Diversified Rehabilitation Group:

Residential Traumatic Stress Recovery Program

Overview Statistics and Research

by

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Residential PTSD Treatment: Executive Summary

Focus/Purpose/Background

The Trauma Stress Recovery Program (TSRP) employs evidence-based treatments and a biopsychosocial model to address the whole person, offering a comprehensive and holistic approach to care. The program's residential model is supported by multiple evidence-based factors, as demonstrated by clinically significant improvements in pre- to post-treatment outcomes detailed in the statistical section. Additionally, the program's long-term effectiveness is underscored by a nine-month post-treatment survey and client testimonials, which reveal that many participants resume daily activities and successfully return to work. Consistent with research by Hilton et al. (p. 148), effective treatment strategies integrate trauma-focused evidence-based interventions, appropriate medication management, and holistic, multimodal approaches.

TSRP and Pre-admission Program

The TSRP (Trauma and Stress Recovery Program) for first responders and veterans is a comprehensive residential treatment program designed to address trauma and PTSD, focusing on healing, recovery, and reintegration.

Phase One

The first phase consists of a 5-week residential program that incorporates individual and small-group therapy sessions. It employs an intensive, evidence-based, and tailored treatment approach to meet the unique needs of participants. A key feature of this phase is the *Home Reintegration Week (HRW)*, which occurs during the third week. During HRW, participants return home to practice newly acquired skills in their everyday environment. This week includes a structured schedule with one virtual individual clinical session and one virtual group session. Participants then return to the residential setting to complete the final two weeks of this phase (Weeks 4 and 5).

Phase Two

Upon completing the residential program, participants transition to the second phase: a 6-week virtual post-treatment program. This phase emphasizes sustained recovery, goal follow-through, and reintegration into daily life at work and home.

Holistic Treatment Framework

The TSRP adopts a biopsychosocial model and integrates evidence-based treatments with a holistic approach. Components include:

- Psychoeducation
- Movement-based therapies: Yoga, guided movement/dance, and outdoor activities such as walks and hikes

- Mindfulness and meditation practices
- Nutritional (healthy diet)
- Sleep hygiene support
- Expressive arts therapy
- Supported exposure: through community outings and the RCMP Reintegration Program.

These activities are delivered within a supportive framework designed to foster emotional, physical, and psychological well-being. TSRP's multidisciplinary approach ensures participants receive the tools and support necessary for long-term recovery and reintegration.

The pre-admission program is a unique and complementary aspect of the TSRP designed to commence participants' healing journey at home. This non-mandatory 4-week program offers immediate support to individuals before residential program attendance. This program includes in-person or video counselling, psychoeducational sessions, mental health coaching, and full access to the Diversified Members Portal, which offers many helpful resources. This program intends to introduce participants to biopsychosocial components of anxiety, depression, and trauma, introduce core concepts and techniques, and empower clients to explore personalized self-regulation strategies and techniques. The program also aims to support anxiety reduction regarding program attendance while intentionally meeting individuals where they are in their healing journey to create a sense of support and safety.

Benefits and Effectiveness of Pre-admission and Residential Treatment Program Based on the Biopsychosocial Model

Residential trauma treatment programs dedicated to supporting first responders have been in existence for well over two decades (Fay et al., 2006; Kamena & Galvez, 2020). One of the primary motivators for these rehabilitation programs is the high risk of trauma exposure within these service industries and the increasing prevalence of clinical symptoms experienced by first responders and veterans, which typically include depression, anxiety, sleep disturbances, posttraumatic stress, and substance abuse disorders (Fay et al., 2006; Alvarez, etal., 2011; Kamena & Galvez, 2020; Schneider et al., 2015). The associated costs of treating post-traumatic stress disorder (PTSD), which biennially cost billions of dollars, also highlight and motivate the need for effective treatment options (Schneider etal., 2015). On a more human-centered level, there is a biopsychosocial-spiritual need to not only reduce PTSD symptoms but to increase daily functioning and quality of life across all domains (psychological, physical, social, spiritual), beyond surviving and thriving (Kamena & Galvez, 2020, Schneideret al., 2015).

Residential rehabilitation programs that adopt a holistic biopsychosocial model are an effective treatment option because they treat the whole person (Fay et al., 2006; Hliton et al., 2019). This means that they recognize and target every aspect of functioning through multimodal approaches that include aspects of complementary and integrative health (CIH) practices, which aids in addressing multifactorial issues often present in service members with combat-related stress and PTSD (Hilton et al., 2019). This biopsychosocial approach has been found to have a

myriad of mental and physical health benefits and lead to improvements in emotional well-being and social relationships, with additional evidence of the decreased use of medications (Bolton et al., 2020).

The Trauma Stress Recovery Program at Diversified Rehabilitation utilizes evidence-based treatments, and couples these evidence-based modalities with complementary, integrative programming to address the multifaceted and unique needs of each client. Clinical treatment includes a variety of evidence-based modalities, such as Eye Movement Desensitization and Reprocessing, Prolonged Exposure Therapy, and Cognitive Processing Therapy, which have strong empirical research support on their efficacy in treating PTSD (Schneider et al., 2015; Malaktaris & Lang, 2018). The complementary and integrative practices such as yoga, nutrition, relaxation, and expressive art are foundational aspects of trauma processing (versus talk therapy) and contribute to improving overall mental and physical wellness, as well as increasing socialization among clients and providing options for posttreatment routines and goals, among a myriad of other benefits.

Treatment occurs within a supportive nature-based environment that emphasizes healing through a supportive structure, consistency, acceptance, warmth, compassion, support, and, of utmost importance, safety (Fay et al., 2006). In addition, the support staff and clinical staff have an awareness and understanding of first responders and veterans' cultural factors, including survival strengths/tendencies (i.e., self-reliance, psychological toughness, emotional suppression) and specific needs, such as peer approval, respect, and acceptance (Benner, 2000; Fay et al., 2006). This supports a sense of mutual understanding, common humanity, safety, and camaraderie among clients and a culturally competent staff who can help to normalize first responder's experiences and offer more effective treatment (Fay et al., 2006).

