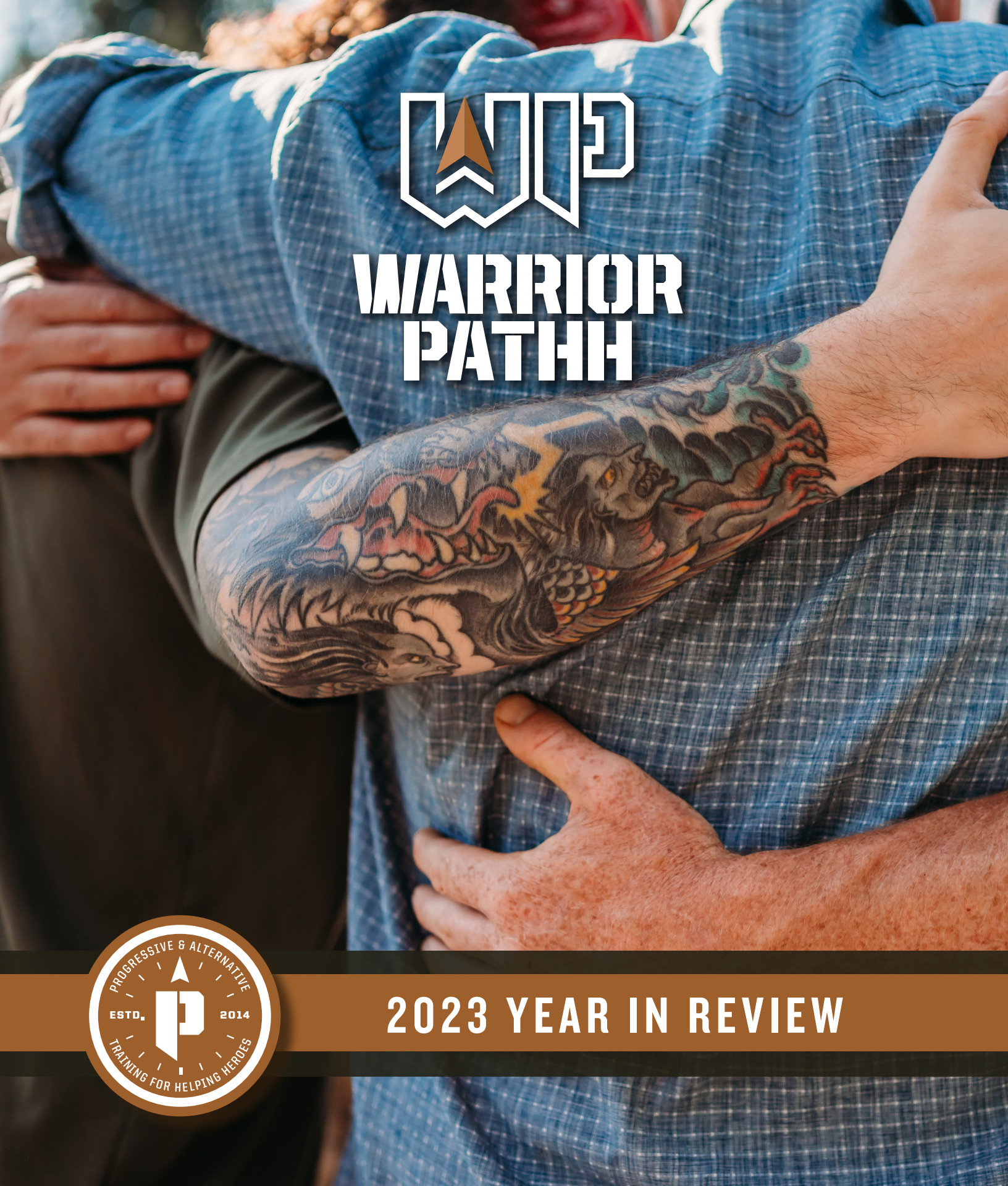

WARRIOR PATHH

PROGRESSIVE & ALTERNATIVE
ESTD. 2014
TRAINING FOR HELPING HEROES

2023 YEAR IN REVIEW

“STRUGGLE IS A TERRIBLE THING TO WASTE.”

– CAPT. CHARLIE PLUMB

Former Navy Fighter Pilot and 6-Year Hanoi Hilton Prisoner of War

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Warrior PATHH is a peer-based training program that relies on a variety of educational and experiential activities for the purpose of teaching life skills, increasing community integration and involvement, and promoting physical, emotional, relational, financial, and spiritual health. Warrior PATHH is not an outpatient or residential clinical treatment program and does not offer any health care services including, but not limited to, use of licensed healthcare professionals in the delivery of programs or supervision of staff. Warrior PATHH does not involve the provision of health care of any kind including, but not limited to, individual, group, or family counseling or psychotherapy, pharmacological management, or medical interventions. Warrior PATHH is not offered as a substitute or replacement for health care services, which may be ongoing or needed at any time by program participants.

BOULDER CREST FOUNDATION

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EXECUTIVE SUMMARY

"THEY TRIED TO BURY US. THEY DIDN'T KNOW THAT WE WERE SEEDS."

— DINOS CHRISTIANOPOULOS, CONTEMPORARY GREEK POET

Boulder Crest Foundation is the home of Posttraumatic Growth. The idea of something beautiful emerging from a place of pain and suffering is central to the philosophy of Posttraumatic Growth and at the core of our Warrior PATHH program. Warrior PATHH started as a seedling in 2014, when we delivered three programs to 22 veterans. Warrior PATHH has grown into a nationwide movement, and in 2023, along with our Avalon Action Alliance Warrior PATHH Partners, we delivered 136 Warrior PATHH programs to 981 members of the military, veteran, and first responder communities.

The drivers of this growth are both positive and negative. Our nation's heroes continue to suffer. The U.S. Department of Veterans Affairs' *2023 National Veteran Suicide Prevention Annual Report* documented how the veteran suicide rate increased between 2020 and 2021, reversing the trend of decreased rates in 2019 and 2020. The number of suicide deaths among first responders also grew between 2021 and 2022, with the highest increases seen in the firefighter and law enforcement communities. It is likely that the actual suicide numbers are much higher than what is reported. In addition, suicide is not the only indicator of struggle, and far too many members of the military, veteran, and first responder communities live lives of quiet desperation.

Despite experiencing a higher rate of suicide than their civilian counterparts, the communities we serve are less likely to seek out mental health services. Mental health challenges still carry a stigma in these workplace cultures where the attitude has traditionally been, "suck it up." Struggling veterans and first responders are concerned about a potentially negative impact on their careers if they utilize mental health services, and, as with more and more Americans, wait times for and the cost of health services are additional barriers to care. Those who do seek help often find the mainstream approach to mental health does not address their needs.

This was the experience of many of the combat veterans who came to stay at Boulder Crest for Family Rest & Reconnection Stays starting in 2013. Late night "table talk" between the veterans, their spouses, and Boulder Crest's Chairman and Founder Ken Falke planted a seed in Ken's mind: if the mainstream approaches to mental health care are not working for our nation's heroes, what *would* work? Ken's quest to answer this question led him to Dr. Richard Tedeschi, the founder of the science of Posttraumatic Growth, and Dr. Bret Moore, a former U.S. Army psychologist, and ultimately to the creation of Warrior PATHH.

In a relatively short period of time, Warrior PATHH grew to the program we know today: a robust and effective alternative to the traditional narrative of diagnosis, diminishment, and dysfunction; one that speaks to the possibility of growth and continued service to one's community and country after trauma. This new narrative of hope and potential speaks to mankind universally, but especially resonates within the communities Boulder Crest Foundation serves. Graduates of the first PATHH programs returned to Boulder Crest to become PATHH Guides and help support their brothers and sisters who are still struggling. PATHH graduates spread the word of PATHH's transformative effect on their lives and as more people graduated, more people sought out Warrior PATHH.

Boulder Crest Foundation established a second location in 2017, and in 2019 we co-founded the Avalon Action Alliance to begin the process of growing a nationwide Warrior PATHH Network. By the time last year's *Warrior PATHH Year in Review* report went to press, Boulder Crest Foundation had teams at our Arizona and Virginia locations, a mobile training team and six Warrior PATHH partners – Big Red Barn Retreat (South Carolina), Camp Southern Ground (Georgia), GratitudeAmerica (Florida), Permission to Start Dreaming (Washington State), Sheep Dog Impact Assistance (Arkansas/Missouri), and Travis Mills Foundation (Maine). A seventh PATHH Partner, Eagle Oak Retreat in Italy, Texas, was scheduled to commence Warrior PATHH delivery in early 2023.

This still was not enough to satisfy the growing demand for Warrior PATHH. "*The mystery of human existence lies not in just staying alive, but in finding something to live for," (Fyodor Dostoevsky, Russian novelist)*, and the word is out that Warrior PATHH is helping people do just that. We stood up a second mobile training team that conducted seven Warrior PATHH programs between June and December 2023, and second teams in South Carolina (Big Red Barn Retreat) and Arkansas (Sheep Dog Impact Assistance). In September we launched the Struggle Well Experience specifically for first responders with the goal of reducing their program wait times.

"THE MYSTERY OF HUMAN EXISTENCE LIES NOT IN JUST STAYING ALIVE, BUT IN FINDING SOMETHING TO LIVE FOR."

— FYODOR DOSTOEVSKY, RUSSIAN NOVELIST

Boulder Crest Foundation's exponential growth did not come at the expense of program quality and transformational outcomes, as you will read on the following pages. Warrior PATHH continues to reduce the symptoms of Posttraumatic Stress (by 60%, up from 58% in 2022), depression (54%), and anxiety (54%) of those who attend; and Posttraumatic Growth went from improving by 56% in 2022 to 65% in 2023. Warrior PATHH graduates report that they are more physically active, have better nutrition habits, and read more than before they attended PATHH. The myPATHH mobile app has a community of nearly 3,000 people who use the app for continued education, community, and accountability. PATHH program outcomes are demonstrably sustained and graduates remain part of a larger community that supports their continued Posttraumatic Growth.

Our work is not going unnoticed. In a significant win for our advocacy efforts, June 13th was named PTG Awareness Day in a proclamation signed by Rep. Jack Bergman (R-MI). The proclamation reads, in part, *"I commend Boulder Crest Foundation for their outstanding contributions in the field of trauma recovery and their development of the Warrior PATHH program. The commitment and dedication of Boulder Crest Foundation [...] to helping Veterans, first responders, and others affected by trauma are deserving of the highest recognition."* June is PTSD Awareness Month and features PTSD Awareness Day, but this nearly exclusive focus on the negative aspects of struggle is a major part of the challenge we face. It saps people of hope and can make them feel their best days are behind them. Boulder Crest works every day to change this narrative and offer hope, possibility, and growth to everyone with whom we come in contact.

The first of the *10 Truths About Struggle* that we discuss is “Struggle has value.” Warrior PATHH helps those in the military, veteran, and first responder communities see this value and learn to utilize the principles of Posttraumatic Growth to transform their struggle into strength. We help our nation’s heroes see that their best days are still ahead of them and that they can be of continued service to their community and country. We have a long way to go until Posttraumatic Growth is a commonly-used word in the national dialogue about mental health care, but we are committed to doing what is required to make that a reality.

“WE CAN’T BECOME WHAT WE NEED TO BE BY REMAINING WHAT WE ARE.”

OPRAH WINFREY

Together, we can ensure this movement continues to grow. Join us.

Josh Goldberg
CEO
Boulder Crest Foundation
Author, *Struggle Well: Thriving in the Aftermath of Trauma*

WHAT IS WARRIOR PATHH

Warrior PATHH (Progressive and Alternative Training for Helping Heroes) is the first training program ever designed to enable our nation's combat veterans and first responders to transform deep struggle into profound strength and lifelong Posttraumatic Growth (PTG). Warrior PATHH is a 90-day, non-pharmacological, peer-delivered training program that begins with a 7-day intensive and immersive initiation delivered across the United States.

Warrior PATHH was developed by Boulder Crest Foundation, a national nonprofit organization working to ensure that service members, veterans, first responders, and their families can live great lives in the aftermath of stress, struggle, and trauma. Warrior PATHH was developed in collaboration with Dr. Richard Tedeschi and Dr. Bret Moore.

What is Posttraumatic Growth?
Posttraumatic Growth is the basis of Warrior PATHH and reflects thousands of years of understanding, decades of research, and years of application and operationalization at Boulder Crest. The science of PTG suggests that it is during times of deep struggle that people are likely to engage in reflection and introspection, and carefully consider what is truly valuable and significant in their lives. As a result, growth is often witnessed in some or all of five areas:

- **New Possibilities:** The sense that new opportunities have emerged from the struggle, opening up possibilities that were not present before.
- **Deeper Relationships:** Experiencing closer relationships with specific people, and an increased sense of connection with others who suffer.
- **Personal Strength:** An increased sense of one's own strength — "If I lived through that, I can face anything."
- **Appreciation for Life:** A sense of gratitude for the small and large things in life.
- **Spiritual and Existential Change:** A deepening of their spiritual lives; and an exploration of beliefs and notions previously unconsidered.

"YOU HAVE TO KNOW THAT POSTTRAUMATIC GROWTH EXISTS IN ORDER FOR IT TO HAPPEN. YOU HAVE TO KNOW IT'S OKAY FOR GOOD THINGS TO HAPPEN AFTER REALLY BAD THINGS."
— MANDY PIFER, WHOSE FIANCÉ WAS KILLED IN A 2015 ISIS-RELATED SHOOTING

Why Does Warrior PATHH Work?
Warrior PATHH is based on the proven framework of PTG and trains students in the five phases of PTG, built on an environment of trust and connection:

- **Education:** Identify the impacts of stress and trauma; examine the ways in which struggle can lead to opportunities for growth and transformation.
- **Regulation:** Develop mind, body, financial, and spiritual wellness practices to regulate thoughts, feelings, and actions.
- **Disclosure:** Devise ways to self-disclose personal experiences with struggle that are effective in strengthening interpersonal relationships.
- **Story:** Create a positive, forward-looking personal story that integrates past, present, and future.
- **Service**: Develop a plan for a new mission of service to themselves, their family, work, community, and country.

Warrior PATHH = Sustained Transformation
The purpose of Warrior PATHH is to enable students to achieve sustained and life-changing transformation. To that end, Warrior PATHH is a 90-day intensive program that begins with a 7-day initiation, followed by 12 weeks of ongoing training, support, and accountability. This includes five team video conferences led by a PATHH Guide, daily content, private team pages with messaging capabilities, and additional courses, support, and community made possible by the myPATHH app. PATHH Alumni have lifetime access to myPATHH to enable continued engagement and interaction with their peer community.

