offers historical context and a scientific foundation for effective intervention and policy development for workplace trauma exposure.

First, in terms of historical context, researchers interested in studying workplace trauma exposure have developed a number of related and sometimes overlapping terms to describe this phenomenon, which has been written about extensively (Newell et al., 2016). These terms

include vicarious trauma, secondary trauma exposure, compassion fatigue, and burnout, among others. When engaging with traumatized workers on the frontlines, we have used the term, *secondary trauma* (and at times, *vicarious victimization*, depending on the audience) as an umbrella term to capture the multitude of concepts that academics have coined over the years.

Second, a number of instruments have been developed to document the prevalence of workplace trauma-related symptoms. Widely used instruments include the Secondary Traumatic Stress Scale (Bride et al., 2004), the Professional Quality of Life Scale (Stamm, 2010), and the Maslach Burnout Inventory (Maslach et al., 2016). With the inclusion of workplace trauma exposures as a qualifying exposure type in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-5; Pai et al., 2017), several researchers also include the PTSD Checklist for the DSM-5 (Weathers et al., 2013) in their studies (White et al., 2023). In our own work, we have found that many of the symptoms captured in these measures are highly correlated (Knight et al., 2021). That said, our research and that of others (Elwood et al., 2011; Sabin-Farrell & Turpin, 2003) have noted that symptoms may differ depending on profession. For example, we found that community and social service workers reported more PTSD symptoms, whereas criminal justice workers reported more cynicism, and healthcare workers reported more exhaustion (Knight et al., 2023). Overall, however, we found more similarities than differences in the symptoms reported.

Third, a wide body of research has sought to document risk and protective factors associated with workplace trauma exposure. Risk factors include being a woman (Baum, 2016), having a personal history of trauma (Caringi et al., 2015; Elwood et al., 2011; Hensel et al., 2015; Ivicic & Motta, 2017), amount or dose of traumatic exposure, including years of professional experience (Bober & Regehr, 2006; Craig & Sprang, 2010; Deighton et al., 2007; Elwood et al., 2011; Hensel et al., 2015; Tosone et al., 2010; Udipi et al., 2008). Protective factors include mindfulness (Thieleman & Cacciatore, 2014; Thomas & Otis, 2010; van Dernoot Lipsky, 2009), social support (Bonach & Heckert, 2012), and supervision or training more broadly (Killian, 2008; Sprang et al., 2007). These findings are corroborated in our own research (Ellis & Knight, 2021; Knight et al., 2023; Knight et al., 2018; Knight et al., 2021; Knight et al., 2022) and can be used to inform intervention development.

Fourth, a growing but altogether insufficient body of research is attempting to document interventions for workers exposed to trauma (Bercier & Maynard, 2015, Molner et al., 2017; Sprang et al., 2019). Of the published studies that exist, intervention targets typically fall into three categories, promoting awareness (e.g., training as intervention and psychoeducation), self-care (e.g., promoting health and wellness), and organizational change (but to a much lesser extent), rather than empirically supported treatments for PTSD following indirect traumatization (Sprang et al., 2019). Randomized controlled trials are rare (see Cieslak et al., 2016, for an exception). In our own work, we have been unable to locate intervention manuals, or the details

needed to replicate existing interventions. As a result, when organizations contact us asking for suggestions for interventions that they can implement themselves, we do not have a model intervention to offer. Following Sprang et al. (2019), we typically suggest at two-tiered framework that involves organizational-level prevention and then individual-level therapeutic interventions for those experiencing both symptoms and functional impairments. To assist with organizational-level prevention efforts, we developed a freely available and user-friendly toolkit that promotes awareness, self-care, and organizational response (Bear Chief et al., 2018; Clements et al., 2018). More extensive toolkits have also been developed (e.g., Office for Victims of Crime, n.d.).