The length of the program supports further research on the positive association between residential treatment length and PTSD symptom improvement. Banducci et al. (2018), found less severe PTSD symptoms at discharge following a longer length of stay in a residential PTSD treatment program, which also supports research from Harpaz-Rotem, et al. (2011), who found that length of stay in a residential treatment program longer than 30 days, led to greater improvements in psychiatric symptoms versus veterans who received less than 30 days of residential treatment (at one-year follow-up). The TSRP aligns with this association, offering a comprehensive 5-week program that is also enhanced and enriched by the structured four-week pre-admission and six-week post-treatment programs phases of programming.

Another unique aspect of TSRP is that it is the only program in Western Canada that serves first responders and veterans who are free of substance use (at least 30 days before admission to the program). The intention behind this is to serve the large population of first responders and veterans who have been diagnosed with PTSD or other occupational stress disorders, who do not utilize coping-oriented alcohol use or who do not have a comorbid diagnosis of alcohol use disorder (AUD) (MyHealth.Alberta.ca, 2021). Although there is a well-established correlation that has been drawn in the research between PTSD and alcohol use (Bonumwezi et al., 2022; Bartlett et al., 2019), there is still a lack of research in understanding

the comorbidity, prevalence, psychological factors, and protective factors (i.e., social support) underlying and linked to this association, specifically within First Responders (Chopko et al., 2013; Harvey et al., 2016). Diversified Rehabilitation's TSRP continues to offer trauma-informed care, offering comprehensive programming that includes coping skills, resilience training, social support, and other supportive factors to ensure that clients complete the program with all the tools they need to maintain healthy coping and the highest quality of life at work and home.

Instruments and Statistics

Population/ Instruments/ Surveys

Population:

First Responders and Veterans

432 participants attended TSRP between 2014 and 2023.

Instruments:

Three psychometric instruments were administered pre- and post-TSRP and one nine-month post-treatment survey.

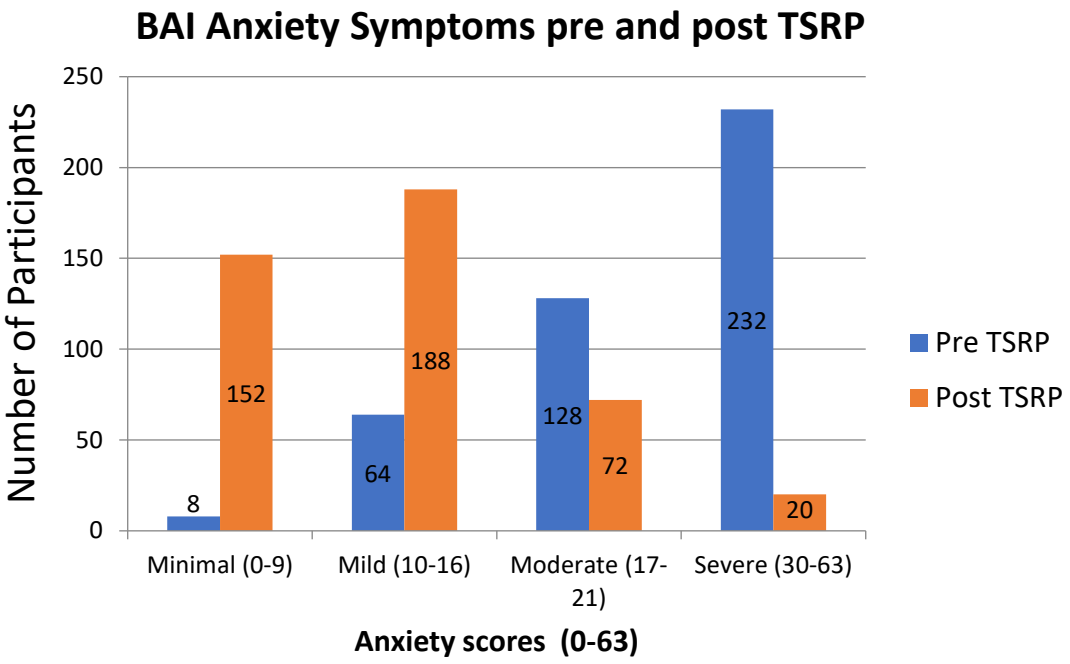
Beck Anxiety Inventory (BAI) – a multiple-choice self-report used to measure anxiety's severity. It takes 5 to 10 minutes to complete. The BAI contains 21 questions, each answer being scored on a scale value of 0 (not at all) to 3 (severely). Higher total scores indicate more severe anxiety symptoms. The standardized cutoffs are 0–9: minimal anxiety, 10-16: mild anxiety, 17-29: moderate anxiety, 30-63: severe anxiety.

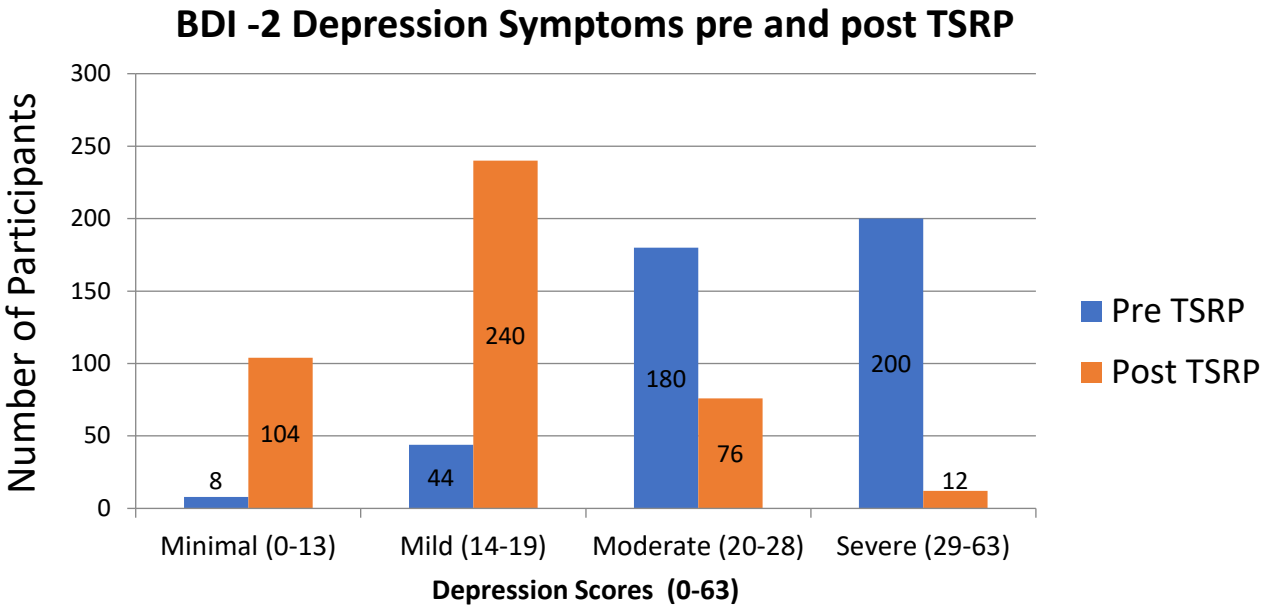
Beck Depression Inventory-II (**BDI-II**) – is a multiple-choice self-report that is used for measuring the severity of depression. It takes 5 to 10 minutes to complete. The BDI contains 21 questions, each answer being scored on a scale value of 0 (not at all) to 3 (severely). Higher total scores indicate more severe depression symptoms. The standardized cutoffs are 0–13: which indicates minimal depression, 14–19: which indicates mild depression; 20–28: which indicates moderate depression, and 29–63: which indicates severe depression.