THE HISTORY OF WARRIOR PATHH

2014 — First Warrior PATHH program delivered

2015 — Warrior PATHH curriculum development begins

2016 — Warrior PATHH curriculum completed; Warrior PATHH 18-month longitudinal study begins

2018 — First Warrior PATHH program delivered at Boulder Crest Arizona

2019 — First two Warrior PATHH partners join network: GratitudeAmerica (Florida) and Camp Southern Ground (Georgia)

2020 — Three teams and two partners added to the Warrior PATHH network: Boulder Crest Foundation Mobile Training Team, Travis Mills Foundation (Maine), and Big Red Barn Retreat (South Carolina)

2021 — Two partners added to the Warrior PATHH network: Sheep Dog Impact Assistance (Arkansas) and Permission to Start Dreaming Foundation (Washington); 1,000 students served

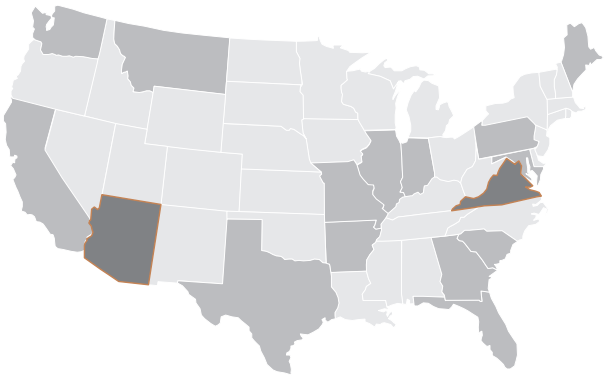
2022 — 2,000 students served; Two Warrior PATHH delivery organizations (Boulder Crest and PTSD Foundation) awarded Department of Veterans Affairs SSG Fox Suicide Prevention Grant

2023 — Version 5.5 of Warrior PATHH curriculum launched; more than 3,100 students served; Second Mobile Training Team established by Boulder Crest; Eagle Oak Retreat joins the network as the seventh Warrior PATHH Partner; Boulder Crest and PTSD Foundation awarded VA SSG Fox Suicide Prevention Grant for a second year

THE WARRIOR PATHH NETWORK

The Warrior PATHH Network is made possible by the AVALON ACTION ALLIANCE

As the home of Posttraumatic Growth (PTG), Boulder Crest began the development of Warrior PATHH in 2014 at Boulder Crest's Virginia PTG Academy. In 2018, Boulder Crest expanded the delivery of Warrior PATHH to our Arizona PTG Academy. In 2019, Boulder Crest co-founded the Avalon Action Alliance to begin a national expansion effort designed to transform lives and revolutionize how we support struggling combat veterans and first responders. At the end of 2023, there were permanent teams delivering Warrior PATHH in nine states and two Boulder Crest Foundation Mobile Training Teams delivering Warrior PATHH at sites across the country.



BOULDER CREST FOUNDATION

GratitudeAmerica

CAMP SOUTHERN GROUND

TRAVIS MILLS FOUNDATION

BIG RED BARN Retreat

SHEEP DOG® IMPACT ASSISTANCE

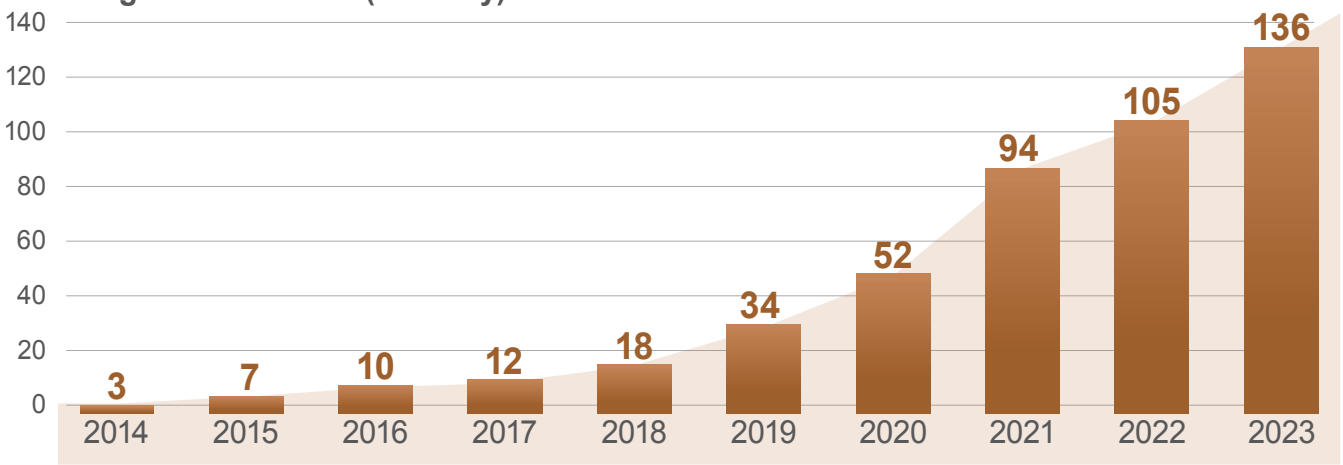
PERMISSION TO START DREAMING · FDN ·

EAGLE OAK RETREAT FOUNDATION ITALY, TEXAS

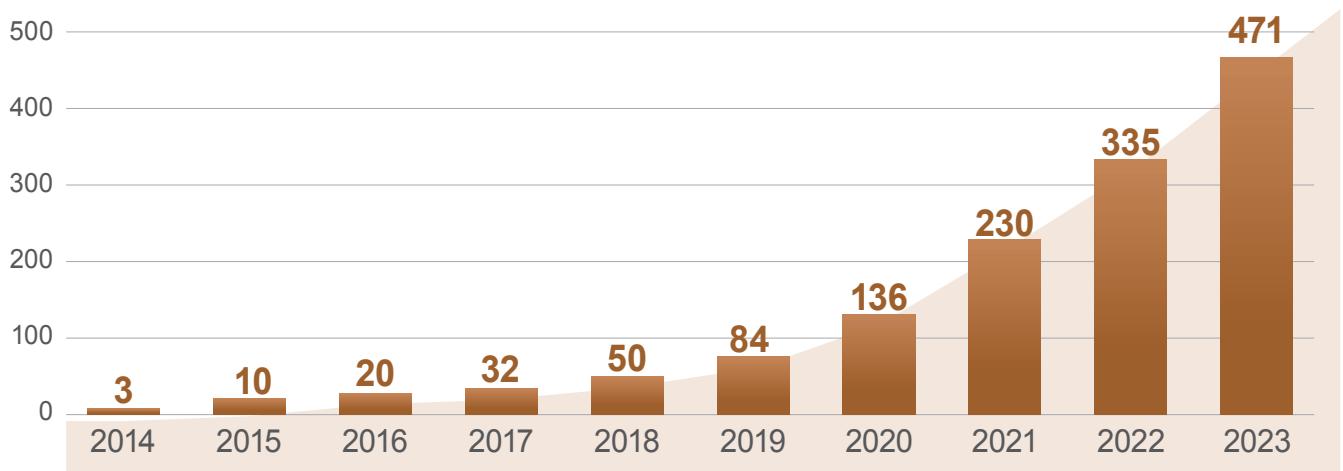
WARRIOR PATHH BY THE NUMBERS (2014-2023)

The first-ever Warrior PATHH was delivered at Boulder Crest Foundation's Virginia PTG Academy in June 2014. Since then there has been dramatic expansion, fueled by the Avalon Action Alliance's investment in the Warrior PATHH network. In 2023, we delivered 136 Warrior PATHH programs to 981 students. We have now delivered 471 programs to 3,174 students; it took approximately seven years to serve 1,000 Warriors; 18 months to serve 2,000; 13 months to serve 3,000; and we will cross the 4,000 mark in 11 months.

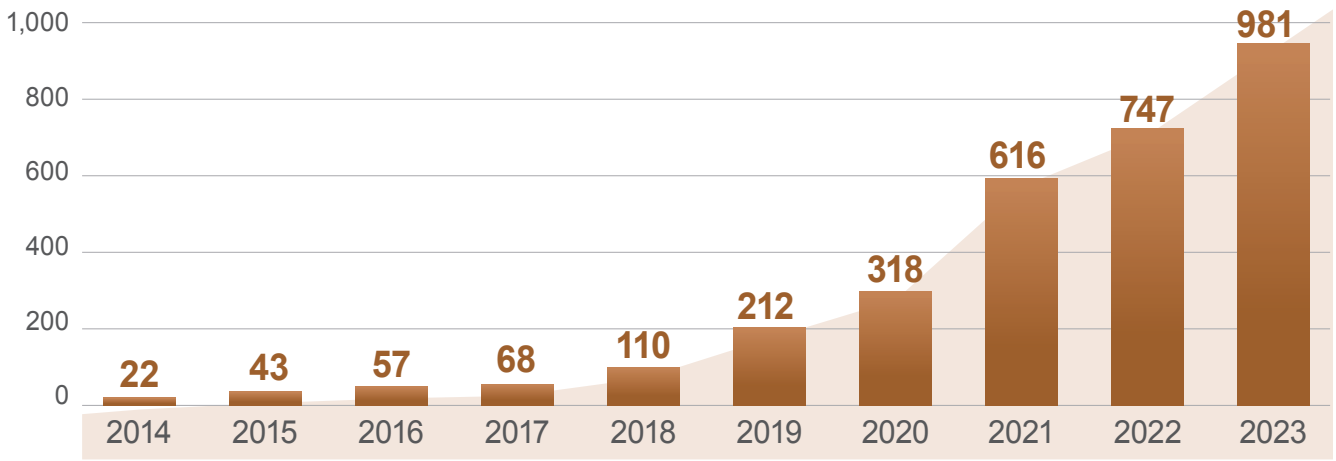
Programs Delivered (annually)



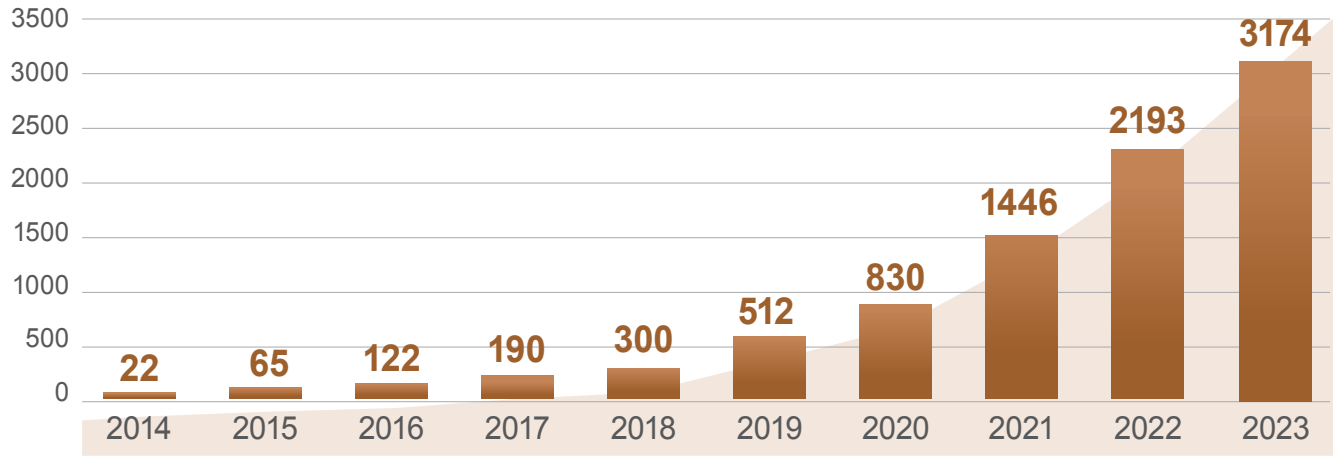
Programs Delivered (cumulative total)



Students Transformed (annually)



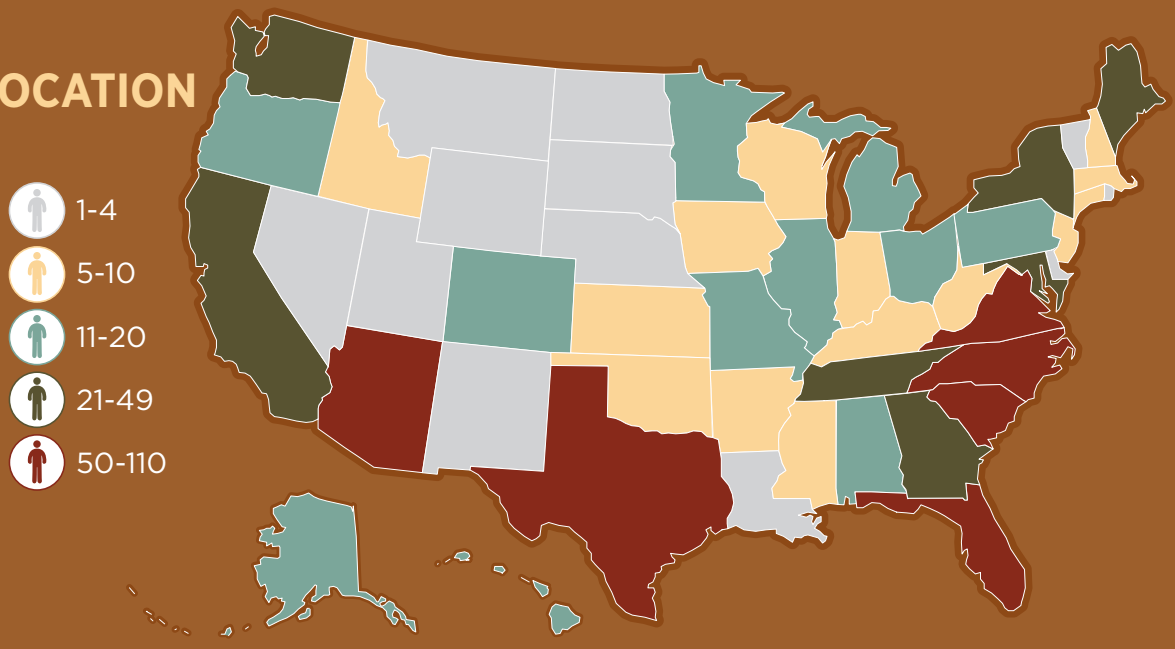
Students Transformed (cumulative total)



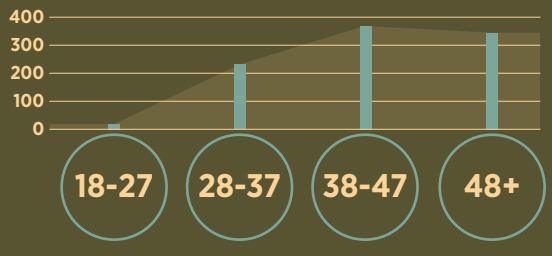
WARRIOR PATHH 2023: WHO WE SERVED

In 2023, the 11 Warrior PATHH teams served 981 Warriors across 136 programs. These students came from all 50 states.

