

MINDFULNESS-BASED RESILIENCE TRAINING

FOR FIREFIGHTERS & DAY STAFF:

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***Program Summary: Mindfulness-Based Resilience Training (MBRT) for Firefighters & Day Staff at TVF&R**

Summary

Tualatin Valley Fire & Rescue (TVF&R) is a large fire district that introduced a mindfulness-based eight-week resilience training (MBRT) for firefighters and day staff in 2014. The trainings have continued through early 2017 as a component of the agency's behavioral health program. In collaboration with Pacific University's Professional Psychology research faculty and the Stress Reduction Clinic's MBRT trainer, four cohorts of firefighters were tested prior to and on the last day of their training with well accepted health status instruments measuring such factors as burnout, cognitive function, stress level, and more. The results show significant positive changes for participants. Such results are similar to those of researched mindfulness-based trainings involving first responder professionals and the general public. These trainings hold promise for our profession in three ways: 1) as an effective way of enhancing mental and physical health in this trauma-prone profession 2) enhancing mental acuity and situational awareness under duress 3) improving the durability of healthy social relationships on shift and at home.

Background

Tualatin Valley Fire & Rescue (TVF&R) is a special fire district in the Portland metropolitan area of Oregon. It serves approximately 500,000 residents in Washington, Clackamas, Multnomah and Yamhill counties south and west of Portland and covers an area of about 400 square miles.

TVF&R currently employs 445 union firefighters/paramedics and 115 non-union administrative and support personnel. TVF&R personnel operate out of twenty-six fire stations, a command and business operating center, a south operating center, a training facility, and full-service fleet maintenance shops.

Tualatin Valley Fire & Rescue took shape between 1972 and 2004 as a number of small fire departments consolidated to increase efficiency, lower the cost of service, and eliminate duplication. In 1998 TVF&R established an Occupational Health & Wellness Program in support of its core principles of safety and performance. This followed the creation of the IAFF/IAFC Joint Labor Management Wellness-Fitness Initiative. The Occupational Health & Wellness program works to ensure that all personnel work safely and effectively during their careers and maintain healthy lifestyle choices into their

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retirement. Education, wellness services, and in-house program implementation to all personnel, volunteers, family and retirees are meant to improve the quality of life and longevity.

Behavioral Health in the Agency

TVF&R has recognized that in addition to focusing on the physical health and wellness of its personnel, it also needed to support the mental, emotional, relational and behavioral health and wellness of its personnel. TVF&R has maintained a full-time Behavioral Health Specialist position since 1998 as a step towards addressing these goals. The Behavioral Health Specialist performs a variety of duties and responsibilities related to personal,



interpersonal, and group coaching and counseling needs within TVF&R. The nature of the work that firefighters do involves difficult, dangerous, emergent, and crisis situations. Being involved in these situations can be stressful and traumatic.

The effects of acute and cumulative stressful and traumatic events can take a toll on the health and wellness of firefighters. This can manifest with substance abuse, mental health issues, including but not limited to, anxiety and depression, and post-traumatic stress disorder, relationship/family difficulties, suicidal ideation and suicides.

The Behavioral Health Specialist manages, conducts and supervises Critical Incident Stress Management (CISM). This includes pre-incident education, incident intervention, and post-incident defusing, debriefing groups and one-on-one counseling. In addition the Behavioral Health Specialist is responsible to train and supervise 12 TVF&R personnel to provide Peer Support services throughout the fire district. The Behavioral Health Specialist works with all personnel and their families with on-going education, coaching and counseling services. In addition, the BHS works with TVF&R personnel on preventive approaches and practices to help raise awareness, manage stress, build resilience and increase coping skills.

In recent years, such preventive practices as mindfulness-based meditation and yoga have become more widely known to the first responder culture. TVF&R looked at the mindfulness meditation model developed at the University of Massachusetts Medical School known as Mindfulness-Based Stress Reduction (MBSR). This model has over thirty years of research behind it demonstrating its efficacy in helping people to be more present and aware, to reduce stress, to build resilience, and to calm the mind. Working with a local MBSR trainer we modified the MBSR curriculum to accommodate to the particular nature of the job and culture of the firefighter and called it Mindfulness-Based Resilience Training (MBRT). Since the spring of 2015 approximately 130 TVF&R personnel have gone through MBRT.

Trainings like this have been studied for over three decades and show the down-to-earth value of learning the practice of mindfulness (Ludwig & Kabat-Zinn, 2008).