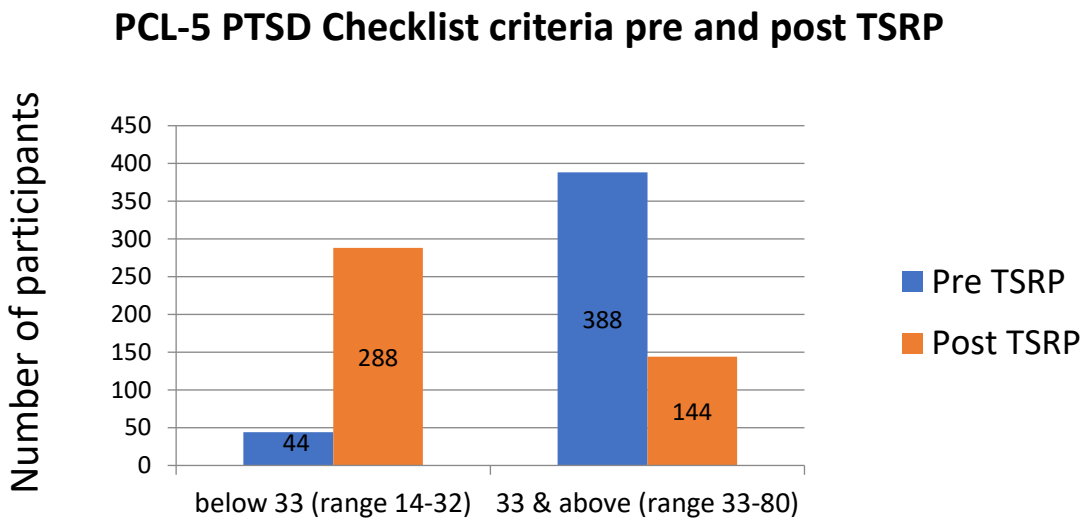
Posttraumatic Stress Disorder Checklist (PCL-5) is a 20-item self-report measure that assesses the DSM-**5** symptoms of PTSD in adults (18+ years). A PCL-5 cut-point of 33 appears to be a reasonable value to use for provisional PTSD diagnosis. Severity can be determined adding scores of each item together to determine a total score. The range is 0-80. A total score of 33 or higher suggests the patient needs further assessment to confirm a diagnosis of PTSD. **Nine Month Post**

Treatment Survey
243 TSRP participants received a Post Treatment Survey between 2017- 2023. The post-treatment follow-up survey was mailed to participants **nine months after** TSRP treatment completion. The survey was mailed to 243 participants. 175 surveys were received back, which represents 72 % of the participants.

The numbers in columns represent the number of participants with that score.