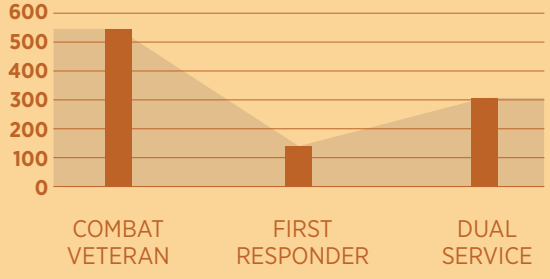
LOCATION



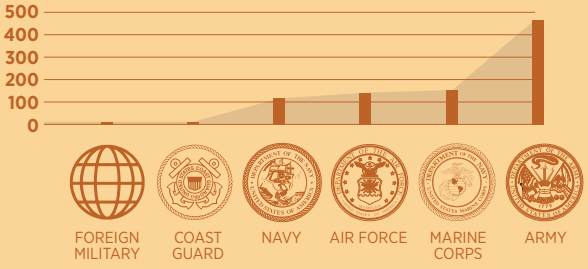
AGE



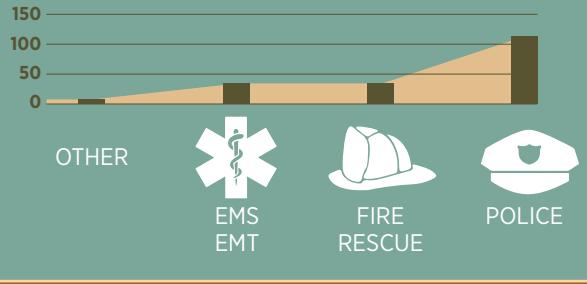
SERVICE TYPE



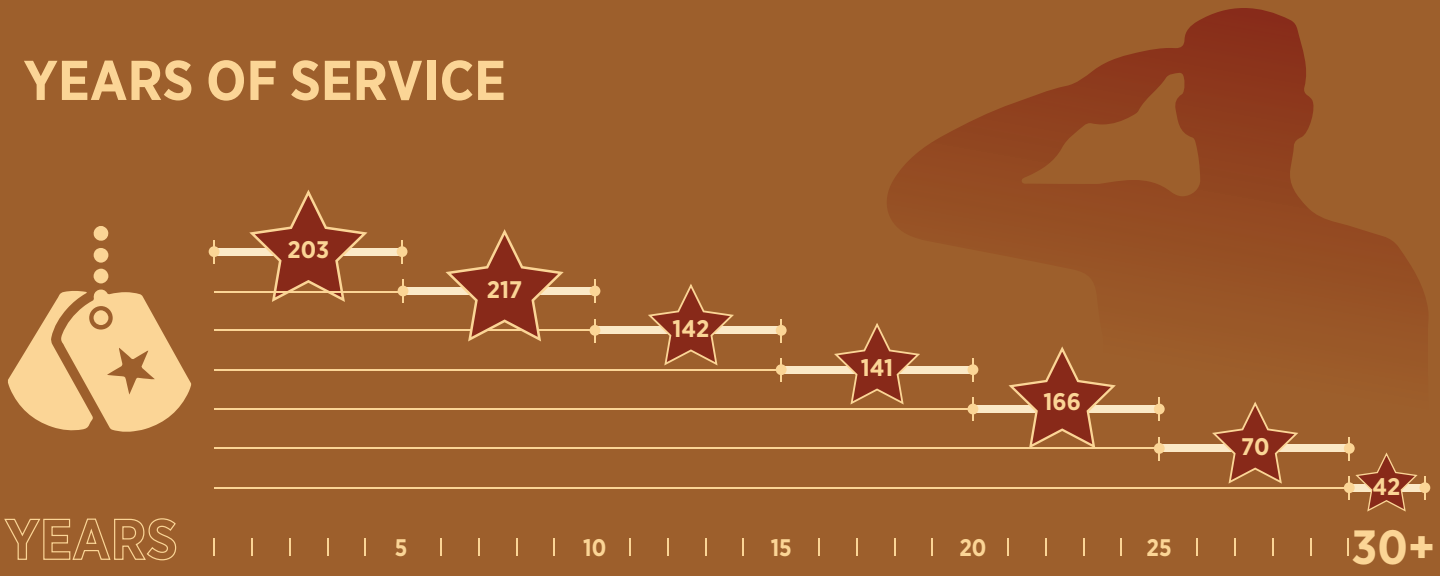
BRANCH



FIRST RESPONDERS



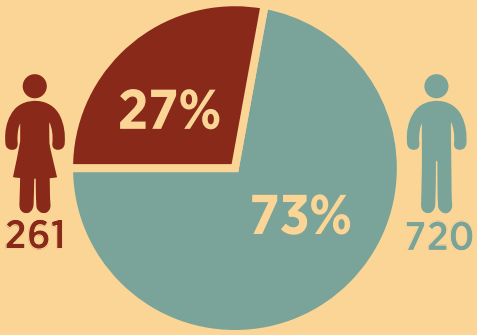
YEARS OF SERVICE



MARITAL STATUS

570	230	117	43	21
Married	Divorced	Never Married	Married/ Separated	Widowed

GENDER



EMPLOYMENT

539		33
Employed		Student
245		164
Retired		Unemployed

TRANSFORMING LIVES: THE IMPACT OF WARRIOR PATHH IN 2023

QUANTITATIVE DATA (*n*=981)

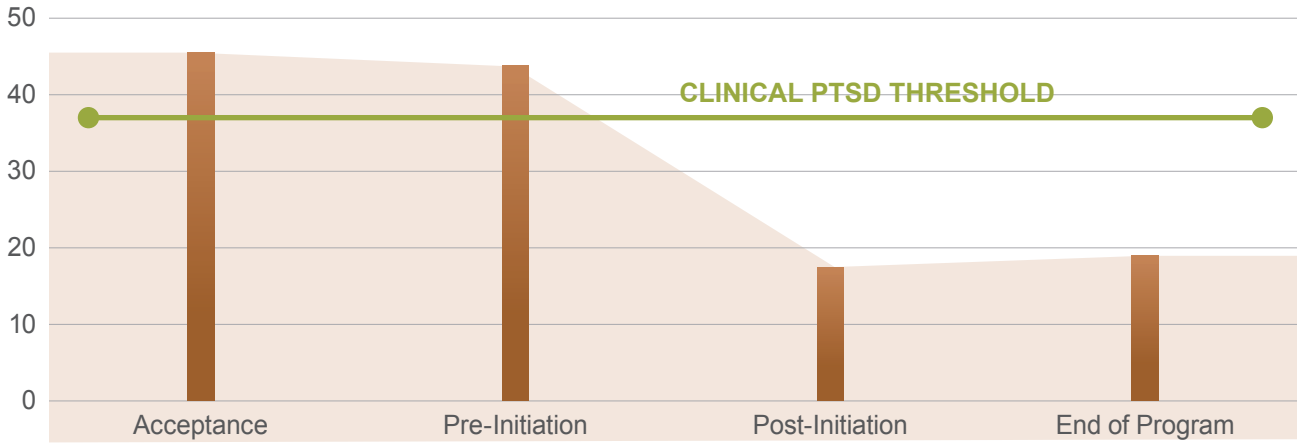
We evaluate Warrior PATHH's efficacy using a combination of publicly available clinical instruments and proprietary measures designed to measure the impact of Warrior PATHH in three domains: Symptom Reduction, Quality of Life Improvement, and Posttraumatic Growth. There were four collection points: (1) upon acceptance into Warrior PATHH; (2) upon arrival at the 7-day Initiation; (3) at the conclusion of the 7-day Initiation; (4) and at the conclusion of the 90-day program.

QUANTITATIVE EVALUATION

SYMPTOM REDUCTION: PTSD CHECKLIST (PCL-5)

Average PCL-5 Score

Warrior PATHH students experienced a 60% sustained reduction in PCL symptoms, falling well below the clinical threshold after the initiation.



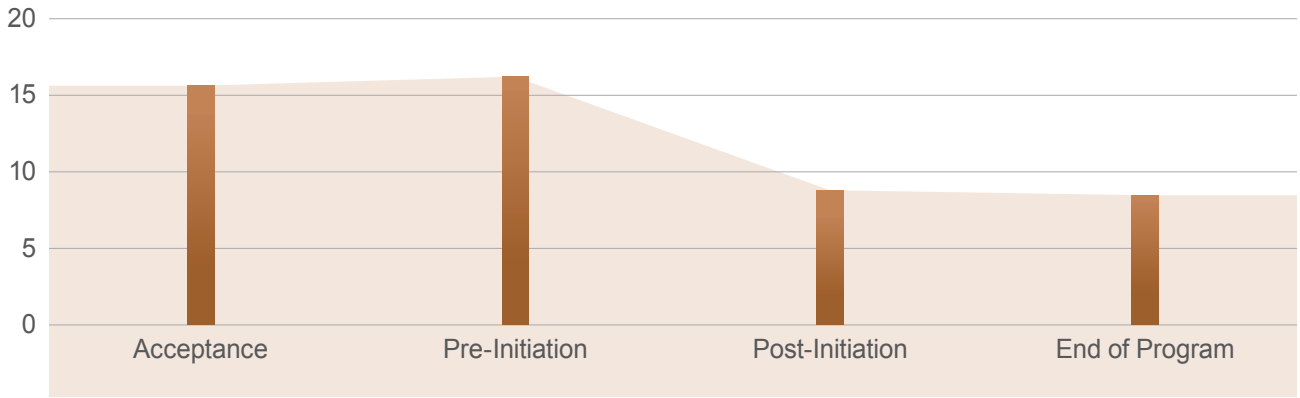
Explanation of Instrument
The PCL-5 is a 20-item self-report measure that assesses the 20 DSM-5 symptoms of PTSD. The PCL-5 has a variety of purposes, including: monitoring symptom change during and after treatment; screening individuals for PTSD; making a provisional PTSD diagnosis.

Rationale for Usage
Almost all traditional military and veterans clinical programs measure the presence and severity of PTSD and use it as a means of monitoring the efficacy of treatments specific for PTSD (e.g., prolonged exposure, cognitive processing therapy, eye movement desensitization and reprocessing). It is important that Boulder Crest do the same if it plans to draw comparisons between the efficacy of the Warrior PATHH program and traditional clinical interventions.

SYMPTOM REDUCTION: DASS-21

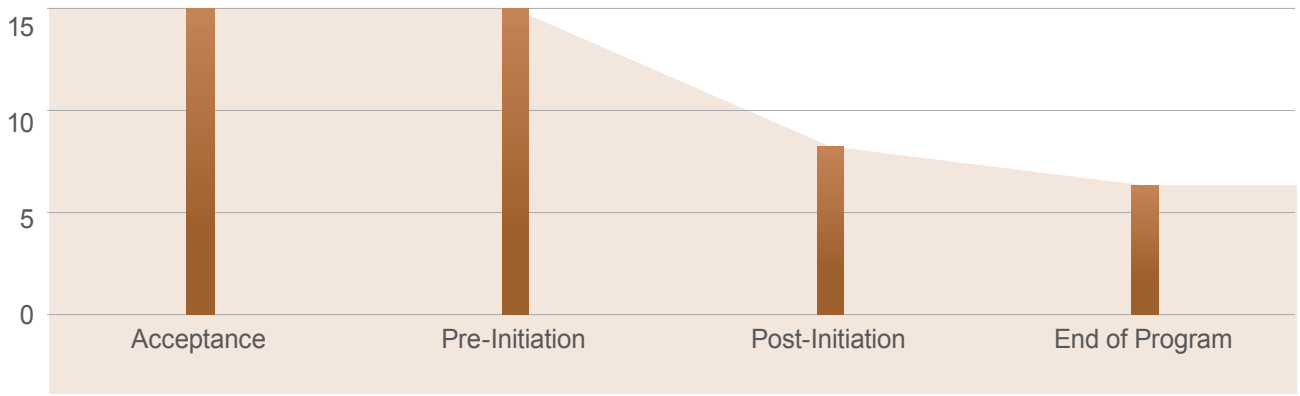
DASS-21 Depression

Warrior PATHH students experienced a sustained 61% reduction in depression.



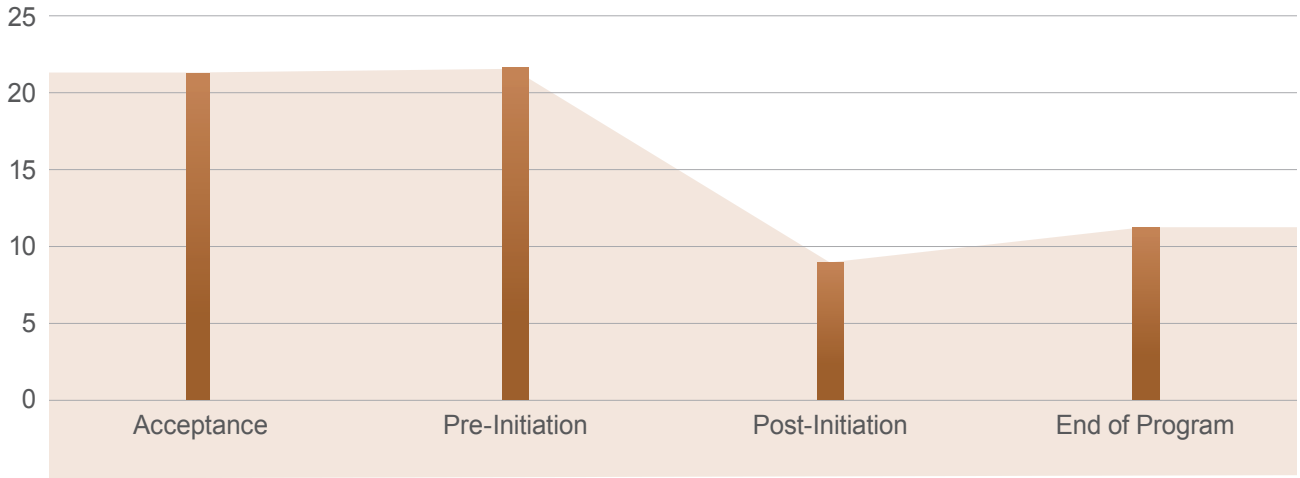
DASS-21 Anxiety

Warrior PATHH students experienced a sustained 54% reduction in anxiety.



DASS-21 Stress

Warrior PATHH students experienced a sustained 50% reduction in stress.



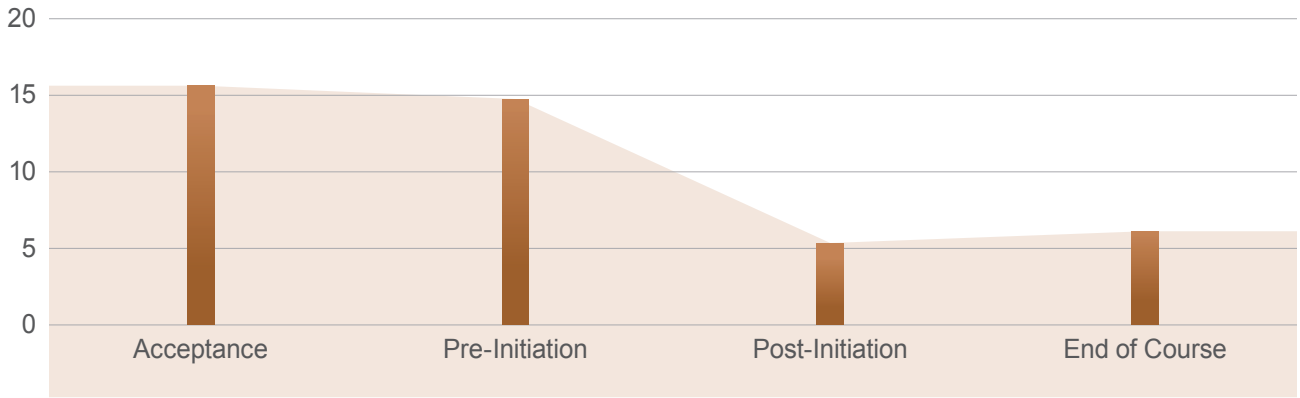
Explanation of Instrument
The short form of the DASS is a 21-item self-report measure with 3 subscales (Depression, Anxiety, and Stress), and includes statements that address how subjects have felt during the past week, such as “I found myself getting agitated” and “I felt that life was meaningless.” All items are rated on a 4-point Likert scale, ranging from 0 (“Did not apply to me at all”) to 3 (“Applied to me very much, or most of the time”). Together, the three subscales provide a summed score of overall distress (Cronbach’s α = .93). (Henry and Crawford, 2005).

Rationale for Usage
In addition to being a brief measure of the most common symptoms of psychological problems, the DASS also can indicate response to treatment.

SYMPTOM REDUCTION: PHQ-9

PHQ-9

Warrior PATHH students experienced a sustained 57% reduction in depression symptoms.