Altogether, the findings provided by prior research offer valuable insight for researchers and employers who wish to develop, implement, and evaluate interventions that address trauma in the workplace. While some research has begun to identify obstacles related to this work (e.g., Hallinan et al., 2021) very little is known about the specific challenges associated with interventions for traumatized individuals working in rural and tribal contexts. Rural settings, which typically have fewer workers spread over larger and more isolated geographic regions and a higher probability of transportation issues, staff recruitment difficulties, lower public funding for services and programs, among others, present unique challenges in general (Phillips & McLeroy, 2004; Rink et al., 2020) and especially for the study of trauma in the workplace (e.g., Dekeseredy et al., 2019). Therefore, this article aims to extend the foundational work described above by providing researchers and their organizational partners with practical information and recommendations primarily on the issues and challenges of studying and creating interventions that support those who engage with traumatized others or traumatic material in a rural or tribal context.

The Current Article

The purpose of this article is to provide important guidance to those conducting interventions for, and related research on, individuals who are likely to be traumatized in rural or tribal work settings. We summarize the methods and relevant findings of our own studies and present five overarching lessons that would have been helpful to us before we began our own research on these population. Within the social science and public health fields, researchers rarely publish what they learn through experience. Given that it is less common for this information to be written and widely disseminated, we aim to make these lessons more broadly available to those interested in conducting new research with rural or tribal workers who engage with traumatized populations or traumatic material. The lessons discussed here apply to the use of CBPR methods, traumatized populations and study samples, trauma-informed approaches, efficient and effective intervention evaluations and outcome assessments, and the important task of manualizing and disseminating the work to push forward the field.

Five Studies: Methods, Sample Characteristics, and Select Findings

We briefly describe our methods and findings in an effort to provide readers with a context for the lessons and recommendations that follow. Our larger research project unfolded in a series of studies. In an effort to be succinct, we briefly describe five of our most relevant studies below. In addition to the methods used, sample characteristics and relevant findings are included. All studies took place in Montana, which is largely rural with a population of just over one million (U.S. Census Bureau, 2023) and seven reservations (Montana State University, 2019). For additional context, some areas of Montana have faced both recent and historical shifts in their populations due to the nature of natural resource extraction (e.g., oil and gas boom- and bust-towns) and tourism (Ellis & Knight, 2021). These shifts and their related challenges (e.g., drug and human trafficking) impact victim service providers and their organizations, many of whom are under-resourced and ill-equipped to handle rapid change.

Study 1: Qualitative interviews and focus groups to understand experiences of stress and trauma among workers. We conducted what began as a statewide victim needs assessment, using in-depth interviews with organizational leaders (lasting 1 hour on average; n = 38), focus groups of workers (lasting 2 to 3 hours; n = 56), and participant observation (90 hours of observing workers in eight different trainings about how to better serve victims of crime; Ellis & Knight, 2021). Participants were child protective service workers, sexual and domestic violence advocates, law enforcement officers, attorneys, mental and physical healthcare providers, and clergy. Their self-reported average age was 43; 81% were women, 88% White, 7% Native American, and 3.5% Hispanic; 66% held a bachelor's degree or higher. Data showed that workplace stress, trauma, and fatigue were the most salient problems facing workers, especially in more rural areas and in areas of Montana that were rapidly expanding. As a result, we shifted the focus of our research from victims' needs to workers' needs. We then developed a theoretical model linking suboptimal work with: (a) data indicating the importance of adverse childhood experiences and other forms of primary trauma; (b) a decision to go into trauma heavy occupations; (c) increases in secondary trauma, as indicated by a multitude of related and sometimes correlated conditions such as stress, fatigue, trauma exposures, burnout, compassion fatigue, and moral distress; (d) increases in risky coping behaviors such as overeating and substance use; (e) subsequent disease and disability; and (f) eventual staff turnover and worker shortage.

Study 2: Using community-based participatory research (CBPR) to develop an intervention. CBPR is a partnership approach to research that involves community or organizational representatives, researchers, and others in all aspects of the research process (Israel et al., 2013; Wallerstein & Duran, 2006). Ideally, all partners have an equal responsibility in the process by contributing their respective expertise and sharing in the decision-making as well as the ownership of data. The aims of CBPR are to increase knowledge and understanding

of a given phenomenon, and to integrate the knowledge gained from interventions for policy or social change benefiting the community or organizational members.