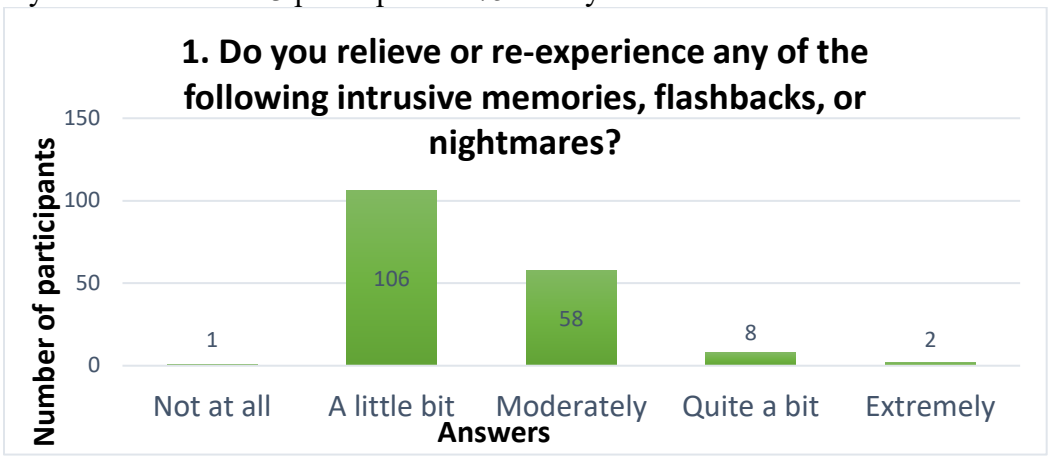


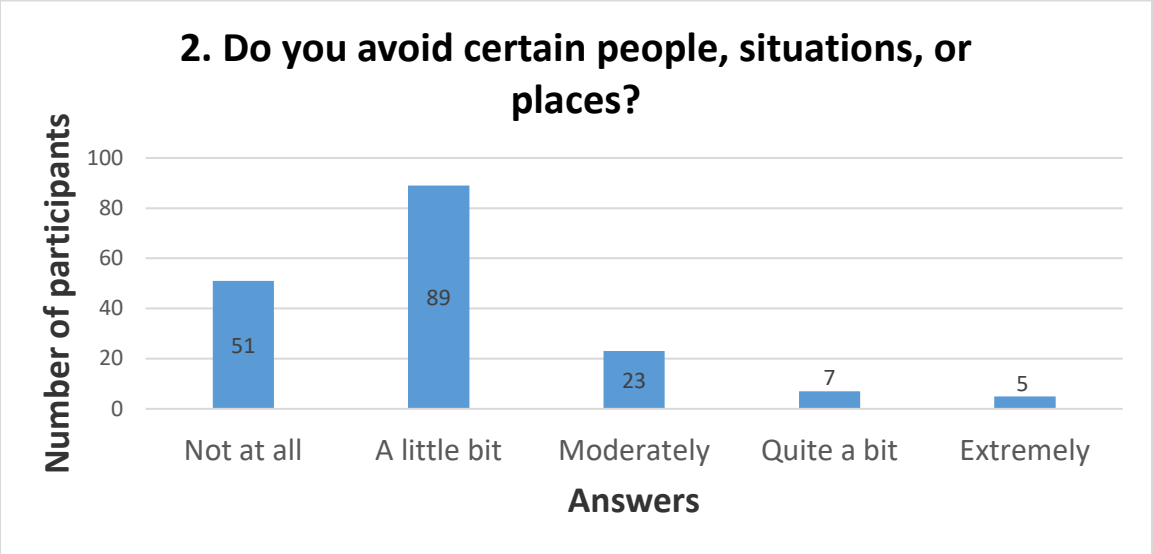


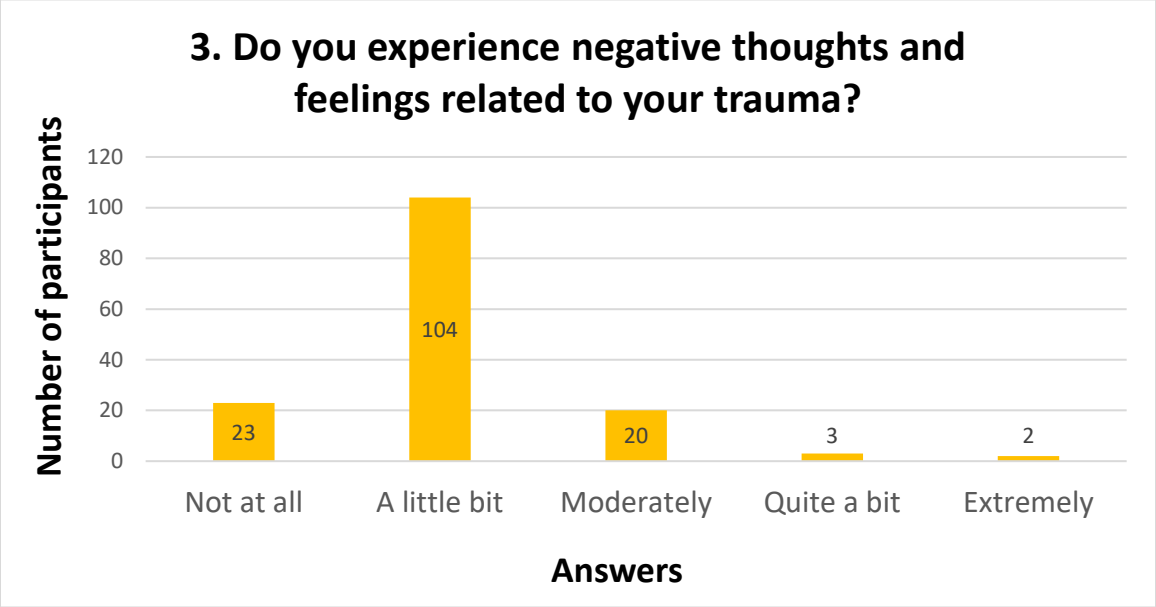
Post-testing results showed that all 432 participants showed a dramatic reduction in the major symptoms that were first identified and associated with PTSD. Anxiety and depressive symptomology were significantly reduced compared with what was originally evaluated at intake.

