Resilience Training for High Risk Occupations: Results
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Introduction

It has been established that opioid overdoses in North Carolina has reached epidemic levels. Beyond the deaths, the toll on families, public service workers, and the first responders who respond to those calls has become significant collateral damage in an endeavor to save lives.[1,2] Efforts to reduce the number of unintentional deaths in North Carolina have shown some success and is certainly proceeding in the right direction.[3] This resilience training was an effort to address some of the mental health and wellness challenges public service workers and other caregivers confront daily. Compounding this is the reluctance of first responders and public service workers to seek mental health assistance.[4]

Resiliency is the ability of an individual to bounce back from life's adversity, cope with stresses and deal with these stresses in healthy ways. The program's goal is to apply resiliency practices that effectively prevent and/or manage inevitable stress and foster personal and professional development through *intentionally practicing* a resiliency skill set and establishing a social framework to foster resiliency. Our specific focus is the implementation of research-based resiliency methods. These include assessment and the physical, psychological, and social systems of resiliency. [4,6,7] The program is also consistent with the recommendations of the World Health Organization (WHO) in their report on suicide prevention.[8]

The "You, the Mentor" Resilience Program emerged from a jointly developed program originating from the Southern Arizona VA Health Care System and the University of Arizona.[9] Research in resiliency training has demonstrated that successful readjustment diminishes the risk of the development of post-traumatic stress (PTS). Moreover, resiliency characteristics and the development of an adequate support system can be protective factors in preventing PTS.[10] Resiliency can be taught effectively in a classroom setting and the development of appropriate resiliency attitudes can lead to an increase in retention.[11,12] This program has been well researched and found to increase healthy pathways to which participants can think, feel, and act during times of stress. The resiliency program has been delivered to more than 1,000 nurses, police officers, firefighters, EMS, 911-dispatchers, and crime scene techs in Arizona, Colorado, California, and Arkansas. [13,14,15]

In September 2019, Professor Leisha DeHart-Davis arranged a conference call with significant stakeholders in the North Carolina Public Service community on how best to address the mental wellness of public service workers who are confronted with the myriad problems associated with the opioid crisis. Our resilience program has gone through many iterations and can be

tailored to a number of format's. It has been taught as a full 15 week semester college course, as well as a 7.5 week colloquium.[16] It has also been integrated into existing nursing curriculum, and because the significant time constraints of public service workers, we have developed a 4 hour training.[17,18] All of these formats have demonstrated significant increases in participants' resilience scores. The dominant themes throughout all the trainings focus on positive coping skills and developing a healthy social support system. There is also a "train-the-trainer" curriculum that is formatted in a 2 day training where participants are immersed in understanding 8 resilience skills, the science behind each skill, and application to their community.[19]
The consensus of the group was, as a beginning, constituents would best be served with a 4 hour training exploring 5 resilience skills. Three skills (Belief, Trust, and Strength) were covered in-depth and the participants discovered at the end that they had been using the other 2 skills (Persistence and Adaptability) throughout the training. This discovery was a result of the facilitator's way of bringing these skills into the discussion and pointing out their use in context as it came up in class discussions. During a lunch session, following the skills training, small and large group discussions examined where and how participants could apply the skills in their communities. Three separate sites were chosen: University of North Carolina- Chapel Hill (N=57), Western Carolina University – Asheville (N=32), and University of North Carolina – Wilmington (N=46). Participants were professionally diverse, including police/sheriff, fire/ems, nursing, dispatchers, social workers, animal control, and city and county administrators.

After a brief introduction, completion of the *Responses to Stressful Experiences Scale*[20] (RSES) pre-test, the review of training format, and course objectives, participants were asked to break into small groups and talk about "a time in your life" where they had to use the skill of *belief* and share it with the people in their small groups. Participants were then asked to write down and share with their small groups about a current challenge in their lives where the skill of recognizing *beliefs* is beneficial. After sharing with their small groups, participants were asked to write and tape their challenge to the wall and all participants were encouraged to examine the group's various challenges and how the application of *belief* would be productive. Finally, participants were asked to consider keywords or phrases that would assist them in remembering the skill of *belief,* write them down, share with their group and again tape their keywords to the wall for the entire cohort to survey. The entire process for each skill was approximately 50 minutes.

Next, the skill of *strength* was examined within the context of good "self-care." *Strength* is more than exercise and eating right and includes relaxation and good sleep hygiene. With the question, "Are you worth 8 minutes a day?" participants were asked to reflect on the amount of time they take each day to relax and decompress. Various relaxation and meditation techniques were reviewed.[21,22] Participants were then asked to rate their current *Subjective Unit of Distress Scale* (10 = extremely stressed, 0 = completely relaxed).[23] Once they determined their *SUDS* level participants went through a 2 minute diaphragmatic breathing exercise and were again asked to establish a current *SUDS*. (Appendix) Diaphragmatic breathing is shown to reduce SUDS level more quickly than any other on the job intervention. It is used in this training as both an illustration and a tool for practice.