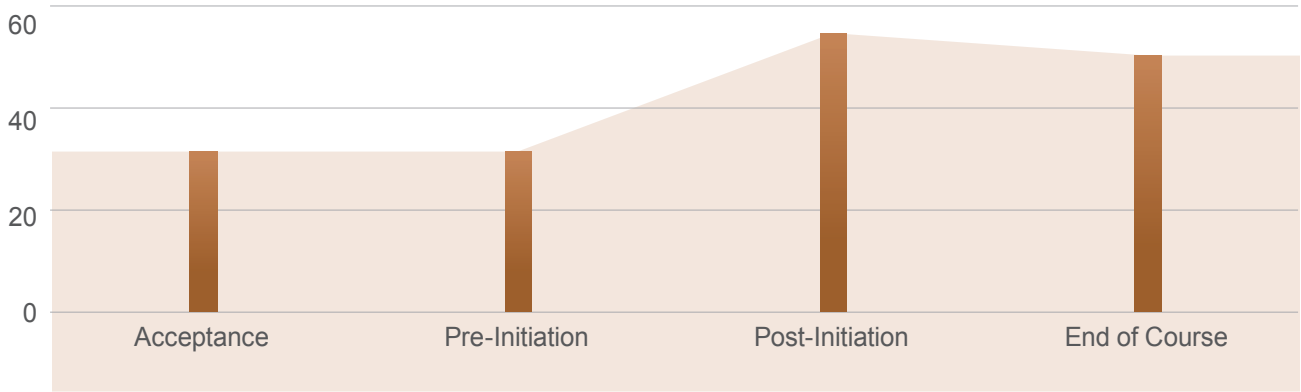
Explanation of Instrument
The nine-item Patient Health Questionnaire is a depressive symptom scale and diagnostic tool introduced in 2001 to screen adult patients in primary care settings. The instrument assesses for the presence and severity of depressive symptoms and a possible depressive disorder.

Rationale for Usage
Boulder Crest is a recipient of a grant under the Department of Veterans Affairs Staff Sergeant Fox Suicide Prevention Grant Program (SSG Fox SPGP). The PHQ-9 was included in the Warrior PATHH evaluation as part of the grant requirements.

QUALITY OF LIFE IMPROVEMENT:
WARWICK-EDINBURGH MENTAL WELLBEING SCALE

WEMWBS

Warrior PATHH students experienced a sustained 37% improvement in their wellbeing.



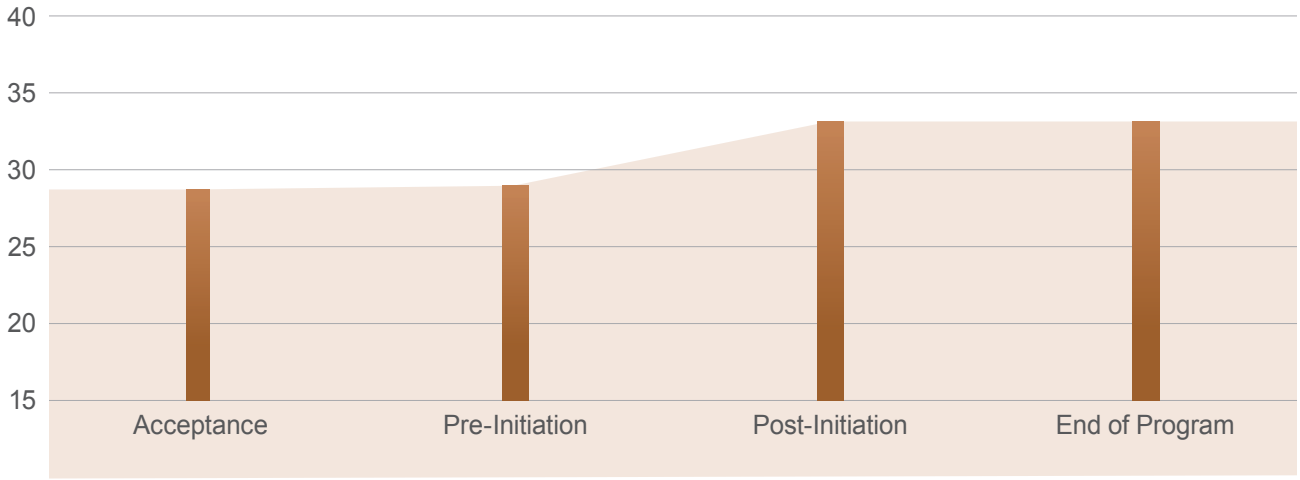
Explanation of Instrument
The Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) is a scale of 14 positively worded items for assessing a population's mental wellbeing.

Rationale for Usage
Boulder Crest is a recipient of a grant under the Department of Veterans Affairs Staff Sergeant Fox Suicide Prevention Grant Program (SSG Fox SPGP). The WEMWBS was included in the Warrior PATHH evaluation as part of the grant requirements.

QUALITY OF LIFE IMPROVEMENT: GENERAL SELF-EFFICACY SCALE

GSE

Warrior PATHH students experienced a sustained 15% improvement in self-efficacy.



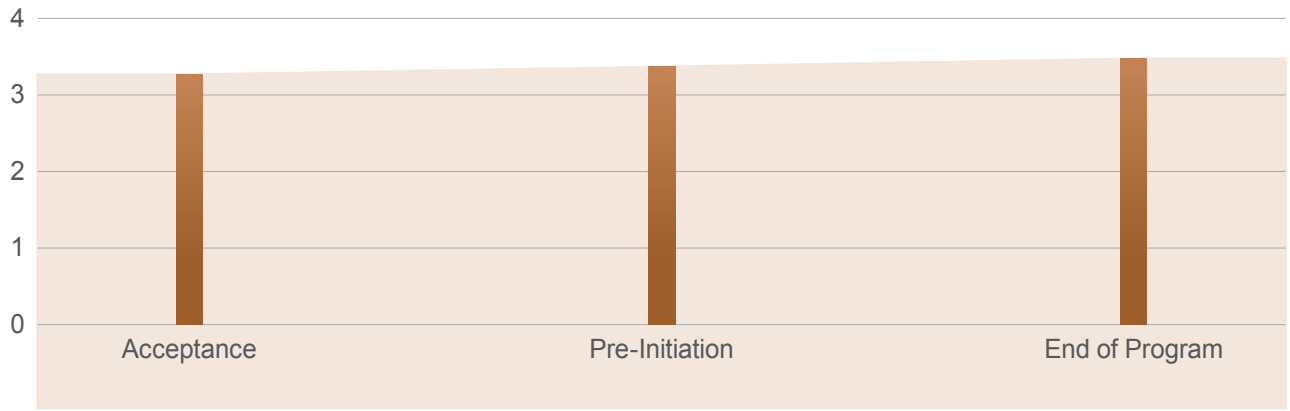
Explanation of Instrument
The General Self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995) was created to assess a general sense of perceived self-efficacy in mind to predict coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events.

Rationale for Usage
In addition to being a brief measure of the most common symptoms of psychological problems, the GSE also can indicate response to treatment.

QUALITY OF LIFE IMPROVEMENT: PHYSICAL ACTIVITY

Physical Activity

Warrior PATHH students experienced a 15% improvement in physical activity.



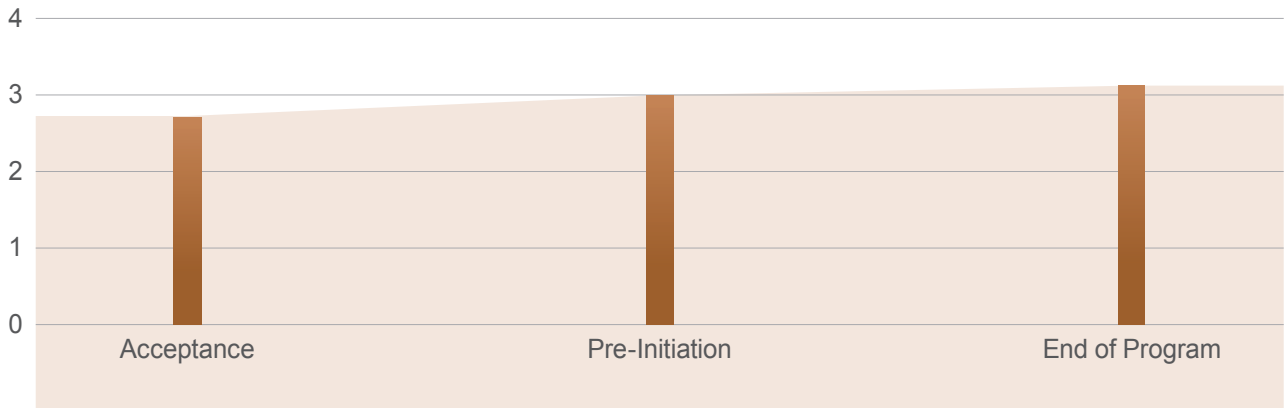
Explanation of Instrument
Developed by Dr. Tedeschi and Dr. Moore for the Program Evaluation.

Rationale for Usage
Increased physical activity may increase energy, concentration, and emotional well-being. Warrior PATHH encourages physical activity due to the setting and the outdoor activities.

QUALITY OF LIFE IMPROVEMENT: NUTRITION

Nutrition

Warrior PATHH students experienced a 17% improvement in nutrition.



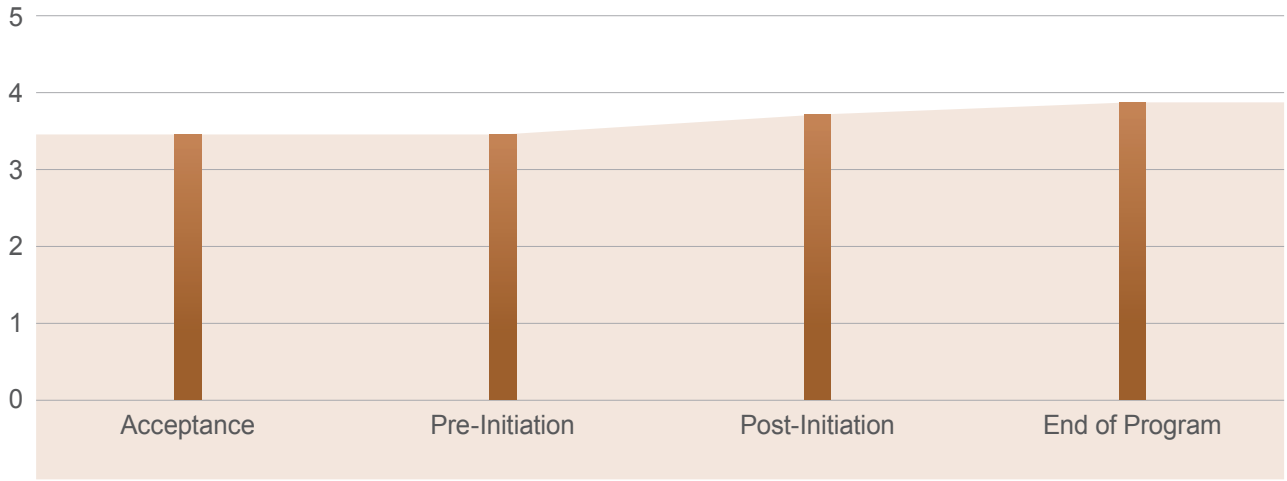
Explanation of Instrument
Developed by Dr. Tedeschi and Dr. Moore for the Program Evaluation.

Rationale for Usage
Attention to healthy eating at Warrior PATHH may affect the choices participants make and the eating habits they develop after returning home. Good nutrition can affect emotional as well as physical health.

QUALITY OF LIFE IMPROVEMENT: FINANCIAL WELLNESS

Financial Wellness

Warrior PATHH students experienced a 12% improvement in financial wellness.



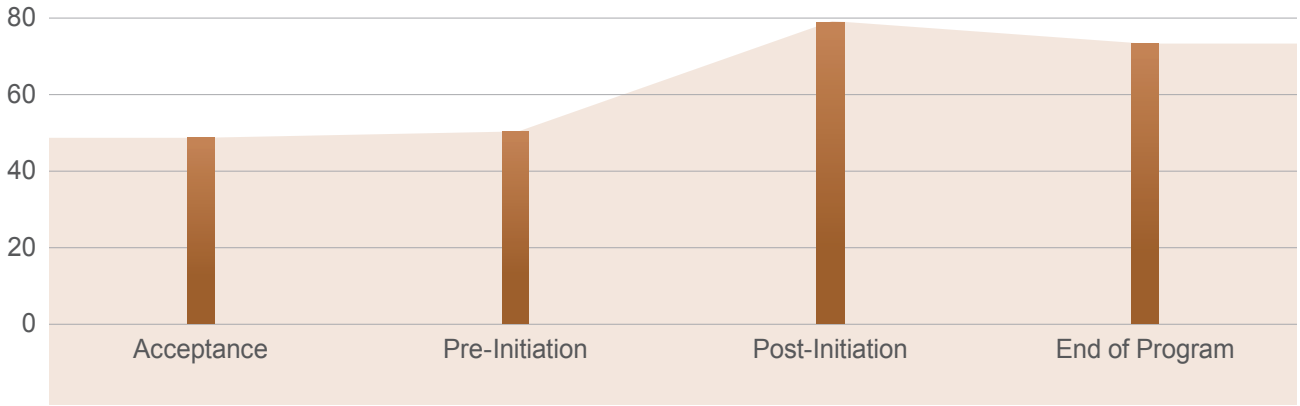
Explanation of Instrument
Developed by Dr. Tedeschi and Dr. Moore for the Program Evaluation.

Rationale for Usage
Good financial decisions are a goal of the Warrior PATHH program, and can reduce stress over time.

POSTTRAUMATIC GROWTH: PTGI-X

Posttraumatic Growth Inventory

Warrior PATHH students experienced a 65% improvement in PTGI scores.



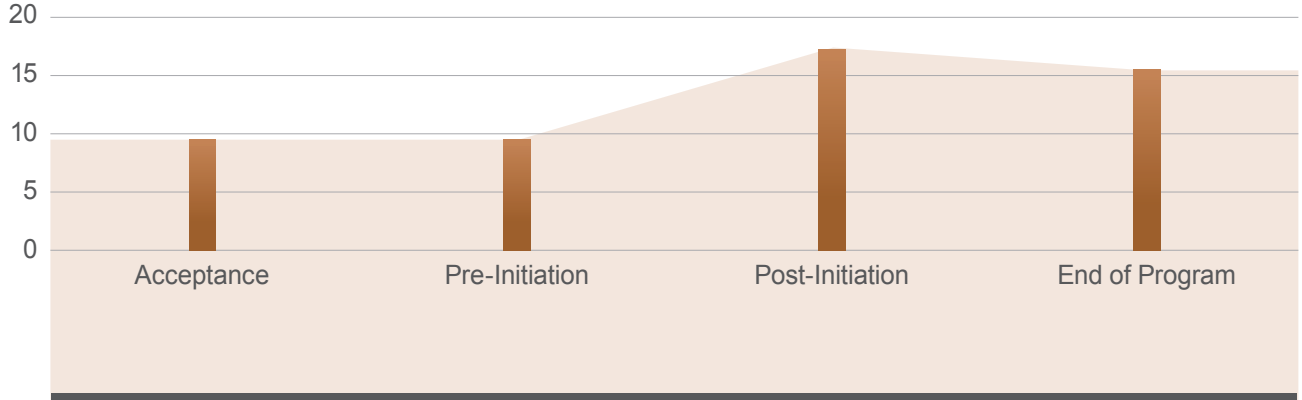
Explanation of Instrument
The Posttraumatic Growth Inventory-Expanded (PTGI-X) (Tedeschi, Cann, Taku, Senol-Durak, & Calhoun, 2017). The PTGI-X is a 25-item scale that measures the extent to which individuals report positive psychological change as a result of experiencing a traumatic event, and is based on the original measure (Tedeschi & Calhoun, 1996). The degree to which individuals experience change is assessed in five domains, which include: New Possibilities ("I established a new path for my life"), Personal Strength ("I discovered that I'm stronger than I thought I was"), Deeper Relationships ("A sense of closeness with others"), Spiritual-Existential Change ("A better understanding of spiritual matters"), and Appreciation of Life ("I have a greater appreciation for the value of my own life"). The PTGI-X is based on the original 21-item PTGI except that it adds items representing existential change. It utilizes a 6-point Likert response format, with item scorings ranging from 0 ("I did not experience this change as a result of the event") to 5 ("I experienced this change to a very great degree as a result of the event").