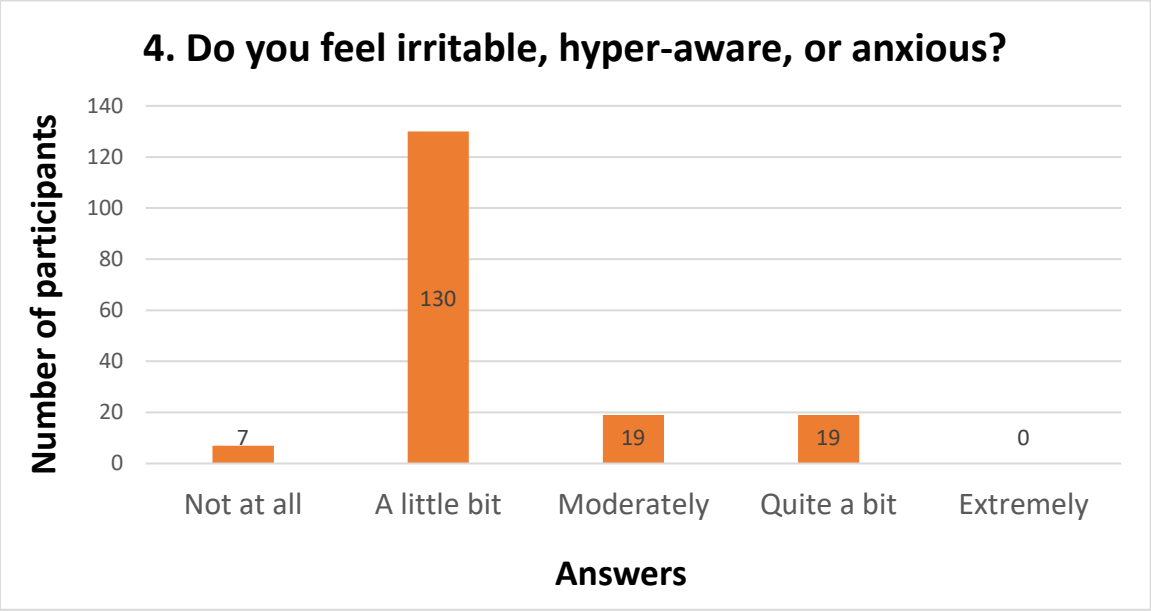
SURVEY RESULTS AFTER 9 MONTHS POST - TRAUMATIC STRESS RECOVERY PROGRAM

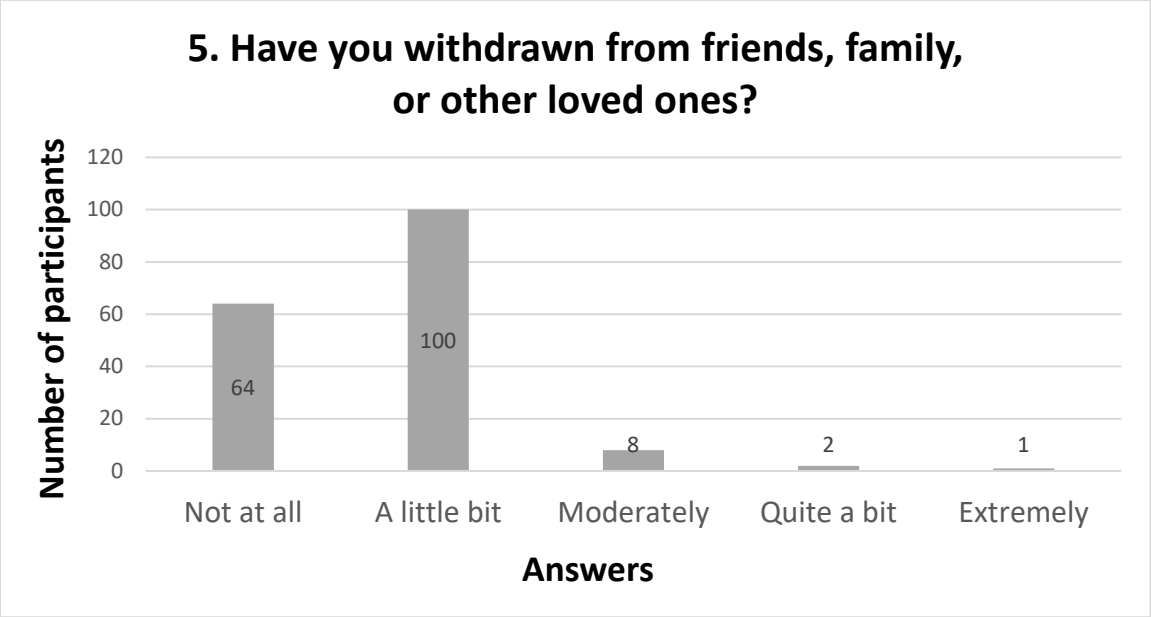
The survey was mailed to 243 participants. 175 surveys were received back.