Testing before and after such trainings shows dramatic and statistically significant improvements in a wide array of both mental and physical health measures as well as durable levels of cognitive function under duress.

This holds true for results with first responders in a local MBRT program developed with the our instructor in a program for police officers. Dramatic improvements were found in measures of burnout, resiliences, stress levels, cognitive function, sleep levels, family problems, organizational stress and more (Christopher et al, 2015). We found the same sorts of results for our MBRT program tailored for firefighters and day staff here and summarize below.



Mindfulness Training Methodology

MBRT introduces the practical application of mindfulness exercises aimed at improving resilience and attention. It is a largely experiential training with exercises designed to reduce stress, improve dietary habits, improve exercise routines, support better interpersonal communication, enhance levels of self-care, and boost mental clarity along with situational awareness.

Through a blend of group class time and daily home practice assignments, participants learn and practice a number of formal and informal methods. These include contemplative silence, mindful physical movement/exercise, mindful communication, awareness practices, emotional intelligence activities, non-reactivity practice, and breathing exercises.

Since 2015, we have offered four MBRT courses which list two months. The first three were eight sessions with weekly two-hour classes for a total of 16 class-hours. The final was three-session with one every three weeks, with two-hour sessions for a total of six class-hours. Participants also commit to completing a maximum of 30 minutes per day of practical exercises and study assignments for the duration of the training. A training manual or reading materials, weekly printed materials and audio recordings of exercises were provided for participants' home practice.

Five dozen firefighters from our agency and a few neighboring agencies completed a training. Also, over twenty day staff attended these trainings.

Measurable Consequences of the Training

Testing for the firefighters was done on the first and last day of the eight-week training for a number of health status measures. The tests are generally accepted instruments frequently used in such studies to measure behavioral and cognitive status and are listed here:

- Resilience – Brief Resilience Scale, which assesses how easily and quickly people recover from dealing with stressful events.

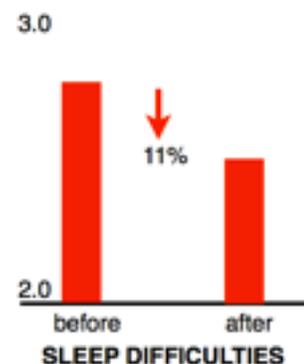
- Firefighter Efficiency – The Firefighter Self-Efficacy Scale, which assesses the degree to which firefighters believe they can competently handle a range of professional situations.
- Burnout – Oldenburg Burnout Inventory, which assesses the degree to which people have enough energy for leisure, enjoy their work, and can manage their workload.
- Cognitive Difficulties – A measure of mental function and clarity.
- Emotion Regulation – Difficulties with Emotion Regulation Scale, which assesses the degree to which people are accepting of and have strategies for coping with negative emotions and stress.
- Stressful Events – Stressful Life Events Inventory, which assesses the frequency of experiencing stressful life events.
- Alcohol Use – PROMIS alcohol use, which was created by the National Institutes of Health and assesses the frequency with which a person drinks and the degree to which the person has difficulty not drinking.
- Mindfulness – The Five Factor Mindfulness Questionnaire is a widely used scale measuring five facets of mindfulness.
- General Stress – The PSS-4, a measure of the degree to which situations in one's life seem stressful; how unpredictable, uncontrollable, and overloaded folks feel about their lives.

You'll see in the summary graphs of testing results that each of these tests showed positive changes for the firefighters from the first class to the final class of the training (Figure 1). All but the measure for emotion regulation were statistically highly significant changes. Resilience levels increased 20%. The burnout scale dropped by 10%. Stressful events dropped by 44% and general stress by 23%. Cognitive difficulties dropped by 30%. Alcohol use dropped precipitously, by more than half. Levels of mindfulness increased 15%. Difficulties with emotions declined but not in a statistically significant way.

We also did limited testing before and after the abbreviated three-session, six-hour MBRT training in early 2017. The same general trends were noticed though with no statistically significant results except for a new measure about sleep. Sleep difficulties dropped significantly and by 11% according to this measure as note to the right.

In addition, we asked training alumni to provide some anonymous comments and feedback about the training to help us assess its value and to help others understand and consider the trainings (Table 1).