Study 2 began when a tribal member associated with our university attended a presentation overviewing Study 1. She invited us to her home reservation and introduced us to tribal victim service providers whom she knew well. We made the four-hour trip several times and held meetings with a group of engaged providers. At the same time, we began meeting with a nontribal group of providers, most of whom were participants in Study 1, and were interested in collaborating on a new phase of the project. These two groups became our "community advisory boards" (CABs), each consisting of seven organizational leaders representing various social and community service, criminal justice, and healthcare organizations.

CAB members worked with us in developing an intervention that addressed the workplace stress, trauma, and fatigue identified by Study 1 participants. We met monthly for over two years, often traveling long distances to convene. These meetings led to two coauthored toolkit booklets, one tailored specifically for our tribal collaborators and one intended for a general audience, both of which included nine tools covering three domains: (a) *awareness*, encompassing topics like understanding the different forms of trauma, recognizing the consequences of secondary trauma, and weighing risk factors and resiliency; (b) *self-care*, encompassing topics such as the assessment of secondary trauma, cultivating mindfulness, and regulating the nervous system; and (c) *organizational response*, encompassing topics like leading trauma-informed meetings, implementing low-impact debriefing, and the importance of connecting with others (Bear Chief et al., 2018; Clements et al., 2018).

We then held a toolkit training intervention that employed a train-the-trainer approach (Knight et al., 2022). Using flyers, emails, and direct contacts from CAB members, workers (n = 41) from a variety of organizations were recruited to attend. Following the intervention, participants were encouraged to disseminate a hardcopy or online version of the toolkit to their colleagues. The toolkit training intervention project was also used in a tribal community in Montana where a toolkit specifically for the tribe was developed and three additional trainings were offered (n = 46, n = 31, n = 60). Two of the four trainings were led by the principal investigators of the project, and two were led by experts in mindfulness and mental health, both of whom shared American Indian heritage with the participants.

Across all four training interventions, the self-reported average age was 49, and participants consisted of 80% women; 29% were White, 65% Native American; and 62% held a bachelor's degree or higher (Knight et al., 2022). Approximately 10% of the participants in these trainings also participated in Study 1. Using a short and anonymous survey developed with CAB members, evaluations completed at each training session indicated: *successful implementation* based on responses to five items such as "this training will make a difference," "the toolkit is a

practical way to respond to secondary trauma," and "the train-the-trainer model is a sustainable response to secondary trauma" (Likert scale = 1-5, M = 4.35-4.33, SD = .65-82); *usefulness of the tools to the participant personally* (nine items, one for each tool, Likert scale = 1-3, M = 2.72, SD = .37); and *usefulness of the tools to their organization* (nine items, one for each tool, Likert scale = 1-3, M = 2.76, SD = .40).

In addition, we found statistically significant changes from pre- to post-training intervention outcomes in six items assessing: *awareness of secondary trauma*, *knowledge of its consequences*, *understanding that secondary trauma is a normal response to working with traumatized people*, *coping strategies for secondary trauma*, *individual plans to reduce its impacts*, and *organizational plans to reduce its impacts* (Likert scale = 1-5; M = 2.90, SD = .92 when retrospectively assessed before the training; M = 4.10, SD = .59 assessed at the end of the training; $t = -1.20$, $p < .001$; Knight et al., 2022). A multivariate regression analysis controlling for demographic factors and the different training sessions also showed significant improvement of scores on training intervention outcomes after the training ($b = .37$, $SE = .05$, $p < .001$).