Participants then reviewed the challenges of good sleep hygiene, especially among public services workers where shift work, natural and human disasters, and the mental demands of their work can interfere with restorative sleep.[24,25,26] Referring back to the skill of *belief* participants were asked to identify their cognitive and behavioral patterns *prior* to sleep and the impact they have on their ability to get to sleep. They were then asked to rate their SUDS level when they imagined lying in bed reviewing their day with all the "should have" and "must do's." They were then asked to rate their SUDS levels as they considered 5 people or situations they encountered during the day that they were "grateful" for. Participants were then asked to compare their SUDS levels for each situation and asked, which focus would assist in getting to sleep.

Finally the skill of *trust* was explored following the same progression: 1) identify a time in your life where you had to use the skill of *trust* and then share that with the small group, 2) write about a current challenge in your life where the skill of *trust* would be helpful, share it with your small group, and tape your results to the wall, 3) brainstorm within small groups keywords or phrases that will help them integrate and recall the skill going forward. Participants were asked to tape their response to the wall and review the cohort's responses.

During the lunch session the focus was on how the participants could take these resiliency skills back to their communities. Interestingly, the cohort in Chapel Hill reflected and shared about the many obstacles they foresaw in their efforts to integrate the resiliency skills into their organization and culture. Using the analogy of "eating an elephant one bite at a time," the focus shifted to "what is the one bite I can take out of the elephant?" Proving to be a pivotal point, the remaining two trainings focused more on the latter concept, with a discussion of how thinking about and coping with the "whole elephant" can be overwhelming (or counterproductive at the outset; while deconstructing the process on "one bite at a time" is more easily implementable.

Results

Participants' responses to the *Responses to Stressful Experiences Scale* (RSES) showed statistically significant increases pre-post. The combined group *pre-test* resiliency scores for the cohort at UNC Chapel Hill (N=38) (mean [M]=65.1) and *post-test* (M=71.2) demonstrated significant improvement. The value of *z* is-4.2709. The *p*-value is < .00001. The result is significant at $p < .05$. The combined group *pre-test* scores for the cohort at Western Carolina University – Asheville (N=29) (mean [M]=62.7) and *post-test* (M= 76.9). The value of z is -4.6598. The p-value is <.00001. The result is significant at $p < .05$. The combined *pre-test* scores for the UNC-W (N=36) cohort (mean [M]= 67.2) and *post-test* (M= 73.2). The value of z is -4.9724. The p-value is <.00001. The result is significant at p < .05. See *Figure 1* for a comparison of pre- and post-resiliency scores. All cohorts made statistically significant increases on the resilience scores pre-post.

Responses to Stressful Experiences Scale (RSES)

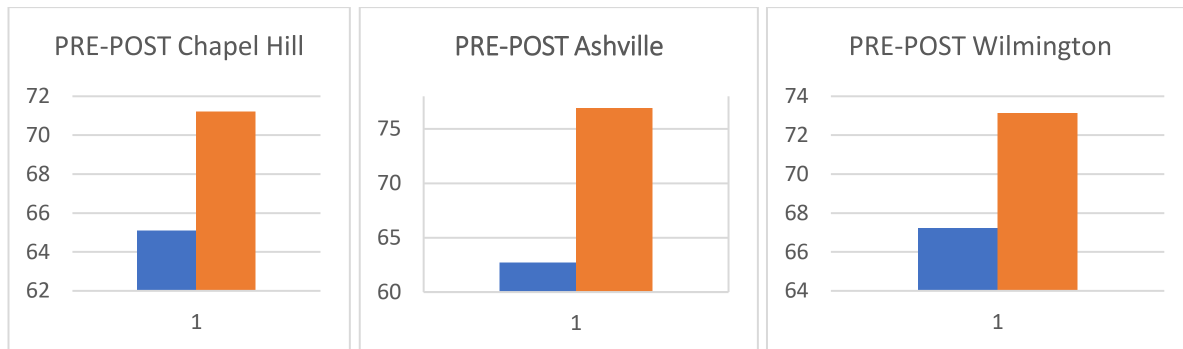

Figure 1

Follow up Evaluations

Responses to the follow up evaluations from each of the 3 training sites reveal the following results:

UNC – Chapel Hill (N = 22 - See Attachment A)

The majority of the participants felt the training was important to their professional development and felt the training was skillfully presented. Fourteen percent thought the training did not meet their expectations. Over 80% of participants who responded to the post evaluation felt that learning about the skill of *belief* was helpful in their professional development, 90% felt the skill of *trust* was helpful in their professional growth and thought the skill of *adaptability* was beneficial to the demands of their profession.

While 2 of the participants felt the training was not helpful to them, another major theme that is apparent in the feedback from this cohort was their desire for more in-depth training. For example, "…need more of this training in the Fire Service," and "Could have gone into more depth about the science behind the approaches he recommended and provided more examples. Could have easily been a full day class, if not a day and half."

Positive feedback included: "It was a nice mix of PPT and exercises" and "Dr. Marks was engaged and knowledgeable."