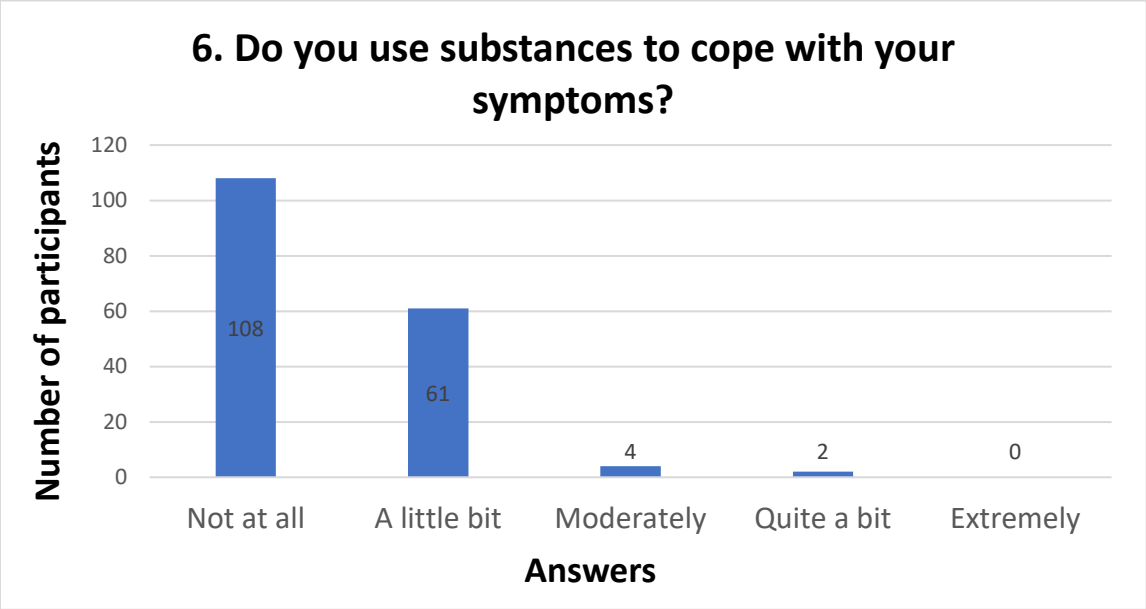


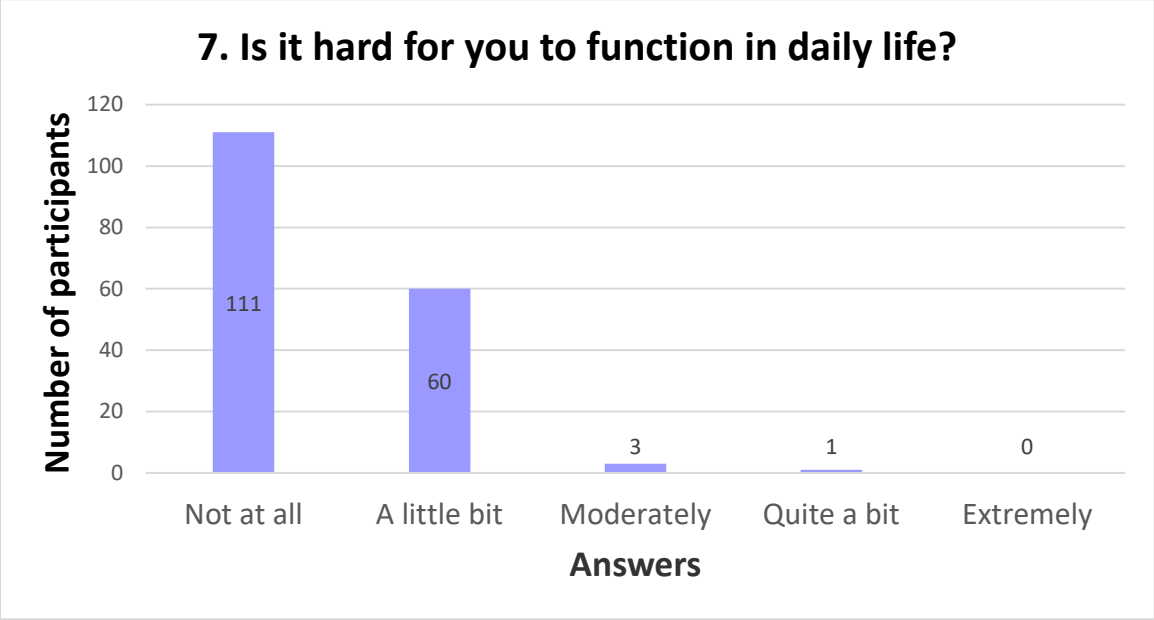

2. Do you avoid certain people, situations, or places?
Number of participants
100
80
60
40
20
0
51
89
23
7
5
Not at all
A little bit
Moderately
Quite a bit
Extremely
Answers

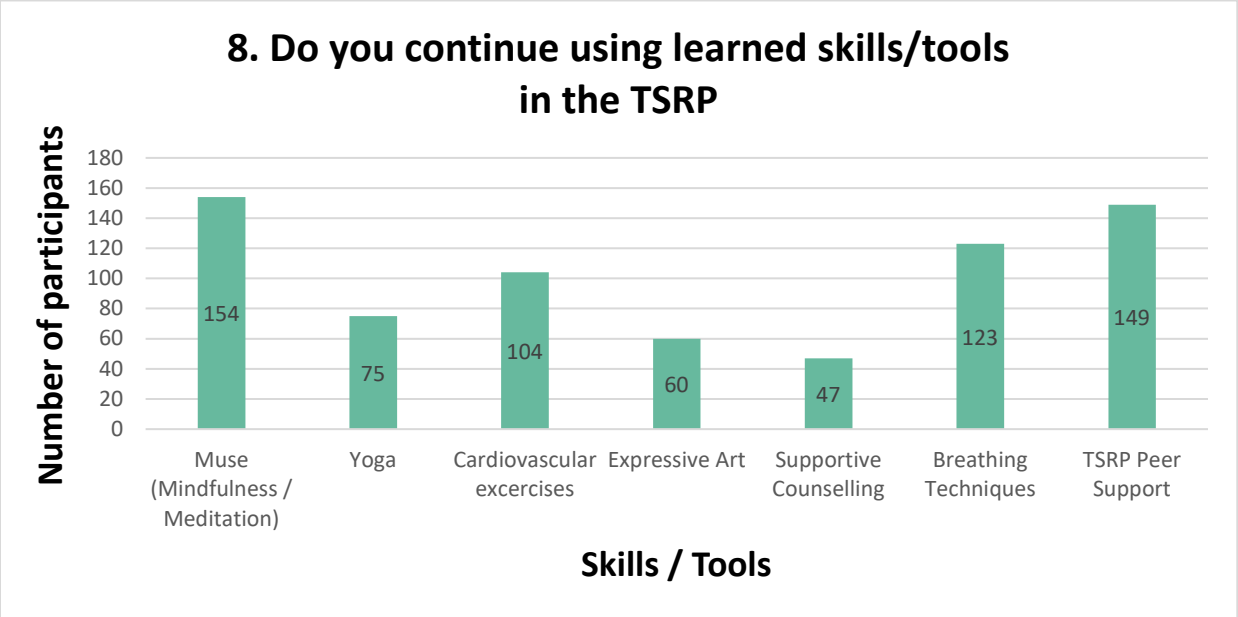

3. Do you experience negative thoughts and feelings related to your trauma?
Number of participants
120
100
80
60
40
20
0
23
104
20
3
2
Not at all
A little bit
Moderately
Quite a bit
Extremely
Answers