Study 3: Quantitative survey of workers. The purpose of this survey was to document the burdens experienced by workers, their adverse impact on health, and the need for an intervention (Knight et al., 2019). We quantitatively assessed exposure to stress and trauma, as well as physical and mental health outcomes reported in Study 1. CAB members nominated eleven organizations for possible recruitment into the study: five law enforcement agencies, one detention center, one child protective service agency, one hospital (targeting emergency-room personnel and sexual assault nurse examiners), and three community-based organizations providing a variety of programs and services to their respective communities (e.g., responding to domestic violence, sexual assault, suicide, and housing and transportation crises). Following in-person presentations to organizational leaders about the study goals and procedures to solicit participation, a link to an online survey was sent to these leaders, who forwarded it to their employees. The overall response rate per organization ranged from 50 to 95% with a median of 71.5%. The average age of respondents was 37; 55% were women, 92% were White, 67% had a bachelor's degree or higher, and 5% had participated in Study 2.

Individual organization reports were shared with respective leaders to help them understand the prevalence of exposure and the degree to which their workers were experiencing negative health outcomes. In addition, Knight et al. (2023) described how multivariate regression models tested the impact of organization (i.e., criminal justice, community and social services, healthcare) and job type (i.e., law enforcement, social workers, detention officers, healthcare technicians, office and administrative support, nurses, educators/trainers, administrators, physicians) on four outcomes: burnout-related exhaustion, cynicism, secondary traumatic stress, and PTSD symptoms. Findings indicated that, rather than profession, number of years on the job ($p < .05$ for all outcomes) and adverse experiences in childhood ($p < .05$ for all outcomes except

cynicism) were the most important risk factors. Worker age ($p < .05$ for all outcomes) and effectiveness of related trainings ($p < .05$ for all outcomes) were the most protective. These findings played an important role in the design of our subsequent intervention. For example, the intervention was then delivered in groups ($n = 15$) that included a mix of different types of workers (i.e., mixed-work groups) because our findings indicated that, in predicting work-related health problems, differences in organization and job type were less important than similarities in trauma exposure, including those experienced in childhood.

In Knight et al. (2021) we standardized and averaged scores on several measures to test links among different sources of trauma exposure in childhood and at work and among four composite outcomes: (a) occupation-based trauma symptoms; (b) mental health; (c) physical health; and (d) substance use. Multivariate regression models found that adverse child experiences (ACEs) were positively associated with the occupation-based trauma composite ($p = .02$ for men and $p = .06$ for women), which was in turn positively associated with the composites for mental ($p < .001$) and physical ($p < .001$) health symptoms. This information was used in designing our intervention curriculum to help workers understand that not all health problems are a direct result of the work and that symptoms are likely to stem from a mix of exposure, ongoing adversity, and retraumatization.

Studies 4 and 5: Pilot Randomized Controlled Trials (RCTs). To test a longer, multiday intervention that gave participants time to practice our curriculum at a slower pace, Study 4 randomly selected a sample of workers (treatment $n = 41$; control = 39) who had completed the Study 3 survey to participate in a pilot training intervention that involved two days of intensive, face-to-face meetings. These were bookended by three weeks during which each participant completed three individual online assignments and one of three small-group consultations with the trainer. The in-person training curriculum was similar to that used in Study 2 but also included more trauma-informed mindfulness training practiced in small, socially supportive breakout groups of 2-3 participants and observed by trained facilitators (mental health providers and research assistants). In a series of mindfulness exercises, participants learned to track and regulate their nervous system responses to stress, practiced helping others do the same, and then debriefed with one another about their experiences. Although we did not test health outcomes, the 50% retention rate and qualitative data gathered from discussions with participants, facilitators, and the external trainer signaled a redesign of the intervention including: (a) a focus on high-risk workers so that trainers could help participants who needed it most; (b) the use of small, prescreened, and mixed-work groups meeting in neutral and confidential settings; and (c) a multisession (6-week) format to increase psychological safety and reduce conflicts in social norms.