Rationale for Usage
As a core basis of the Boulder Crest philosophy and program content, PTG must be assessed.

POSTTRAUMATIC GROWTH: PTGI-X

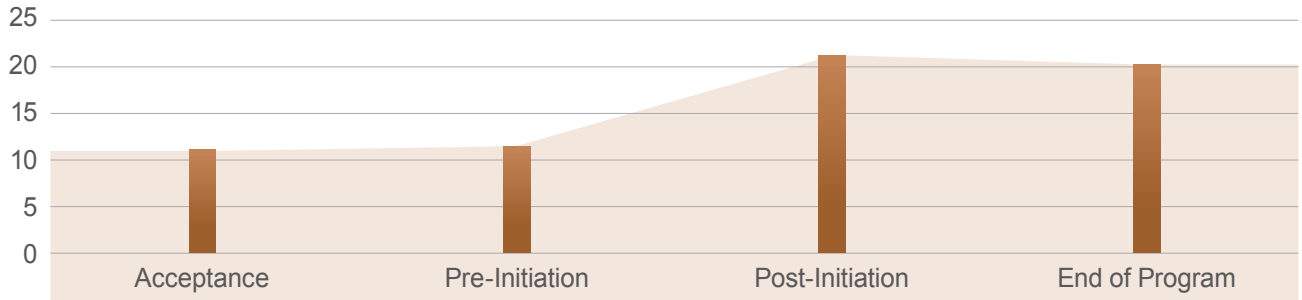
Spiritual and Existential Change

Warrior PATHH students experienced a 80% growth in this domain of PTG.



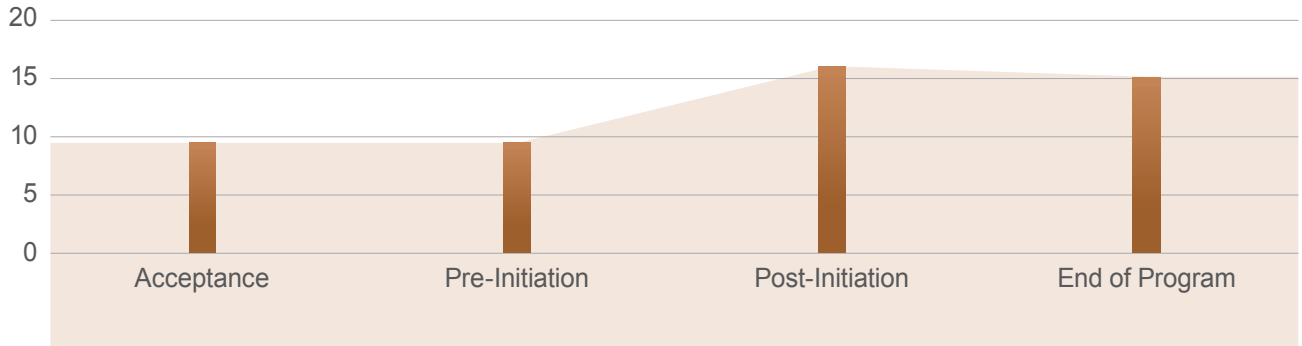
Deeper Relationships

Warrior PATHH students experienced a 79% growth in this domain of PTG.



New Possibilities

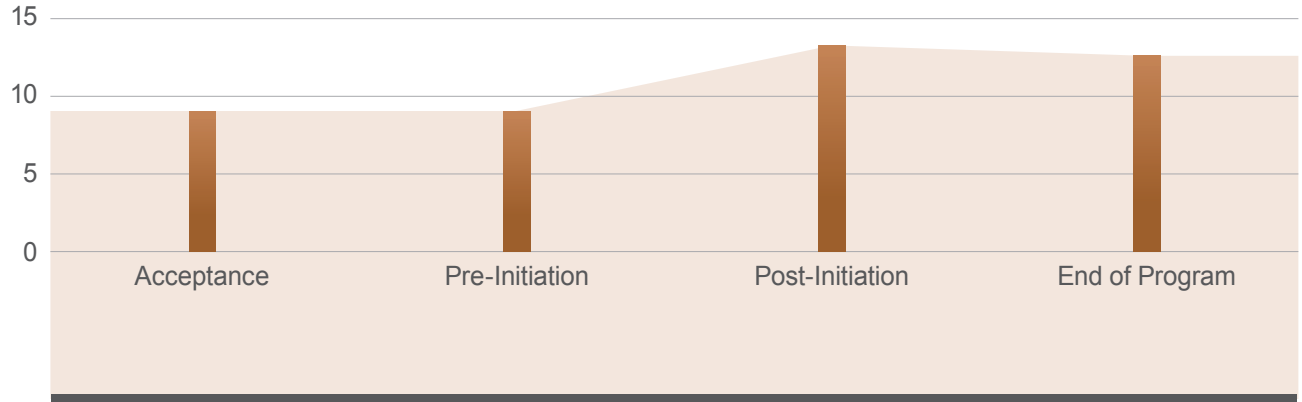
Warrior PATHH students experienced a 64% growth in this domain of PTG.



POSTTRAUMATIC GROWTH: PTGI-X

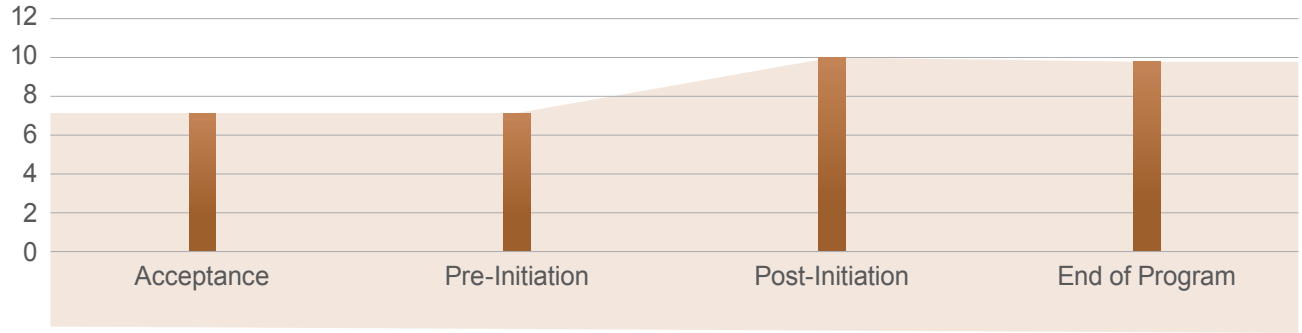
Personal Strength

Warrior PATHH students experienced a 61% growth in this domain of PTG.



Appreciation for Life

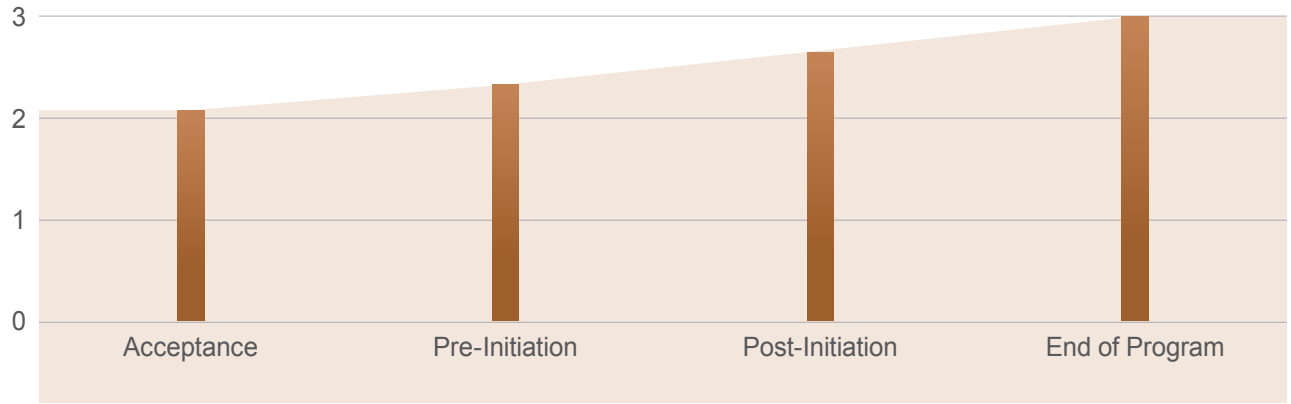
Warrior PATHH students experienced a 32% growth in this domain of PTG.



POSTTRAUMATIC GROWTH: ACTIVE READING

Active Reading

Warrior PATHH students experienced a 43% improvement in reading.



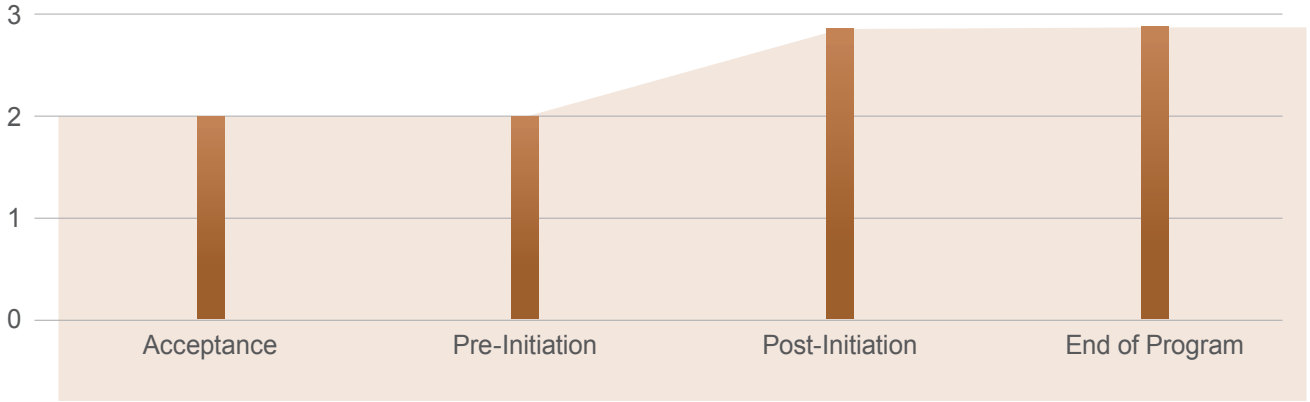
Explanation of Instrument
Developed by Dr. Tedeschi and Dr. Moore for the Program Evaluation.

Rationale for Usage
Recent research (Tsai, El-Gabalawy, Sledge, W., Southwick, & Pietrzak, 2015) has shown that those who have experienced combat who actively engage in reading have better outcomes and this has been associated with growth after trauma. The Warrior PATHH experience may produce more openness and interest in learning and knowing.

POSTTRAUMATIC GROWTH: TRAUMA RESOLUTION

Trauma Resolution

Warrior PATHH students experienced a 41% improvement in trauma resolution.

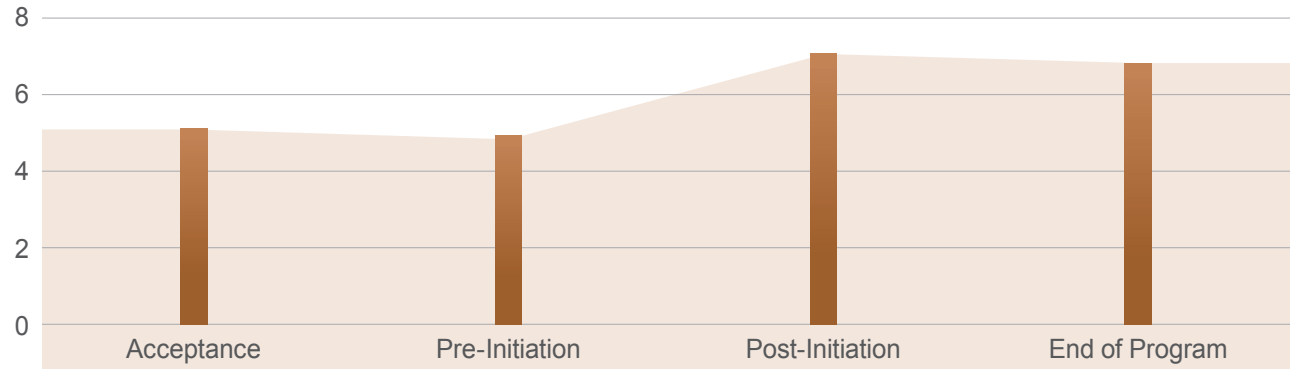


Explanation of Instrument & Rational for Usage
The Trauma Resolution Item is an attempt to discern the degree to which core beliefs are being reconstructed, since PTG is based to a large extent on the challenge to core beliefs. (Triplett, K. N., Tedeschi, R. G., Cann, A., Calhoun, L. G., & Reeve, C. L. (2012). Posttraumatic Growth, meaning in life, and life satisfaction in response to trauma.

POSTTRAUMATIC GROWTH: CANTRIL SELF-ANCHORING STRIVING SCALE

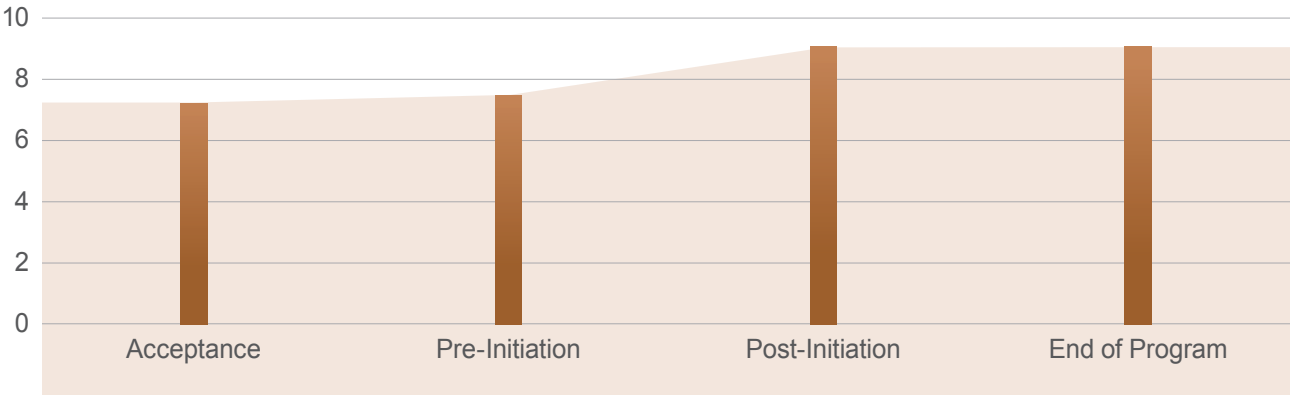
Cantril Self-Anchoring Striving Scale: Today

Warrior PATHH students experienced a 49% improvement.



Cantril Self-Anchoring Striving Scale: 5 Years

Warrior PATHH students experienced a 20% improvement.



Explanation of Instrument
The Cantril Self-Anchoring Striving Scale, known as the "Cantril Ladder," asks respondents to think of a ladder, with the best possible life for them being a 10 and the worst possible life being a 0. They are asked to rate their own current lives on that 0 to 10 scale. (Cantril, H., 1965)

Rationale for Usage
The "Cantril Ladder" is a brief, visual tool for measuring general well-being, mental health, and happiness. Specifically, it asks the respondent to reflect on where things stand for them in their present life versus how they see themselves in the future.