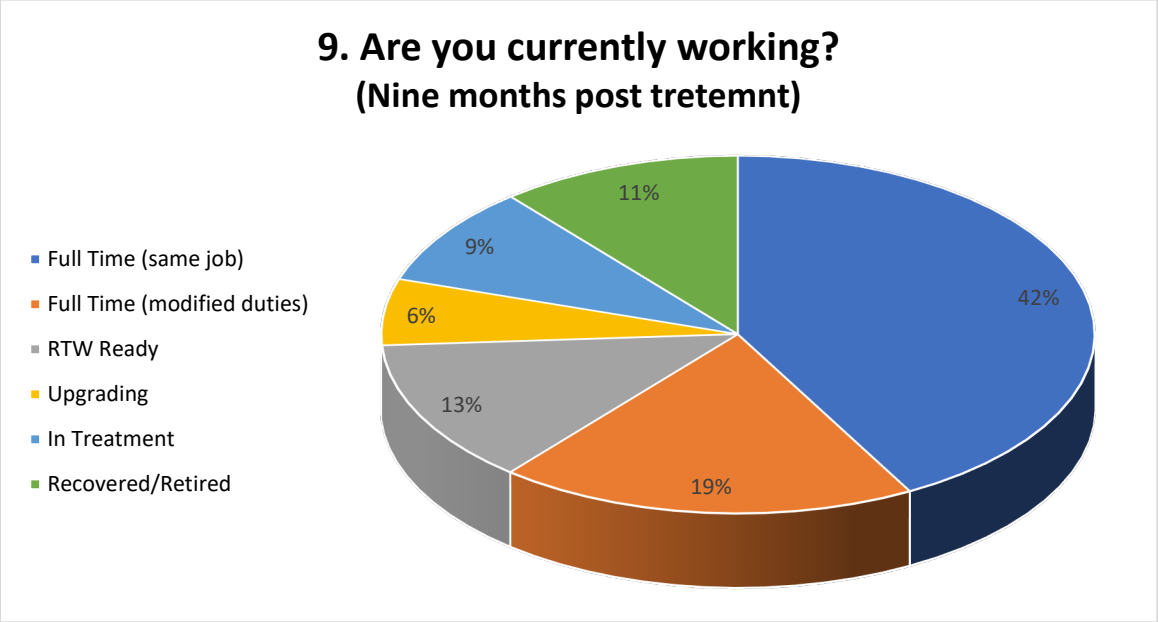

4. Do you feel irritable, hyper-aware, or anxious?
Number of participants
140
120
100
80
60
40
20
0
7
130
19
19
0
Not at all
A little bit
Moderately
Quite a bit
Extremely
Answers


5. Have you withdrawn from friends, family, or other loved ones?
Number of participants
120
100
80
60
40
20
0
64
100
8
2
1
Not at all
A little bit
Moderately
Quite a bit
Extremely
Answers


6. Do you use substances to cope with your symptoms?
Number of participants
120
100
80
60
40
20
0
108
61
4
2
0
Not at all
A little bit
Moderately
Quite a bit
Extremely
Answers


7. Is it hard for you to function in daily life?
Number of participants
120
100
80
60
40
20
0
111
60
3
1
0
Not at all
A little bit
Moderately
Quite a bit
Extremely
Answers


8. Do you continue using learned skills/tools in the TSRP
Number of participants
180
160
140
120
100
80
60
40
20
0
154
75
104
60
47
123
149
Muse (Mindfulness / Meditation)
Yoga
Cardiovascular excercises
Expressive Art
Supportive Counselling
Breathing Techniques
TSRP Peer Support
Skills / Tools


9. Are you currently working?
(Nine months post tretemnt)
Full Time (same job)
Full Time (modified duties)
RTW Ready
Upgrading
In Treatment
Recovered/Retired
42%
19%
13%
6%
9%
11%

Residential PTSD Treatment: Annotated Bibliography

Fay, J., Kamena, M. D., Benner, A., & Buscho, A. (2006). A residential milieu treatment approach for first-responder trauma. *Traumatology, 12*(3), 255-262. https://doi.org/10.1177/1534765606294991

This article examines the effectiveness of two highly structured, short-term residential treatment programs devoted specifically to the treatment of first responders, specializing in the unique challenges faced when recovering from critical incidents. The authors discuss program goals around helping emergency professionals and retirees regain a sense of control over their lives, with a focus on shifting their perspective on stress and their ability to cope. The author notes that program attendees often received community-based/individual treatment without favorable or sufficient outcomes before attending the program. There is an emphasis on peer support, which it intentionally coordinated, to help normalize behavior and symptoms, create a common humanity, and encourage a sense of hope and recovery. Staff should also adopt a working-together model to promote relationship-building and reduce any hierarchies. A chaplain assumes both a passive and active role in reconnecting with faith and a 12-step program is mandatory for those who are in recovery. The advantages of utilizing a residential treatment model included prevention of avoidance behaviours, which is a common safety behaviour, and a focus on physiological and psychological symptoms, as well as peer cohesiveness and therapeutic alliances. In addition, the highly structured format, which includes individual and group components, also includes ample rest time. Upon completing the program, a transition to community-based continuity of care is encouraged and a long-term wellness plan with biopsychosocial-spiritual goals and peer follow-up is offered to support ongoing integration and healing. The authors note that outside of a residential treatment format, a similar milieu and process is difficult to replicate. Although more research and statistical support regarding the program's efficacy and long-term outcomes is needed, all those involved in the program, all of which volunteer their time, reported significant positive changes in the participants following attendance.

Kamena, M. & Galvez, H. (2020). Intensive residential treatment program: Efficacy for emergency responders' critical incident stress. *Journal of Police and Criminal Psychology, 35,* 75-81. https://doi.org/10.1007/s11896-019-09359-w

This article examines the factors that contribute to symptom reduction in emergency responders suffering from critical incident stress and PTSI who attended residential treatment (versus waitlist participants). The West Coast Post-Trauma Retreat (WCPR) is a 6-day residential program that utilizes an integrative psychosocial model as their treatment approach, which is largely a contributing factor to their success. The organizations mission is to improve client quality of life, improve resiliency, and reduce traumatic stress symptoms (Kamena & Fay, 2007) using evidence-based treatments,

coupled with peer support and eye movement desensitizing and reprocessing (EMDR). The retreat combines individual therapy, interactive psychoeducational group therapy, and milieu therapies to create safe and structured clinical and non-clinical healing opportunities. Clients also have the option to attend alcoholics anonymous (AA) meetings and participate in non-denominational support with a chaplain. The integrated non-evidence-based treatments, including daily meditation exercises (to enhance situational awareness), are an integral aspect of the psychosocial program design. The retreat combines individual therapy, interactive psychoeducational group therapy, and milieu therapies to create safe and structured clinical and non-clinical healing opportunities. Through pre-test/post-testing, findings included a reduction in critical incident stress levels, clinically significant symptom reduction across all categories, and increased overall well-being. Recommendations were made for longer-term psychological treatment, including individual or group critical incident stress debriefings and opportunities to express feelings to help normalize and create safety. Limitations to this study include self-report measures without structured clinical interviews. This article adds to the growing research on the efficacy of residential treatment for first responders.