Study 5 tested: (a) the feasibility of online screening and data collection protocols and (b) the impact of a training that involved two waves of in-person, weeklong sessions focused on

secondary trauma for workers (Knight et al., 2019). The study allowed us to pilot randomization to immediate training and waitlist control and to assess longitudinal online survey data-collection protocols. Even though the study was canceled at the midpoint due to the COVID-19 pandemic, we were able to randomize N = 140 mental healthcare workers and collect three waves of repeated online outcome surveys, as well as one training evaluation survey across a six-month period. For workers who completed our baseline survey, we achieved a 93% (n = 121/130) retention rate after the third wave of data collection.

Findings: Five Lessons

Lesson 1: Use CBPR—but building reciprocal relationships takes time, energy, and funding. As discussed earlier, CBPR is a partnership approach to research where all partners have an equal and shared responsibility in the research process (Israel et al., 2013; Wallerstein & Duran, 2006). CBPR is especially important when working with rural, tribal, and other historically marginalized groups where researchers have exploited and harmed individuals and their communities (Konkel, 2015). Our primary approach to CBPR involved developing a CAB comprised of organizational leaders and representatives who not only served as study consultants throughout all five projects but who were also champions of the work. They helped us reach hard-to-access participants in their own and other related organizations, increased cultural and ecological validity of the intervention materials, and promoted the importance of participating in the intervention and completing assessments.

Our tribal-based CAB was especially critical to the project's success. As Salois and colleagues (2006) say, research in tribal communities is a "spiritual covenant." While our tribal and non-tribal CABs helped us work through research ethics related to participant exploitation, vulnerability, and mistrust, our tribal partners also helped us navigate the research process with cultural humility and competency that we would not have had without these friendships. The CABs also helped us navigate challenging design features given the larger geographic and reservation-based settings of our studies, reminding us of issues associated with traveling long distances (a burden shared by researchers and participants alike), working with culturally distinct groups, and small populations where individuals often hold dual roles (e.g., relative and police officer).

A strong relationship with your CAB is fundamental but must also be reciprocal. We recommend compensating these board members and other partners as generously as possible. We typically provided cash or gift cards and a meal at each meeting. Additionally, we regularly attended events they were hosting, provided relevant training and professional support as often as possible, and, when appropriate, included them as co-authors on publications. Managing the logistics and "windshield time" of these tasks was onerous, but in the end, we found that our relationships with the CABs improved the success and impact of our research. That said, we

wished we knew in advance how much time, energy, and funding CBPR methods take and had built that knowledge into our initial research design.

Lesson 2: Know your population and sample with care. As noted earlier, we use the term victim service provider in our research to broadly include workers of various types who engage with traumatized individuals or traumatic material. Typically, this includes community and social service, criminal justice, and healthcare providers. It can also include frontline workers, administrative staff, management, and administrators. We have at times included teachers, religious clergy, elder-care professionals, volunteers, and students. Our reasons are two-fold. First, the size of Montana is large and its population relatively small. Compared to an urban context, we did not have the luxury of sampling just one type of provider or organization, given issues of sample size and underpowered analyses. Second and more importantly, we believe that secondary trauma is an equal-opportunity victimizer. Certainly, different groups can experience varying rates of trauma exposure and other types of symptoms. However, when we explored this issue in Study 2, we found that while important differences existed between job types and organizational contexts, with careful attention, effective interventions can be delivered across these groups, when warranted.

The practical necessity of sampling participants from across occupational backgrounds has risks, especially in small communities where individuals have many dual roles. We recommend using CBPR methods to get to know your population early in a project and well before intervention implementation. Strategies include prescreening participants to assess for dual roles. We learned the importance of this step during one of our early training interventions when we unknowingly paired a law enforcement officer with a community advocate who was also a former arrestee. We quickly learned that the pairing was unacceptable to both of them and had to make quick adjustments. Related, carefully consider whether supervisors and their reports should be in the same intervention. In these cases, we often relied on the institutional knowledge of our CAB members to help make these decisions.

Other lessons learned include the challenges of working with on-call staff who would frequently need to leave an intervention or answer a phone when a given issue or emergency arose. This is especially problematic in rural settings where one worker covers a wide geographic area or is responsible for a wide range of duties, as is often the case in rural organizations that are understaffed and under-resourced. These problems are intensified in tribal communities. Last, we recommend tracking which participants elect the training versus those mandated to attend by their employer. Our preliminary analysis in Study 5 suggested better outcomes for those who wanted rather than were required to attend the intervention (Knight et al., 2019).