TRANSFORMING LIVES:
THE IMPACT OF WARRIOR PATHH IN 2023

QUALITATIVE DATA

In addition to the quantitative measures noted above, Warrior PATHH utilizes qualitative questions that enable students to share how the program impacted them. This occurs at the end of the 7-day Initiation and at the conclusion of Warrior PATHH (90 days).

Think about how this week has impacted you. Describe the ways in which you have changed and grown over the last seven days?

I had no hope. I was lost, broken and didn't want to live anymore. I wasn't living anymore. I see now that I have purpose, I learned why, I learned ways to help me through the tough times and I found my strength again.

I am transformed. I am hopeful again. I have strength. I have focus. I have purpose again.

I want to live. I have hope. I FEEL lighter, calmer, seen, heard & valued!!!!! I can think because my mind is clearer. I can smile & laugh & mean it not fake it!

I have a newfound focus on positive growth, a strong desire to succeed for my family, and a sense of purpose for serving my community.

First and foremost, I am calm. My entire mind, body, and soul feel rejuvenated and recharged. On top of that, I have a newfound optimism for what lies ahead. Instead of dreading each and every day, I am thankful for the opportunity to grow, learn, love.

I have been able to lay down my past. I didn't realize the effect it had on me. How much holding onto it was sticking with me. How much all my experiences through life really made me who I had become. I have made connections. It was easy to isolate and I felt like I was doing it to protect myself but I have now seen what connections do for us. For our soul, for accountability, and I need that in my life. I have learned to love myself again. I didn't think that would be part of this process. I can give that love forward now.

How has participation in the Warrior PATHH program caused you to reconsider how you view your past experiences as well as how you now view your life going forward?

It's no longer just bad things that happened to me. It's my story that I can use to help others who have experienced trauma.

It has given me a space to unpack and offload my guilt and shame, and reconnect with others wherein I no longer feel useless and void of care.

A new perspective on my history has probably saved my life.

It's taught me to let it go and be in the present. My future will be lived the same way. I'm very excited to teach others and to continue to change myself.

Changing the lens with it happened to me and for me has changed everything. Knowing that because of those experiences I am the man I am today and am stronger because of it.

I no longer view trauma as a weight or a scar, but as a messenger.

There are two sides to every story and every story can take a different path. It's my choice where the next chapter goes.

I view my past experiences as a part of me. They are not who I am but what happened. Going forward I am better equipped to continue the path to PTG and I'm in a great place to begin writing my new story.

My past happened, and I have processed it. I now have awareness and resources to deal with any situation that may arise from my trauma.

What do you think your future would look like if you never attended Warrior PATHH?

Grim and grave.

Increased depression and anxiety, spiraling into a greater abyss. Another failed relationship.

Anger, divorce, and likely more of the same bad habits and traumas passed down to my son.

I will still be at home drowning in my own sorrow not knowing which way to go from day to day.

I would be dead. Six months max. Y'all saved me.

Broken inside and distant from my loved ones. I would be present but not participating.

What do you believe will be your most significant challenge going forward after you leave today?

Changing my bad habits and restoring my marriage.

Not backsliding or getting overwhelmed with life. Remembering to put the time in for myself.

Going back to work, seeing the individuals that have caused stress, dealing with situations at work.

Fixing broken family relationships.

Patience. I feel ready to explode out of the gate but I need to remind myself for me and my family that life is won with the slow, deliberate, thoughtful grind.

Cutting ties with people that no longer serve a positive purpose in my life. Their reactions will not be easy to handle. However, they're necessary.

Responding properly and not reacting to my children or problems that might arise that I cannot control.

What support and resources do you believe would help you overcome these challenges?

My team holding me accountable.

Accountability, scheduling, and sticking to it! Putting me 1st!

I think the app will be awesome to work through as well as all of the other resources we were given. I look forward to getting home and ordering a number of books I heard about like *Struggle Well.*

My practices and a group to lean on.

I know I can lean on my Warrior brothers for support and now past alumni through the app.

I believe the check-in system Warrior PATHH has set up will be very effective in aiding me in maintaining and strengthening these bonds.

If you were asked by a friend, family member, or co-worker to describe your experiences during Warrior PATHH, what would you say?

The experience is deeply personal and unique. My experience will be different than yours, thus read the website and if something strikes a chord in you, hit submit.

I would simply say that Warrior PATHH without a doubt saved my life.

It's a life changing course that you get as much out of it as you put into it and the instructors are there to help you realize your potential.

This program is life-changing. It's difficult but nothing good ever comes easy. You will forge relationships more valuable than you could ever imagine just by being yourself.

My experiences in the Warrior PATHH program have led me to a 100% belief that this has been the most beneficial thing that I have ever done for my emotional and physical well being. I walked in a broken man and am leaving here whole. I am more confident and excited for my future me than I ever was!

In what ways do you believe you will make the biggest positive impact on your family, community, and country going forward? In other words, how will you make the world a better place?

By being my authentic self. Using my story and my gifts to help others feel seen, heard, and valued.

Applying the wellness practices to my daily life and using the ripple effect to shift perspectives. Volunteering, reaching out, level 2 listening, being patient and kind. Speak it into existence.

I will not deny the leader I am. I will answer the call in the best way I can that is in line with the goals for my future family. I will seek out and accept future positions where I can serve.

I will teach others my experiences and show them possible ways to improve their own lives.

I am going to focus more on me. I have never taken care of myself. I am so focused on the externals that I had forgotten about the person in the mirror. I know that if I focus more of my energy on myself it will ripple positive effects to my family and friends, community and further. Butterfly effect.

I will maintain a positive attitude, remembering everybody is going through struggles and using the knowledge I've learned to positively influence anybody I can that can benefit from what I've learned.

By starting to live life again and not being a burden to the VA anymore. I believe I can help others to become better versions of themselves and to escape the chains of addiction. I plan to volunteer and give back to the community and others.

TESTIMONIALS

ALI'S STORY

Being a cop was my calling; it was exactly where I belonged. After too many close calls, a decade of shift work, and the emotional trauma of the job, I took time off to be a mom and military spouse; my husband was in the special forces group and figured I would return to the police force within a year. When our daughter was six months old, she suffered a severe nontraumatic spinal cord injury due to a rare illness. That ended my career, and I became a full-time caregiver. I was angry about not having control over losing my career and identity. I took it out on my family. I felt lost without the one place I belonged: law enforcement. I didn't realize that I was hiding behind other people's trauma and living in a state of hyper-vigilance, on the edge of exploding. Now, I felt like I had nothing. I envisioned how much better my family would be if I were killed alone in one of those tragic car accidents I had seen so many times.

Then my husband Cody went to Warrior PATHH and started healing. He returned from the program as a different person, meditating daily, and engaging in the practices he was taught. Now, my trauma was front and center. Rather than embrace what worked for him, I fought back and was angry and combative with everyone around me. One night, I lost it. For the first time, I exploded and physically tried to hurt him, the one person who loved and supported me through it all. I hit rock bottom, and my teenage son was there to see it all. It was time to get help. Warrior PATHH was truly my last hope. My husband asked me to promise to give it everything I had. I took a deep breath, walked into Warrior PATHH, and committed to trusting the process and being honest. I pulled out skeletons and trauma from that damn closet that had dust from as long as 32 years ago. Having my trauma all out there, while terrifying, was a huge weight lifted off my shoulders. I wasn't judged, I wasn't pitied, I was simply loved and supported. I live life now confident that I can only control myself and my responses. I respond and rarely react, and that's been a huge game-changer.

Warrior PATHH worked for me because I gave it everything I had, and the people in the program made a huge difference. I'll be honest: if my husband hadn't gone through before me, I might have held back and probably would have never gone. But because of him, I trusted the people and the process. Because I saw it save him… and then it saved me, too. I don't say this lightly; this saved me and my spouse. It saved my family.

COREY'S STORY

After many years of battling mental health issues, including depression and anxiety, Corey was diagnosed in 2020 with chronic PTSD. After 27 years of military service commanding at the battalion and brigade level, Corey's post-military transition was mired with a loss of purpose, leading to isolation from his family and friends. Struggling to connect and perform essential executive functions, he contacted a local VA veteran center for help. For the first time in his life, he talked about the verbal and physical abuse experienced as an adolescent. He opened up about his diagnosis of testicular cancer in 1993, which left mental and physical scars that were never talked about or understood. Soon after surviving cancer, his marriage ended in a divorce, leaving him alone and wondering if a cancer survivor divorcee would remarry. As a Battalion S3 with the 10th Mountain Division preparing for deployment to Afghanistan, Corey received a call early on a Saturday morning that his Battalion NBC NCO had committed suicide. The overwhelming feeling of guilt was challenging to process as he felt responsible for not doing more to prevent this from happening. Repeated humanitarian assistance and combat deployments to Haiti, Bosnia, Afghanistan, and Iraq exacerbated his depression and anxiety as he witnessed and experienced the same traumatic events as many others who served over multiple combat tours.

Corey had exhausted medications and various therapies while on active duty and through the VA. "Nothing seemed to work," he said. "I felt numb to the pain and was tired of feeling the anger, rage, and guilt. I needed to do something to be a better husband and father." Moving back to his home state of Maine, Corey landed at the Sanford Veterans Center, where after a few months of therapy, his social worker introduced him to the concept of PTG and the book, Struggle Well.

"I read the book in three days and immediately filled out the Warrior PATHH application," he said. "Something told me this was the next step I needed to get better." Corey arrived with anxiety, trepidation, and loneliness, and he departed seven days later with increased confidence, renewed purpose, and feeling connected. For so many years, he served others, and now *Warrior PATHH* has given him the leadership training to focus on himself. "That day in the horse barn where I shared my three guiding principles – purpose, balance, and connection, was a pivotal transition point in my life, refocusing me on what I lost when I left the military." Corey is now volunteering for the Travis Mills Foundation during Warrior PATHH week and wants to continue serving others struggling as a PATHH guide. "Serving others is my purpose," he said, "but I must first focus on 'struggling well' and serving myself by focusing on my family, my character, and my beliefs."

PHIL'S STORY

Phil was born at the Vietnamese Refugee Relocation Center at Fort Chaffee, Arkansas. He is the second of three sons born to South Vietnamese military officers who were forced to flee to the United States as refugees after the fall of Saigon in 1975. After being commissioned as an armored cavalry officer, Phil was deployed to Operation Desert Spring in 2002, took part in the invasion of Iraq in 2003, and completed several subsequent deployments to Iraq from 2005 through 2009. In 2010, Phil began serving as a US Army foreign area officer specializing in China and the Asia-Pacific and has been posted to China and Mongolia.

After having sought help for mental health from the military for over 20 years, Phil completed Warrior PATHH in April 2023. The hardest part about all of this was that he thought his situation was unique…that he was going through the darkness alone and that a happy life was ultimately hopeless. This changed when he went through PATHH. Through PATHH, he realized that tragedy, trauma, and suffering are not unique to him and that we all have our struggles. He learned that no matter the situation, he can always find something to be grateful for. Most of all, PATHH trained him always to control certain aspects of his life — attitude and effort —and to use his hardships and trials to get stronger and help others. PATHH reminded him that as a leader, he must take care of himself, set an example for others to follow, share his story, and find ways to find and help others.

“I had a rough childhood and an even rougher career in the wartime military. I learned long ago to survive by turning fear and sadness into anger and hatred. Using these as fuel and motivation, I bounced from trauma to trauma, boxing up my feelings and keeping myself busy accomplishing “great things,” …all while damaging my marriage, terrifying my innocent daughters, isolating my friends, and making mistake after mistake. I was slowly destroying myself and those around me in an endless loop of mistakes, regret, sadness, and anger. I would lose hope for myself each time I went through a destructive loop. Life kept getting darker for me, but the only thing I could do was run away faster or double my efforts to cover up or ignore the darkness. I believe that Warriors today are ending their lives because, much like I was, they are also stuck in their spirals of mistakes, regret, sadness, anger, and despair. The most gut-wrenching aspect of their suffering is that they mistakenly think that they are unique in their struggles and that they are navigating their darkness alone. They lose hope. I believe that Warrior PATHH can train them to control—and even break—that negative spiral, find others in the darkness, and start working their way back towards hope.”

“Warrior PATHH worked for me because I gave it everything I had, and the people in the program made a huge difference. I’ll be honest: if my husband hadn’t gone through before me, I might have held back and probably would have never gone. But because of him, I trusted the people and the process. Because I saw it save him… and then it saved me, too. I don’t say this lightly; this saved me and my spouse. It saved my family.”

– Ali

JOURNAL ARTICLE ON WARRIOR PATHH: FRONTIERS IN PSYCHOLOGY

POSTTRAUMATIC GROWTH-ORIENTED PEER-BASED TRAINING AMONG U.S. VETERANS: EVALUATION OF POST-INTERVENTION AND LONG-TERM FOLLOW-UP OUTCOMES

(Joshua R. Rhodes, Richard G. Tedeschi, Bret A. Moore, Cameron T. Alldredge, and Gary R. Elkins)

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Posttraumatic growth-oriented peer-based training among U.S. veterans: evaluation of post-intervention and long-term follow-up outcomes

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Introduction: Exposure to trauma among U.S. military veterans occurs at a high rate, often resulting in continued difficulty with emotional adjustment and a diagnosis of posttraumatic stress disorder (PTSD). The present study provides data from 184 U.S. military veterans who completed a manualized posttraumatic-growth oriented training program during an integrative seven-day retreat.

Methods: Data was collected at baseline, after program completion, and at 18-month follow-up.

Results: Results on primary outcomes indicated significant increases, with medium to large effect sizes, in growth related outcomes. Specifically, there was a significant increase in scores by 54% on the posttraumatic growth outcome measure (PTGI-X) from baseline (M = 50.2, SD = 31.1) to endpoint (M = 77.4, SD = 29.6), $t(183) = -8.78$, $p < 0.001$. Also, results indicate that immediately following training (Day 7), participants reported a significant decrease of 49% on the PCL-5 from baseline (M = 39.7, SD = 17.6) to endpoint (M = 20.1, SD = 13.2), $t(183) = 11.75$, $p < 0.001$. Depression subscale scores decreased by 60% from baseline (M = 8.0, SD = 5.2) to endpoint (M = 3.2, SD = 3.0), $t(183) = 10.68$, $p < 0.001$; Anxiety scores decreased by 28% from baseline (M = 5.8, SD = 4.3) to endpoint (M = 4.2, SD = 3.5), $t(183) = 4.08$, $p < 0.001$; and Stress scores decreased by 50% from baseline (M = 10.0, SD = 4.4) to endpoint (M = 5.0, SD = 3.3), $t(183) = 12.21$, $p < 0.001$. Eighteen-month follow-up data was available for 74 participants and indicated that all significant changes in growth-related outcomes were maintained. Further, all significant changes in symptomatology-related outcomes were also maintained at follow-up.

Discussion: These findings demonstrate both the immediate and the long-lasting impact of an integrative posttraumatic growth-oriented training program on psychological growth and PTSD symptom reduction among U.S. military veterans.

KEYWORDS

veterans, posttraumatic growth, trauma, posttraumatic stress disorder, Boulder Crest Foundation

Introduction

Exposure to trauma among military veterans is very prevalent, with approximately 87% of U.S. veterans reporting exposure to at least one potentially traumatic event (Wisco et al., 2014). Whether or not these reported traumatic events are directly or indirectly related to one's military service, evidence shows the effects of trauma are causing veterans to experience serious difficulties with emotional adjustment (McKinney et al., 2017), resulting in 17.2 Veteran suicides per day in 2019, a number that has remained practically unchanged since 2001 (U.S. Department of Veterans Affairs, 2021). Of this population, individuals ages 55–74 were at the highest risk, accounting for approximately 39% of veteran deaths by suicide in 2019. A notable diagnosis aiming to capture much of this struggle with emotional adjustment following trauma is posttraumatic stress disorder (PTSD).