Taken as a whole these results provide good evidence that the ability of firefighters to meet some of the biggest challenges of their career is enhanced significantly. The confidence and capacity to deal with the many stressors of the job positively is



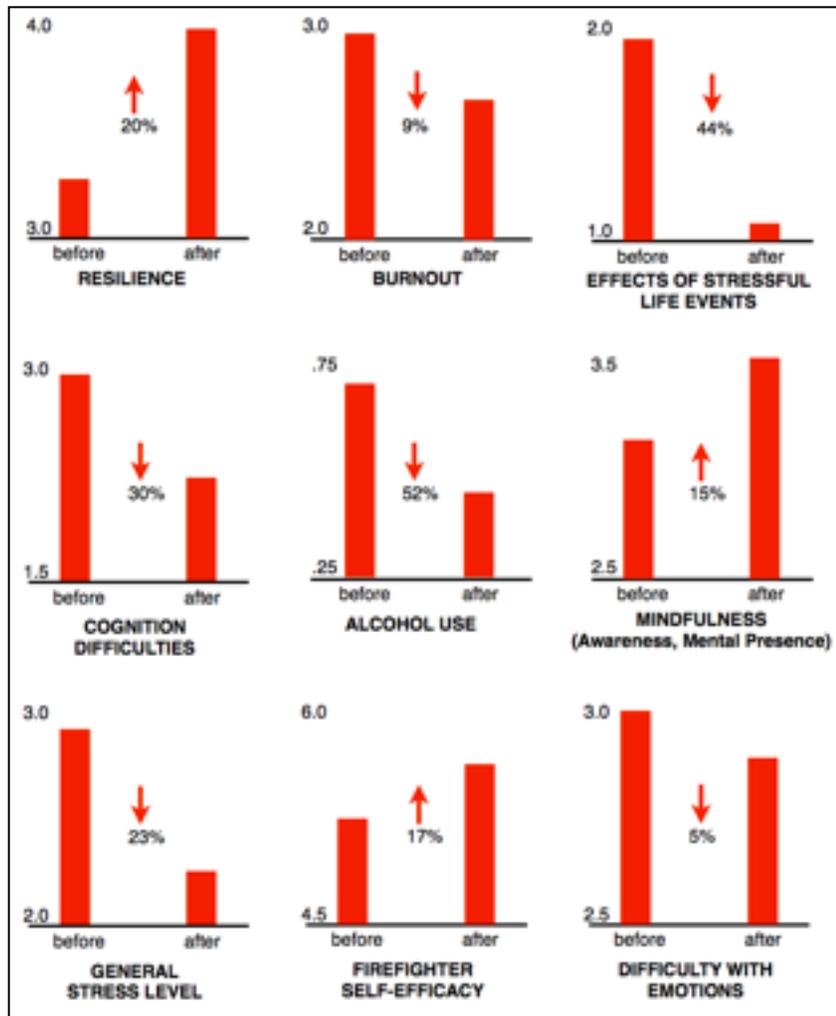


Figure 1: Graphic summary of testing before and after eight-week MBRT trainings at TVF&R for 36 firefighters in 3 groups during 2015 and 2016.

dramatically improved while the negative consequences of such stressors such as alcohol use and burnout are reduced significantly. Likewise, cognitive function shows less susceptibility to stressful events while there is an increase in the level of mindfulness.

These may be very important improvements that function to enhance the capacity for situational awareness under duress. Likewise this improved cognitive function may indicate that trainees will be less prone to emotional reactivity with improved communication skills on the job and at home.

While these results are very encouraging and are very consistent with the other studies mentioned above, they are not definitive. Controlled studies of MBRT with firefighters will be necessary to confirm the value of such trainings. The training regimen will evolve to be more relevant as we inventory feedback from participants.

Table 1: We asked firefighters to provide honest and anonymous comments about their MBRT training to help others decide how useful this training might be.