Lesson 3: Plan for trauma to complicate everything. Perhaps it goes without saying that an intervention for trauma should be trauma informed. Our involvement with participant

observation research, however, has taught us otherwise. We have seen the most well-intended interventions exacerbate retraumatization among their participants. Highlights include hosting long interventions in hot, cramped spaces and one that asked participants to complete, sign, and return Felitti et al.'s (1998) ACEs questionnaire for their supervisors to review. To be sure, we made mistakes. In addition to those mentioned previously, we made our early intervention sessions too long, included trainers who were not a good fit for the audience, and moved through complex content far too quickly. Over time, our data inspired us to change our intervention procedures.

Study 2 data showed that the average number of ACEs for our participants was 2.02 (Knight et al., 2023). This is much higher than the national average of 1.36 (Ranford et al., 2021). Related, American Indian samples in Montana face many ongoing adversities related to historical trauma, ongoing racism and marginalization, poverty, substance use, and suicide (Skewes & Blume, 2019). Whether caused by ACEs, ongoing adversity, or trauma in the workplace itself, van Dernoot Lipsky (2009) posits a trauma exposure response that includes a number of symptoms like chronic exhaustion, inability to listen, sense of persecution, anger and cynicism, hypervigilance, a sense that one can never do enough, and an inability to embrace complexity, as well as experiencing dissociative moments and feeling helpless and hopeless. Therefore, we recommend developing trauma-informed intervention procedures with these symptoms in mind.

As we have learned to deliver training interventions that are succinct, organized, and well-paced, we know to include frequent icebreakers, fun activities (e.g., food and raffles), movement exercises, mindfulness practices, and breaks that promote nervous system regulation. Study 3 involved a full-day training intervention, and although we successfully included the activities just listed, we now advocate for shorter intervention sessions conducted over multiple days when possible. Other implementation recommendations include considering the tradeoffs of onsite (i.e., located at the workplace) versus offsite interventions (e.g., located at an event center or other organization). Busy workers may prefer an onsite location, but an offsite space may provide more psychological safety and time away from competing demands.

In terms of developing content for interventions, we typically begin interventions by teaching participants practical and discreet self-regulation strategies that can be used if they become activated during the intervention or in real time while in a workplace context. Next, we teach content about how ACEs and ongoing adversities can be mistaken for or complicate experiences of workplace trauma exposure. We recommend material that highlights the potentially cumulating effects of trauma over the life course, and protective factors that promote resiliency. In sum, working with trauma complicates the already challenging work of developing and implementing interventions. Working with trauma can be activating for all involved (even

the researchers), so we recommend preparing for the unexpected and showing appreciation and gratitude at every step.

***Lesson 4: Evaluate efficiently and effectively*.** At the start of our research, we were excited to measure *everything,* and we wanted to measure it longitudinally—from sociodemographic and occupational characteristics to mental and physical health outcomes, as well as biomarkers like cortisol. As a result, our initial data collection procedures were inefficient. Surveys took an hour to complete and survey fatigue was a concern. At one point, we collected four waves of preliminary data for a pilot study that, in hindsight, was probably not yet needed. These inefficiencies created a lot of work for our participants but also required a tremendous amount of administrative labor for us. For example, following core CBPR practice, we sought to compensate each participant for each wave of data collection. Repeatedly creating and sending participant support gift cards for multiple waves of surveys, not to mention documenting each transaction for our budget office, took time away from managing, merging, and cleaning waves of data. Although we gleaned valuable information, we learned to be more efficient and to cut back on the number of measures we use and the number of times we administered them.