Presentation of PTSD related symptoms may vary across individuals from distinct wars, cultures, and genders as they have been exposed to varying specific traumas (Dutra et al., 2019). Exposure to specific traumas results in differing duration of symptoms, perception of treatment, and treatment response. For example, Chard et al. (2010) found that veterans from the Vietnam war exhibited significantly less symptom reduction following cognitive processing therapy (CPT) when compared to veterans from Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). The experience of trauma related symptoms is also moderated by gender as men are more likely to report trauma resulting from exposure to combat when compared to women (Macera et al., 2014; Polusny et al., 2014) and women are more likely to experience military sexual trauma (Haskell et al., 2010; Kimerling et al., 2010). The high rate of comorbidity between PTSD and other psychiatric disorders can lead to difficulty in both its diagnoses and the identification of an optimal treatment plan. For example, while much of the current research focuses on PTSD diagnoses, many veterans also struggle with depression and anxiety. Studies estimate that 9.6% of veterans struggle with and receive a diagnosis of depression (Liu et al., 2019) and the prevalence of diagnosed anxiety disorder incidence rates varies widely from 0.01 to 23.7 per 1,000 service members (Russell et al., 2022). Differential diagnoses will highlight different aspects of PTSD symptom presentation and require different treatment modalities to avoid being ineffective or exacerbating the comorbid symptoms.

The U.S. Veterans Affairs/Department of Defense (2017) clinical practice guidelines recommend a tiered approach to PTSD treatment. The first recommendation cited to have the strongest evidence is individual, manualized, trauma-focused psychotherapy. These first-line therapies include Prolonged Exposure therapy (PE; Foa et al., 2005, 2018), Cognitive Processing Therapy (CPT; Resick et al., 2002), and Eye Movement Desensitization and Reprocessing therapy (EMDR; Shapiro, 1989; Rothbaum et al., 2005; Valiente-Gómez et al., 2017). Second tier treatment, per the VA/DOD guidelines (2017) are non-trauma, manualized therapies or pharmacotherapy. Non-trauma focused, manualized therapies include stress inoculation training and present-centered therapy. The recommended pharmacotherapies include three selective serotonin reuptake inhibitors (SSRIs; paroxetine, sertraline, and fluoxetine) and one selective norepinephrine reuptake inhibitor (SNRI; venlafaxine).

The current psychotherapeutic treatment modalities have seemed to exhibit particularly high efficacy in their reduction of PTSD symptomatology specifically. Prolonged Exposure therapy has been shown to reduce PTSD symptomatology with a pre-post effect size of $d = 0.87$ (Eftekhari et al., 2013). A meta-analysis of Cognitive Processing therapy for PTSD symptom reduction found an effect size of $g = 1.24$ when compared to control conditions (Asmundson et al., 2019). Further evidence with a more broad view is found in a meta-analysis of exposure therapies (not treatment specific), reporting a significant reduction in PTSD symptoms when compared to control conditions with an effect size of $g = 0.86$ (McLean et al., 2022). A meta-analysis examining the use of EMDR for PTSD symptom reduction found an overall effect size of $g = -0.64$ (Chen et al., 2014). The effect sizes found for the reduction of PTSD symptoms through pharmacotherapy are generally much lower, with a meta-analysis finding SSRIs to be statistically superior to placebo administration but with a small effect size ($d = 0.23$; Hoskins et al., 2015). While the evidence indicates that individuals can benefit from trauma-focused, manualized therapies, the consensus on whether they significantly outperform non-trauma-focused therapies has been called into question. Recent studies have exhibited mixed-results as to whether patients are receiving clinically meaningful benefit from first-line therapies such as PE and CPT (Steenkamp et al., 2020). Furthermore, these first-line therapies have been found to be only marginally superior to non-trauma focused therapies and active control groups (Steenkamp et al., 2015). While these first-line therapies provide great benefit for some, they are not without their limitations, namely high nonresponse, underresponse, and dropout rates among participants (Steenkamp et al., 2020). Together these findings indicate that the highly complex nature of PTSD and the management of these symptoms within a military population may not be a good match for a one-size-fits-all treatment approach (Steenkamp et al., 2020).

The framework of clinical work with military veterans has largely been focused on the identification of PTSD symptoms and symptom reduction following trauma exposure. The identification of the individual's struggle and the goal of reducing their suffering are not only admirable, but are essential for providing help to countless veterans. The current model of PTSD and its treatment has proven to be efficacious in the reduction of PTSD specific symptoms but seems to fall short in addressing the existential needs and issues veterans face. The difficulty engaging veterans in long-term treatment across months has led to decreased satisfaction across treatment modalities, even though their completion seems to promise significant symptom reduction (Kehle-Forbes et al., 2016; Smith et al., 2019). Alternatively, intensive treatment programs (one or two weeks) have been examined as a potential way to improve on the high dropout rate and limited engagement among individuals (Hendriks et al., 2018; Watkins et al., 2018). While the evidence indicates that massed, trauma-focused therapies are beneficial (Hendriks et al., 2018), they do not directly address the potential for posttraumatic growth and there is limited research on intensive treatment programs influenced by posttraumatic growth theory.

Posttraumatic growth (PTG) is defined as positive psychological changes that can be experienced as a result of the struggle in the aftermath of traumatic or highly challenging circumstances (Tedeschi et al., 2018). Posttraumatic growth theory, largely influenced by Janoff-Bulman (1989), assumes that trauma involves emotional distress as a result of core beliefs being shattered following traumatic events. The disruption of the core belief system leads to struggle and the potential for transformative outcomes and growth. The concept of struggle refers to the difficulties encountered in the process of reconstructing

one's core beliefs. The struggle and distress can often prompt deliberative rumination within the individual. When paired with disclosure to a trusted individual, this deliberative rumination can aid in the process of reconceptualizing one's core belief system (Tedeschi and Moore, 2021).

Posttraumatic growth has been shown to exhibit itself in five domains across individuals (Tedeschi and Calhoun, 1996; Tedeschi et al., 2017). This five-factor model has been established through factor analysis of the posttraumatic growth inventory (PTGI; Tedeschi and Calhoun, 1996; Tedeschi et al., 2017) and several other studies (Linley et al., 2007; Taku et al., 2008; Brunet et al., 2010; Lee et al., 2010). The five domains identified in prior research include: Relating to Others, Personal Strength, Appreciation of Life, New Possibilities, and Spiritual-Existential Change.

The domain of Relating to Others in PTG reflects a deeper emotional quality to relationships, often paired with an increased sense of mutual respect, disclosure, openness, and compassion (Moore et al., 2021). As trauma survivors disclose their experiences, an empathic listener can be very important in the process (Tedeschi and Calhoun, 2006).

The domain of Personal Strength is often exhibited after the individual has simply managed to survive the trauma and its aftermath. Reflection on the experience can instill a greater sense of personal strength as they recognize the self-reliance and courage it took to reach where they are (Tedeschi and Calhoun, 1996; Moore et al., 2021).

Appreciation of Life includes a new perspective that allows the individual to experience a new sense of gratitude for things previously overlooked. This increased sense of appreciation is often the result of actual loss or having narrowly escaped the loss (Tedeschi and Calhoun, 1996; Moore et al., 2021).

Traumatic experiences involve loss of things such as capabilities, roles, relationships and alter an anticipated future. In the struggle to deal with such significant loss, it is possible that new ways to live are discovered. The recognition of new possibilities for a positive future may be essential to developing PTG (Roepke and Seligman, 2015). The search for fulfillment in areas previously unconsidered, is referred to as the domain of New Possibilities (Tedeschi and Calhoun, 1996; Moore et al., 2021).

The domain of Spiritual-Existential Change may occur when individuals reconsider existential issues and potentially reconfigure their beliefs and belief systems as a result of their experience with trauma (Tedeschi and Calhoun, 1996; Moore et al., 2021). The impact of traumatic events can cause survivors to consider existential questions such as life meaning and purpose (Tedeschi and Riffle, 2016). Also, for many survivors of trauma, considerations of forgiveness, spirituality, and religious beliefs may be an important component of PTG (Schultz et al., 2010).

Rather than being a new form of therapy, PTG-based intervention is an *integrative approach* that utilizes elements and research knowledge drawn from several existing approaches, specifically: cognitive-behavioral, narrative, existential, and interpersonal. PTG-based intervention acknowledges the evolving evidence base for trauma interventions within a philosophy that proposes that trauma survivors can both achieve symptom reduction and experience transformative posttraumatic growth (Tedeschi and Moore, 2021) in the five domains of PTG. It is not simply focused on symptom reduction (although PTG-based intervention may result in reduced trauma related symptoms), but promotes and emphasizes the importance of managing emotional distress and moving toward growth that would not have been likely if not for the struggle with the traumatic events. The PTG model of intervention is unique in the emphasis on PTG, but also integrates four primary elements of existing approaches listed below.

Cognitive-behavioral interventions identify change in core beliefs and cognitions as underlying mechanisms of change. Core beliefs may be formulated in early life and people often make assumptions about themselves and the world that may go unexamined until encountering trauma that disrupts one's "assumptive world" (Janoff-Bulman, 1989). Therefore, the PTG intervention model is directed toward schema change (Janoff-Bulman, 2006) using a variety of methods. The process of reconstructing one's core belief system is an evidence-based approach that is a foundation for cognitive processing therapy (Resick et al., 2008) as well as PTG-based intervention. Further, many trauma survivors must achieve a sufficient degree of emotional regulation before being able to tolerate the emotional stress associated with schema change. Therefore, psychoeducation about trauma reactions and teaching emotional regulation methods (i.e., relaxation, mindfulness, present-moment awareness, etc.) are an integral component of the PTG integrative intervention approach.

PTG-based intervention also integrates the concept of developing a new life narrative into it's approach. With the revision of core beliefs, trauma survivors are often tasked with making personal decisions about what kind of life they wish to have in the future and incorporating the past trauma into their personal narrative of their past, present, and future. Narrative therapies, such as those delivered through expressive writing and reflection have been shown to have positive effects on PTG (Hijazi et al., 2014). Interventions that integrate narrative development have been shown to be of benefit with a range of trauma survivors (Neimeyer, 2006; Smyth et al., 2008).

Along with core belief and narrative examination, the struggle with the aftermath of trauma often leads to an awareness of existential questions such as meaning and purpose of trauma and their lives. Survivors may struggle with questions about fairness, justice, and finding new meaning and purpose following significant loss (Frankl, 1962). The existential element is drawn from the concepts within logotherapy and existential therapy generally (Tedeschi and Riffle, 2016). Examination of existential issues is deliberately addressed within the PTG-based approach.

Interpersonal and "common factors" have been shown to be significant components of most psychotherapeutic interventions (Norcross and Wampold, 2011). In the PTG-based intervention, individuals called "expert guides" are individuals trained in providing a supportive environment, non-judgmental listening, unconditional positive regard, and activities toward promoting growth beyond symptom reduction (Calhoun and Tedeschi, 2013). This interpersonal element provides the foundation for trauma survivors to expand their support system, construct new core beliefs, and personal narrative that promotes posttraumatic growth.

PTG-based intervention is provided by individuals trained in providing "expert companionship" often referred to as "expert guides." PTG-based intervention is conceptualized as a training program that follows the natural process following the aftermath of trauma. The goals are not limited to symptom reduction, but include managing distress, and achieving growth in multiple domains. There are five

general components in the structure of PTG-based intervention (Calhoun and Tedeschi, 2013).

Psychoeducation is provided regarding how trauma symptoms develop (Barlow, 2014) and understanding distressing symptoms (Meichenbaum, 2012). Further, psychoeducation is provided regarding the potential of PTG, the domains of PTG, and sharing personal examples. This includes a discussion of how core beliefs have been disrupted and how a reconceptualization and development of new core beliefs can be transformative toward living well and thriving in the aftermath of trauma (Calhoun and Tedeschi, 2013; Tedeschi and Moore, 2021). In addition, assurance about facing and addressing existential questions is provided within a caring and non-judgmental interpersonal relationship.

Teaching and practicing methods of emotional regulation is integrated throughout the structure of PTG-based intervention. This includes relaxation, focus on breathing, grounding techniques, mindfulness exercises, meditation, relaxed music listening, and exercise. Experiential practice is demonstrated and emphasized over intellectual understanding of these emotional regulation techniques. It is beneficial to allow survivors to experience a variety of ways to regulate emotions and select personal preferences to apply to their own lives (Cooper et al., 2019).

Disclosure is essential within the PTG-based intervention structure. Disclosure is modeled by the "expert guides" and a safe and supportive environment is fostered. However, in contrast to exposure-based therapies (Peterson et al., 2019), the disclosure is not focused on the specifics of the traumatic events, but on the impact of these events on the individual's core belief system about self, others, the world, and the future (Williams et al., 2019). Disclosure about one's personal life story broadly defined is encouraged within a non-judgmental context. Openness to sharing key personal life events, influences, successes, perceived failures, and decreasing defensiveness are important aspects of self-reflection and a sense of being accepted.

Development of a personal "life story" brings together an understanding of key past experiences, perhaps extending into childhood. It is not simply disclosure about the traumatic event. Rather, the development of the survivor's personal story includes the trauma in the context of entire past and future. It includes looking forward and consideration of new possibilities for the future and new ways of understanding the past. The narrative may bring up past events, regrets, guilt, or unresolved anger. Some aspects may require acceptance and other change in moving toward the future with growth. Development of a new "life story" narrative is achieved with the support of the "expert guide" and in the process of disclosure.

As posttraumatic growth occurs, survivors may have new insights, goals, sense of meaning and purpose. An awareness of ways they can support the growth of others who may have experienced their own traumas, leads to a stronger connection with family and community. This can be manifested in new goals in life and awareness of service to help others and sharing their experience of PTG.

The Warrior PATHH (Progressive and Alternative Training for Helping Heroes) program is the flagship program of the Boulder Crest Foundation (BCF), a non-profit organization focused on the psychological health of U.S. veterans. The Warrior PATHH program is a 7 days intensive residency program developed to provide PTG-based training and experiences to veterans. The program consists of 48 psychoeducational modules, which are described in a 200-page guide developed for program instructors. Although the program does not offer traditional, evidenced-based psychotherapies, the program does utilize a variety of complementary and alternative interventions (e.g., mindfulness/meditation, yoga, equine therapy) and traditional psychotherapeutic techniques (e.g., psychoeducation, distress management, relationship building, narrative development, goal setting). A unique aspect of Warrior PATHH is that it is peer-delivered and is not run or managed by mental health professionals. This is an important component of the program as those working within Warrior PATHH are veterans who understand the unique needs and professional culture of those who attend the program. The peers who deliver the bulk of the program are combat veterans who have undergone several months of training from peer leaders with years of experience delivering the program as well as licensed mental health professionals. Peers delivering the program receive ongoing training and consultation from these same peer leaders and professionals. Consequently, Warrior PATHH is considered a training program as opposed to a treatment program. Following the residential portion of the program, a structured 18 months of follow-up is offered through a web-based series of meetings and assignments. A more complete description of the Warrior PATHH program can be found in Moore et al. (2021).

While the PTG-based intervention approach of Warrior PATHH has been well developed and manualized, to date there has been limited outcome research. A small pilot study of the Warrior PATHH posttraumatic growth-based intervention program found significant, large reductions in symptomatology including PTSD, insomnia, and negative affect (Moore et al., 2021). Additionally, results indicated significant increases in areas of PTG and psychological flexibility. While these results are encouraging, they do not report immediate outcomes of study participants, resulting in the inability to gather a full picture of immediate and long-term effects. Without the report of immediate outcomes, one does not know about the trajectory of benefit to participants and cannot determine any lasting changes. The purpose of the present study was to address this gap in research by conducting a retrospective evaluation of a much larger sample of veterans with PTSD symptoms who completed the Warrior PATHH program. Outcome data were collected at baseline, after the 7 day program was completed, and at 18 months follow-up.