WCU – Ashville (N = 22 – See Attachment B)

This cohort showed the greatest pre-post changes in the *RSES* scores and the vast majority of participants perceived the training as valuable. Nearly 100% of the participants regarded the training as beneficial to their professional development. Many of the "negative" comments reflected concerns that there was not enough time to delve more deeply into the topic and

skills. For example, “Again no depth and a hurried version of a much deeper subject.” On the other hand, “positive” feedback from this cohort included comments like, “This class was so timely and very relevant. I learned a lot to implement in my life, my family and at work. I look forward to sharing with coworkers,” “Excellent training session, thank you for bringing this to our area, “ and “Great training and easily digestible. I know I will use these skills I learned both personally and professionally.”

UNC – Wilmington (N = 20 – See Attachment C)

Nearly all the participants in this group viewed the training as beneficial. Some participants expressed concern about their work context, ie., “not sure how any of his ideas will help unless everyone in the office changes...” and “… trust must be earned. it can't be given without being deserved...I didn't get how you can trust in an office with lots of turnover.” However, others noted, “Will use the principles in my work,” “Great lesson” and “Awesome training! “

Conclusion

Statistically significant increases pre-post RSES scores were evidenced across all three trainings, and a majority of the follow up evaluations indicated that participants believed the training was beneficial to their professional development. While there were some negative comments much the constructive criticism centered around a need for more in-depth training.

Discussion

Our original curriculum teaches 12 specific skills (see Attachment D) and their pathways for implementation. Once out of the educational setting, time constraints challenged us to find more time sensitive packaging for the skills. Thus the condensation of 12 to 5 more umbrella (inclusive) skills, allowed for the remaining skills to emerge organically in the training’s discussion.

While having statistically significant increases in resilience scores is important, our experience suggests that these results indicate improved awareness and sustainability best achieved by involving family members/spouses in any social/emotional/mental wellness endeavor. Trauma does not happen in a vacuum and to truly care for the whole person, organizationally, we must nurture a first responders social support system. To do so, sends a clear message to public service workers that they and their families psychological wellbeing matters.

In addressing some of the criticisms of the training, there seem to be two themes: 1) not being useful and 2) not enough time. With respect to the training *not being useful* one comment stood out:

> “…My partner and I could have sat in our office and discussed our life situations and saved $270. The session was very disappointing. We were expecting true coping skills and information to bring back and share with our agency. None of this happened….”

This feedback incapsulates a number of concerns and potential solutions. When we began to think about disseminating our resilience training throughout the first responder community, we were acutely aware that many rural fire/ems departments were predominately volunteers with limited resources. As a result, we envisioned creating a YouTube channel, for free, where departments and agencies could go through the concrete coping skills at their own pace and in the comfort of their own teams. (YouTube available February, 2020). Quite literally, responders can now sit "in our office and discuss our life situations" in the context of resilience. Parenthetically, when integrated properly, this is akin to the "peer support model" in which peers could facilitate these conversations.[27]

Another aspect of this criticism was the cost of the training. While it can be argued, "What is the cost of keeping a responder on the job or save their life?," financial expense must be addressed. One potential solution lies in a different question, "What's in it for me, the responder?" Historically, our workshops and trainings have been sponsored under *public safety trainings (AZ and NM POST)* and responders credited for their participation. The diverse formats that this material can be disseminated with beyond the 4 hour workshop, include a 15 hour semester course or a 7.5 hour colloquium college course, thus providing college credit for completion. This could also be accomplished through institutes, summer sessions or evening courses and organizations can identify their "peer support" specialists as potential "train-the-trainers."

The train-the-trainer workshops provide a solution to a several issues, as well. For example, through these trainings an "advocacy" network can be developed to increase the strength of sustainability and to share best practices. "Advocates," also provide a greater opportunity to conduct research going forward, especially in transforming a culture that has been resistant to change. These more extensive trainings also address the critic:

> "Could have gone into more depth about the science behind the approaches he recommended and provided more examples. Could have easily been a full day class, if not a day and half."

Such trainings also winnow down those who come to trainings either "out of duty" or to "check the box."

The positive feedback from the follow-up evaluations clearly reflects a hunger for these types of trainings, whether it be the 4 hour training or more extensive explorations and implementation of skills that promote mental wellness among public service workers.

Final Reflection

While there is constructive criticism, positive feedback and data, which has been helpful, it is the heart-felt stories that matter most to my team as a researcher and presenter going forward. There was the dispatcher who was thankful for the affirmation that their work carried

a heavy burden while sharing reduced it, and the public service worker whose home was destroyed, yet struggled to assist those around them. It is the story of the police chief who is a member of the “Zipper Club,” who doesn’t want those under their command to suffer the same fate because of the stress of the job. Or the sheriff who had a recruit they trained complete suicide, and did not want anyone to either die by suicide or have to deal with the families of an officer who had. It is the story of the fire chief, whose two sons had joined the force, beginning to see the maladaptive changes he had experienced in himself and didn’t want that to happen to his sons. It is the story of child protective service workers making a pact with each other to go home by 9 pm, rather than the usual 10:30 pm - midnight. It is the stories of what each person was going to do to take their “bite out of the elephant”, even if it was just taking 2 minutes to breathe. It was the obvious communal support that provoked and inspired their creativity and evoked a sense of optimism to implement progressive change.

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