We also recommend separating the evaluation of the intervention itself from assessments of changes in outcomes. This makes each data collection piece shorter, more approachable, and ultimately more effective by helping clarify the goals of any given wave of data collection. Separating the evaluation and outcome surveys can promote trust and improve the quality of survey responses. For example, we were surprised when one occupational group (that was not surprisingly cynical of outside researchers) reported few issues with substance use on quantitative surveys than our qualitative data had suggested. We recommend that researchers promote trust early and often. By Study 5, we were consistently reminding participants that the data were anonymized and that individual responses would never be shared with their employers. Last, hiring staff to deliver the intervention was not always practical given our rural and less populated geography (as well as our funding limitations), and at times, we had to deliver and evaluate the training interventions ourselves, which can be a threat to validity. Ultimately, we advocate for getting clear early on about who will deliver the intervention (perhaps using a train-the-trainer model) and who is going to assess the intervention.

***Lesson 5: Manualize and disseminate*.** As discussed earlier, we did not set out to develop an intervention for secondary trauma. Recall that we were in the process of conducting a victim needs assessment when findings from our qualitative work made clear that victim service providers in Montana were suffering and needed support. When we pivoted our study from victims to workers, we assumed that someone else, somewhere else, would have created an intervention that could be replicated and evaluated. Despite an enormous review of the literature and countless emails and phone calls to other researchers and organizational leaders, a neatly

packaged intervention could not be found. To this day, we still get requests asking for recommendations for the best evidence-based intervention. Although some progress has been made since the start of our work (e.g., OVC's Toolkit for Vicarious Trauma), replicable manuals of interventions for traumatized workers are not readily available. Instead, it seems more likely that workers and their organizations (and hopefully skilled research collaborators) will have to cobble together their own intervention programs with the wellness and trauma training expertise that exists in their communities.

In the spirit of moving the field forward, we recommend documenting and manualizing processes and protocols early and often and at every stage—development, implementation, and evaluation. We honor that this is not easy. Our own toolkit took an extraordinary amount of time to produce. At times we got sidetracked analyzing our data rather than documenting the processes that led to our findings. Our rural context exacerbated this issue. Not only were we responsible for running our study, as sociologists, we first needed to develop the skills necessary to create and deliver an intervention by learning, for example, how best to work with traumatized individuals and how best to deliver mindfulness practices that then could be tailored to victim service providers working in rural or tribal contexts. We look forward to the day when trauma interventions for workers are as assessable as interventions designed under, for example, the umbrella of Alcohol Anonymous programs. In the meantime, we implore interventionist to share their manuals for wide-spread dissemination.

Conclusion

The purpose of this article is to provide those interested in developing, implementing, and evaluating interventions for traumatized workers with information and advice about the lessons we learned over almost a decade of research. Although trauma interventions involve a tremendous amount of preparation and many researchers over the years have done important research in this area, there are very few practical guides. In this article, we examined past work that provides historical context and a scientific foundation for effective interventions, described some of our past studies and important findings, and shared five lessons we had learned ourselves. We focused on practical information not readily available in publications.

We hope this article provides those who wish to begin developing and studying interventions for traumatized workers with helpful and practical information about using CBPR methods, working with traumatized study samples, using a trauma-informed approach, evaluating efficiently and effectively, and prioritizing the manualization and dissemination of the work to help push the field forward. The information and recommendations outlined here are likely applicable to studying traumatized populations in a variety of settings. While we provided experiences and advice specifically about conducting research with victim service workers in

rural and tribal contexts, researchers who wish to study other traumatized populations and related interventions may also find this information useful.

We conclude with a reminder that trauma-informed victimization services and trauma-informed workplaces can work hand in hand to better serve victims. Ultimately, trauma-informed workplaces that offer trauma-informed victim services are best equipped to serve victims. Ideally, trauma-informed workplaces and victim services both strive to understand trauma and its complex nature and consequences, seek to provide psychological safety, and attempt to create trusting and empowering spaces and relationships that are sensitive to individual and cultural differences. Both seek to avoid re-traumatization and increase resilience using evidence-based best practices and research-supported interventions. When these conditions are met, trauma work is more sustainable for workers and more effective for victims.

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