Here is what they wrote:

- *“This has made me better with regards to my ability to curtail stressful emotion and helps with awareness in stressful settings.”*
- *“I found the skills I learned in this class to be very informative and helpful. I didn’t know what I was getting into but I’m thankful I signed!”*
- *“This course helps you slow down and notice you’re feeling a certain way and helps you ‘tune in’ to your reactivity.”*
- *“It helped to create an awareness, relaxation, as well as a way work with a full plate.”*
- *“I enjoyed the training and think it will be very valuable for my co-workers in the future.”*
- *“[Working with distractions] was difficult at first and has become much better.”*
- *“(about the 3-session, 6-hour training) I think more time in class is needed.”*
- *“I have been regularly practicing and it calms me when my mind spins out.”*
- *“Allows you to take care of yourself now and provides long-term benefits.”*
- *“I would take the course again and will recommend it to others.”*
- *“I used practice for acute situations and it was very helpful.”*
- *“Mindful pauses are awesome - useful all the time.”*
- *“Focus.”*

Mindfulness Practices in the Classroom

We begin the training by asking participants to reflect on their intentions. What brought them into the classroom? What brought them to their chosen career originally? This serves as a strong, shared foundation for trainees as they navigate the unorthodox and sometimes big challenges of such an inward-oriented, contemplative-based training.

Participants receive a workbook and home practice recordings that guide them through the exercises. Home practice assignments are provided each week.

Each of the class and recorded home practice exercises is designed to help participants recognize and work with the distractions that tug them toward mindless reactivity and away from present moment, situational awareness. Just like working out in the gym the



body gets stronger and more capable, these exercises help strengthen present moment awareness and reduce reactivity.

Mindful Pauses: One of the cornerstones of the training is to practice ‘mindful pauses.’ Trainees are asked to sit quietly then guided to pay attention, as best they can, to the sensations of breathing. The mind will of course wander and when it does, with a dose of patience, folks are asked to notice that it does and then bring awareness back to the sensations of breathing. The heart of this mode of mindfulness practice is this simple process of recognizing the wandering and then coming back to awareness of breath in the moment. The practice is less about breathing and more about simply recognizing when we become distracted from our intention. Importantly and paradoxically there is a fundamental instruction to set aside the notions of success or failure in these practices. These can be distractions themselves. Mindful pause exercises in this training are three to 10 minutes.

Tactical Body Awareness: Another feature of the training is practicing attention to the experience of the body. Participants find a quiet place to recline and for a period of twenty minutes and are guided to pay attention to body sensations; toe tips to finger tips, from tail bone to crown of the head. As in mindful pause practices, the mind will wander and the instruction is to notice the wandering and practice patience while resuming awareness of bodily sensations.

Mindful Movement/Exercise: In this aspect of mindfulness training participants are guided to pay attention to the physical sensations of movement; stretching, pressure, strain, ease, balance, imbalance, etc. During class and in home practice recordings this may be a sequence of simple movements akin to yoga or Tai Chi. However, participants are asked to include any of their usual physical workouts or routines as an opportunity to practice; bringing attention to physical experience. This may include weights, running, swimming, walking, etc. As in mindful pauses and body awareness there will be distractions and folks are asked to notice them and practice coming back to physical experience; with patience and without judgement.

Mindful Communications: A number of exercises and home practice assignments are included to increase awareness of interpersonal communication. After introduction of each experiential practice in class (mindful pause, awareness, mindful movement, etc.) folks gather in small groups and simply describe their experience. They are asked to simply describe the experience and set aside notions of success or failure; just communicate the experience. Also, they are introduced to a mindful conflict/cooperation exercise akin to the martial art Aikido. The exercise has them role-play interpersonal conflict and cooperation as mindfulness practice; bringing awareness to physical/emotional experience and to the distractions that interfere. Another exercise is to pair up with a partner then be guided to speak simply and clearly about a personal experience while the other person listens without comment; just listens. As in all the other mindfulness practices in this training both the speaker and listener are asked to notice distractions and return to their respective role; listener or speaker.

Mindful Eating: During the first class folks are guided to spend a few minutes turning their attention to the (unheard of) experience of eating one raisin for a period of a minute or so, noticing color, shape, tactile sensations (in hand, lips, mouth), fragrance,

flavor, texture, and more. As with the other exercises they are guided to notice distractions that pull them from the experience and come back to the task at hand. It's commonly known that heart disease prevention is a priority in firefighter wellness programs. Beyond strengthening the ability to maintain attention this simple exercise provides a foundation for a less reactive and more healthy relationship with food and nutrition that can prove helpful for those prone to heart disease.



Conclusions

This program has demonstrated measurable and significant improvement in wellbeing and resilience of firefighters and day staff in our agency. While the Behavioral Health Program has made significant contributions to personnel over many years with modes of responding to crises via Critical Incident Stress Management (CISM), the MBRT program has been shown to be a new and worthy prevention-oriented complement going forward. Further, more rigorously designed research will help document the value of MBRT and similar trainings for firefighters.

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