Schneider, B. P., Palmer, G. A., Romero, R., & O'Regan, J. (2015). Post-traumatic stress disorder and quality-of-life outcomes of veterans seeking treatment in a residential rehabilitation treatment program. *Military Behavioral Health, 3*(2), 157-166. https://doi.org/10.1080/21635781.2015.1009215

This article examines the quality-of-life of veterans with PTSD who attended a Veterans Affairs Medical Center (VAMC) residential rehabilitation program (RRTP). The program aimed to reduce PTSD symptoms as well as increase functioning across all domains of life, including physical, environmental, psychological, social, spiritual, and personal. As war situations are rated as one of the most difficult situations to experience and lead to the highest probability of multiple trauma exposure (Anticevic, et al., 2011), as well as increased PTSD symptoms (Pearce, 1985), differentiating combat- and non-combat related trauma was a focus of the study, however, did not end up being a significant factor. Instead, a significant PTSD symptoms reduction factor was exposure through prolonged exposure therapy (PE), cognitive processing therapy (CPT), or a combination of both. Utilizing these therapies as part of a comprehensive treatment model, specifically within a residential treatment program, was noted by the authors as a "promising intervention" that led to improved quality of life overall; This outcome supports findings from a 2011 study by Ochsner Margolies' of significant symptom reduction in veterans immediately following treatment in a RRTP PTSD program at VAMC. The residential setting was also found to support veterans' survival reliance and deep-seated sense of camaraderie, which cultivated therapeutic change through group cohesion. The authors note that future research, with a larger sample size, is required to determine factors and treatments that contribute to the highest symptom reduction and increase in quality of life following treatment as programs are refined to meet veterans' unique needs.

Alvarez, J., McLean, C., Harris, A. H. S., Rosen, C. S., & Ruzek, J. I. (2011). The comparative effectiveness of cognitive processing therapy for male veterans treated in a VHA posttraumatic stress disorder residential rehabilitation program. ***Journal of Consulting and Clinical Psychology, 79*****(5), 590-599. https://doi.org/10.1037/a0024466**

This article examines the effectiveness of integrating trauma-focused cognitive processing group therapy into a posttraumatic stress disorder (PTSD) residential rehabilitation program, replacing trauma-focused group treatment as usual (TAU). It provided an opportunity to test the effectiveness and sustainability of evidence-based PTSD treatments to address the ongoing evolution of PTSD treatment options in the Veterans health Administration (VHA) healthcare system. In this study, the residential program occurred in a therapeutic milieu setting and involved present-centered process groups utilizing CBT and life-span development modalities. Residents were supported with psychoeducation and offered skill development opportunities, including communication and parenting, while also engaging in recreation therapy. It is important to note that there were improvements in the TAU cohort, but that there was clinically significant improvement in the CPT cohort in terms of recovery and improvement. This supports the utility and benefits of continuing to integrate evidence-based PTSD treatments into established residential programs to continually increase the benefits of residential treatment programs for PTSD.

Hilton, L. G., Libretto, S., Xenakis, L., Elfenbaum, P., Boyd, C., Zhang, W, & Clark, A.A. (2019). Evaluation of an integrative post-traumatic stress disorder treatment program. ***The Journal of Alternative and Complementary Medicine, 25*****(1), S147-S152. https://doi.org/10.1089/acm.2018.0424**

The Back on Track program is an intensive, patient-centered, outpatient program that adopts a holistic, whole systems approach. The authors expound that a holistic approach, utilizing multimodal treatments, is a practical and effective treatment strategy for addressing multifactorial issues among servicemembers with PTSD and combat-related stress. They emphasize the importance of "treating the whole person" through evidence-based treatments (i.e., individual psychotherapy, medication, and psychoeducation group work) coupled with complementary and integrative approaches (i.e., daily meditation, mindfulness, and yoga nidra) that address the body, mind, social, and spiritual domains. Psychoeducational group work focuses on the etiology and symptoms of PTSD (to support normalization), psychosocial skills, and coping strategies. Alongside treating combat-related stress, the program focuses on increasing resiliency and supporting reintegration, emphasizing that many of the complementary approaches can be practically accessed following treatment as part of a post-program supportive routine. This program has been found to yield statistically significant effects regarding patient outcomes (i.e., increase in self-efficacy and knowledge) and to be particularly effective as a result of the

holistic (addressing mind, body, social and spiritual needs), multimodal, and multidisciplinary approach.

Bolton, R.E., Fix, G.M., Lukas, C. V., Elwy, A. R., & Bokhour, B. G. (2020). Biopsychosocial benefits of movement-based complementary and integrative health therapies for patients with chronic conditions. *Chronic Illness, 16*(1), 41-54. https://doi.org/10.1177/1742395318782377

The article outlines the increasingly recognized and beneficial aspects of complementary and integrative health (CIH) practices, which are interventions, practices, or disciplines that are commonly not considered conventional medicine, in the treatment of chronic physical and mental health conditions, including PTSD, anxiety, and depression. The authors focused on the utility and mental and physical health benefits of integrating movement-based therapies (MBT's), such as yoga (breathing stretching, and mindfulness), into treatment programs. This study specifically considered the multitude of health benefits across physical, mental, and social domains at two Veterans Affairs medical centers. The biopsychosocial model was utilized as a framework to understand how MBT address biological, social, and psychical aspects of a person's life. In addition to improvements in mental and physical health, other noted improvements included increased emotional well-being, improved social relationships, and a decrease in the use of opiates and psychotropic medications. These improvements were attributed to a variety of physical and mental/emotional health improvements including, but not limited to: reduced anger/suicidal thoughts, improvements in anxiety/PTSD, increased happiness, pain reduction, physical awareness, participant camaraderie/interpersonal focus, improved health behaviour, improved social and family relationships, mindfulness skills, and coping skills (self-reflection, self-regulation, and self-awareness). Overall, this study has significant implications for a clinical practice where a client-centered model is adopted to address the biopsychosocial needs of the client.

Conclusion

Each individual's healing journey is uniquely personal. Diversified Rehabilitation's Trauma and Stress Recovery Program (TSRP) recognizes and honors these diverse paths to recovery by employing evidence-based treatment modalities. The program is continually refined through client feedback, collaborative efforts, ongoing research, and the integration of current best practices to provide a holistic and adaptive healing experience tailored to meet the complex needs of each client. This approach aims to enhance their quality of life both at work and at home. Research supports that effective PTSD residential treatment should incorporate trauma-focused psychotherapy, appropriate medication, a holistic philosophy, and multimodal interventions to deliver a comprehensive, whole-system approach (Hilton et al., 2019, p. 148).

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