Method

Participants were United States combat Veterans completing the Warrior PATHH program. Participants were self-referred and most commonly learned about the program from other veterans and family members familiar with the training program. Participation in the training program was free of cost to all participants and they received no compensation for completing the training. Inclusion criteria for the Warrior PATHH program were individuals who were (1) U.S. military Veterans and (2) had a previous history of trauma. Individuals were excluded from participation if they (1) were diagnosed with any disorder that might require hospitalization, such as psychosis, substance abuse, or active suicidality.

Data collection for all participants occurred prior to the initiation of the program (Day 0), which will be referred to as *baseline*; at the end of the training (Day 7), which will be referred to as *endpoint*; and 18 months following the completion of training, which will be referred to as *follow-up*. The formal evaluation at baseline, endpoint, and follow-up was completed through the administration of an electronic questionnaire. A selection of measurements relating to growth and symptomatology

domains are reported in this manuscript. All measurement tools listed were collected at baseline, endpoint, and 18-month follow-up.

Measures

Posttraumatic Growth Inventory – Expanded (PTGI-X). The PTGI-X (Tedeschi et al., 2017) is a 25-item self-report measure used to assess the extent to which individuals report positive psychological change following the experience of a traumatic event. Five subscales of this measure assess changes in one's perception of new possibilities, relating to others, personal strength, appreciation of life, and spiritual-existential change. Individual items are on a 6-point Likert scale ranging from "I did not experience this change" to "I experienced this change to a very great degree." Good internal consistency ($\alpha = 0.90$; Tedeschi et al., 2017) and content validity has been shown in research (Shakespeare-Finch et al., 2013).

Positive and Negative Affect Schedule (PANAS). The PANAS (Watson et al., 1988) is a 20-item self-report measure for both positive and negative affect. Individual item responses are on a 5-point frequency scale ranging from "not at all" to "extremely." Strong reliability for both the positive ($\alpha = 0.89$) and negative subscale ($\alpha = 0.85$) and construct validity has been reported in addition to substantial available normative data (Crawford and Henry, 2004).

Integration of Stressful Life Experiences Scale (ISLES). The ISLES (Holland et al., 2010) is a 16-item self-report measure used to assess the extent of meaning made following a stressful life experience. Individual items are on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." The ISLES has exhibited strong internal consistency, strong convergent validity, and moderate test–retest reliability (Holland et al., 2010).

Posttraumatic Stress Disorder Checklist DSM 5 (PCL-5). The PCL-5 (Weathers et al., 2013) is a 20-item self-report measure assessing DSM-5 symptoms of PTSD. Individual item responses are on a 5-point frequency scale ranging from "not at all" to "extremely." Strong construct validity ($\alpha = 0.92$) and test–retest reliability ($r = 0.57$) has been found in veteran samples (Bovin et al., 2015; Dutra et al., 2019).

Depression, Anxiety, and Stress Scale (DASS). The DASS (Antony et al., 1998) is a 21-item self-report measures of the presence and degree of depression, anxiety, and stress-related symptoms. Individual item responses are on a 4-point frequency scale ranging from "never" to "almost always." Adequate test–retest reliability ($\alpha = 0.86$–0.90; Gloster et al., 2008) in addition to discriminate and convergent validity has been shown in clinical samples (Brown et al., 1997).

Insomnia Severity Index (ISI). The ISI (Bastien et al., 2001) is a 7-item self-report measure, based on DSM-IV and the International Classification of Sleep Disorders criteria, used to assess insomnia over the past 2 weeks. Individual items are assessed on a 5-point Likert scale ranging from "none" to "very severe." High reliability and validity have been shown for the ISI in both clinical ($\alpha = 0.91$) and community ($\alpha = 0.90$) samples (Morin et al., 2011).

Intervention

Framed as an intensive training program for veterans, the evaluated program is the Warrior PATHH (Progressive and Alternative Training for Helping Heroes). The manualized, 7 days training program is based on posttraumatic growth theory and its intervention model (Tedeschi and McNally, 2011; Calhoun and Tedeschi, 2013; Tedeschi and Moore, 2016, 2018). During this 7 days period, participants are immersed in an all-day intensive regimen combining education and experiential activities. Participants who attend the Warrior PATHH program experienced the following five elements in accordance with the PTG model: psychoeducation about physiological and psychological trauma response and psychological growth; emotion regulation training, including mindfulness and meditative techniques; constructive self-disclosure about trauma and its aftermath that occurs naturally through casual discourse; non-trauma focused narrative development integrating perspectives of past, present, and future; and service goals that are developed to carry out the lessons learned about the value of life, living courageously, and understanding those who have not had the same experiences (Moore et al., 2021). Representing a relational approach to the intervention called Expert Companionship, those providing the intervention are referred to as "expert guides." All expert guides that were responsible for delivering the intervention were U.S. combat veterans who underwent several months of training with established expert guides and mental health professionals trained in the PTG-based intervention. Delivered as a peer-to-peer training program, the Warrior PATHH program took place during a 7 days period at the BCF facility in Bluemont, Virgina, between February 2019 and December 2021.

Analyses

Descriptive statistics at baseline, endpoint, and follow-up were calculated for each of the outcome measures. To determine immediate post-intervention effects, paired samples *t*-tests were conducted for each outcome. Paired samples *t*-tests are used to determine the statistical significance of the difference in scores on outcome measures from baseline to endpoint. The independent variable in these analyses was study time point which had two levels, baseline (Day 1) and endpoint (Day 7). Dependent variables in these analyses were growth domains, including posttraumatic growth, positive affect, and integration of stressful life experiences; and symptomatology domains, including PTSD symptoms, depression, anxiety, stress, negative affect, and insomnia.

To determine the lasting effects of the Warrior PATHH program on growth and symptomatology domains a series of repeated measures analysis of variance (repeated measures ANOVA) were conducted, which are extensions of the paired-samples *t*-tests. The independent variable for these repeated measures ANOVAs was "time" (baseline, endpoint, and follow-up). The dependent variables for these repeated measures ANOVAs were the specific outcome measures. In the event of a significant main effect of time, pairwise comparisons using a Bonferroni correction were examined to determine differences between specific study time points.

To determine the moderating effect of gender on immediate and lasting post-intervention effects on growth and symptomatology domains, multiple analyses of covariance (ANCOVA) were conducted. The independent variable for these ANCOVAs examining immediate effects was "gender," the dependent variables were the scores on the specific outcome measures at endpoint, and the covariates were the baseline score of the specific outcome. The independent variable for the ANCOVAs examining lasting effects was "gender," the dependent variables were the scores of the specific outcome measure at follow-up, and the covariates were the endpoint score of the specific outcome.

Results

Participants were 184 United States combat veterans (male = 155, female = 29) who completed the Warrior PATHH training program between February 2019 and December 2021. The most common U.S. military branch of service represented was Army ($n = 110$), with the second most frequent being Marine Corps. ($n = 32$). Frequencies of all participant demographic variables can be found in Table 1.

All participants ($n = 184$) provided complete data at baseline and endpoint and were included in all analyses examining post-intervention changes. At the optional 18 months follow-up time point, 74 individuals completed outcome measures. Due to the nature of the statistical analyses examining long-term changes, only the 74 individuals who provided data at all three time points were included in the analyses of long-term changes at 18 months.

TABLE 1 Participant demographics.

Demographic variable	Frequency
Gender	
Male	155
Female	29
Age range	
23–27	3
28–32	15
33–37	46
38–42	43
43–47	24
48 or older	53
Branch of service	
Air Force	18
Army	110
First Responder	12
Marine Corps	32
Navy	12
Military Rank	
E1–E4	32
E5–E6	69
E7 or above	41
Officer/Warrant Officer	31
Not specified	11

Post-intervention changes in growth domains

A paired samples *t*-test was used to compare scores on each growth-related outcome variable between baseline and endpoint. Results indicate that immediately following training (Day 7), participants reported a significant increase in scores by 54% on the posttraumatic growth outcome measure (PTGI-X) from baseline ($M = 50.2$, $SD = 31.1$) to endpoint ($M = 77.4$, $SD = 29.6$), $t(183) = -8.78$, $p < 0.001$. Additionally, there was a significant increase in scores by 45% on the positive affect subscale of the PANAS from baseline ($M = 25.8$, $SD = 8.4$) to endpoint ($M = 37.5$, $SD = 6.9$), $t(183) = -14.84$, $p < 0.001$. Finally, there was a significant increase in scores by 29% on the ISLES from baseline ($M = 39.2$, $SD = 12.9$) to endpoint ($M = 50.4$, $SD = 10.9$), $t(183) = -9.13$, $p < 0.001$. Table 2 contains calculated effect sizes for each paired sample comparison.

Results from paired samples *t*-tests for scores on each subscale of the PTGI-X indicate a significant difference between baseline and endpoint for New Possibilities ($M = 10.6$, $SD = 7.3$, $M = 15.7$, $SD = 6.3$, respectively), $t(183) = -7.13$, $p < 0.001$; Personal Strength ($M = 8.9$, $SD = 5.9$, $M = 13.8$, $SD = 4.8$, respectively), $t(183) = -9.01$, $p < 0.001$; Appreciation of Life ($M = 8.22$, $SD = 4.2$, $M = 9.7$, $SD = 3.9$, respectively), $t(183) = -3.71$, $p < 0.001$; Relating to Others ($M = 12.6$, $SD = 9.6$, $M = 21.5$, $SD = 9.5$, respectively), $t(183) = -9.47$, $p < 0.001$; and Spiritual-Existential Change ($M = 10.0$, $SD = 8.4$, $M = 16.6$, $SD = 8.5$, respectively), $t(183) = -7.54$, $p < 0.001$. Medium effect sizes were found for scores on the subscales of Relating to Others (Cohen's $d = -0.70$), Personal Strength (Cohen's $d = -0.66$), Spiritual-Existential Change (Cohen's $d = -0.56$), and New Possibilities (Cohen's $d = -0.53$), and there was a small effect size for scores on Appreciation of Life subscale (Cohen's $d = -0.27$).

TABLE 2 Growth domains effect sizes.

Outcome	Effect Size (*d*)
PTG	−0.65
Positive affect	−1.09
ISLES	−0.67

Post-intervention changes in symptomatology domains

Next, a paired samples *t*-test was used to compare scores on each symptomatology-related outcome variable between baseline and endpoint. Results indicate that immediately following training (Day 7), participants reported a significant decrease in scores by 49% on the PCL-5 from baseline ($M = 39.7$, $SD = 17.6$) to endpoint ($M = 20.1$, $SD = 13.2$), $t(183) = 11.75$, $p < 0.001$. A significant decrease in scores was reported for all subscales of the DASS. Depression subscale scores decreased by 60% from baseline ($M = 8.0$, $SD = 5.2$) to endpoint ($M = 3.2$, $SD = 3.0$), $t(183) = 10.68$, $p < 0.001$; anxiety subscale scores decreased by 28% from baseline ($M = 5.8$, $SD = 4.3$) to endpoint ($M = 4.2$, $SD = 3.5$), $t(183) = 4.08$, $p < 0.001$; and stress subscale scores decreased by 50% from baseline ($M = 10.0$, $SD = 4.4$) to endpoint ($M = 5.0$, $SD = 3.3$), $t(183) = 12.21$, $p < 0.001$. Participant scores on the ISI significantly decreased by 36% from baseline ($M = 14.3$, $SD = 6.9$) to endpoint ($M = 9.1$, $SD = 5.3$), $t(183) = 8.03$, $p < 0.001$. Finally, scores on the negative affect subscale of the PANAS significantly decreased by 16% from baseline ($M = 25.4$, $SD = 8.2$) to endpoint ($M = 21.4$, $SD = 7.4$), $t(183) = 4.89$, $p < 0.001$. Table 3 contains calculated effect sizes for each paired sample comparison.

Long term changes in growth domains

A series of independent samples *t*-tests were first conducted to determine if the 74 participants who completed follow-up measures were representative of the entire sample. The test variable for each of these analyses was the baseline score of each outcome measure. The grouping variable used was (A = Participants who completed baseline and endpoint data; $n = 110$) and (B = participants who completed follow-up measures; $n = 74$). Results of these *t*-tests indicate that there were no significant differences between groups on any outcome measure at baseline, with the exception of baseline depression (Mean Difference = 1.59, $p = 0.041$) and baseline ISLES (Mean Difference = 4.32, $p = 0.023$) scores. Overall, these findings suggest a follow-up sample representative of the entire sample.

A series of repeated measures ANOVAs were then conducted to examine changes in growth-related outcome measures over three time points (baseline, endpoint, and follow-up). The analysis on PTGI-X scores revealed a significant main effect of time, $F(2,146) = 21.26$, $p < 0.001$. Pairwise comparisons indicate that PTGI-X scores significantly increased by 27.1 points (52%) from baseline to endpoint ($p < 0.001$) and remained stable until follow-up, exhibited by a further increase of 0.85 points ($p = 1.00$) and a total increase of 54% between baseline and follow-up. The analysis on positive affect subscale scores also revealed a significant main effect of time, $F(2,146) = 56.09$, $p = <0.001$. Pairwise comparisons indicate that scores on the positive affect subscale significantly increased by 11.1 points (41%) from baseline to endpoint ($p < 0.001$). Results indicate that between endpoint and follow-up, positive affect subscale scores significantly decreased by 8.2 points ($p < 0.001$); however, there remained a significant difference between baseline and follow-up scores ($p = 0.010$) exhibited by a total increase of 11% between baseline and follow-up. Regarding the analysis on ISLES scores, Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(2) = 6.70$, $p = 0.035$, therefore the degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\varepsilon = 0.918$). The results indicate a significant main effect of time, $F(1.84, 134.09) = 23.99$, $p < 0.001$. Pairwise comparisons indicate that ISLES scores significantly increased by 9.69 points (23%) from baseline to endpoint ($p < 0.001$) and remained stable until follow-up, exhibited by a non-significant increase of 1.42 points ($p = 1.00$) and a total increase of 27% from baseline to follow-up. Table 4 includes means and standard deviations for each growth-related outcome measure at each time point.

The analyses on PTGI-X subscale scores revealed a significant main effect of time for Appreciation of Life, $F(2,146) = 3.25$, $p = 0.041$; Personal Strength, $F(2,146) = 24.66$, $p < 0.001$; New Possibilities, $F(2,146) = 13.91$, $p < 0.001$; Relating to Others $F(1.81, 131.96) = 24.21$, $p < 0.001$; and Spiritual-Existential Change, $F(1.75, 127.84) = 17.96$, $p < 0.001$. Mauchly's test indicated that the assumption of sphericity had been violated for the scores on subscales Relating to Others, $\chi^2(2) = 8.10$, $p = 0.017$, and Spiritual-Existential Change, $\chi^2(2) = 11.03$, $p = 0.004$, therefore the degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\varepsilon = 0.904$, $\varepsilon = 0.876$; respectively). Pairwise comparisons indicate that all subscales with a significant main effect of time, with the exception of the Appreciation of Life subscale, exhibited a significant increase in scores from baseline to endpoint, followed by stability through follow-up. This stability through follow-up was exhibited by a non-significant decrease in scores for Personal Strength and New Possibilities subscales and by a non-significant increase in scores for the Relating to Others and Spiritual-Existential Change subscales. Table 5 includes

TABLE 3 Symptomatology domains effect sizes.

Outcome	Effect Size (*d*)
PTSD	0.87
Depression	0.79
Anxiety	0.30
Stress	0.90
Insomnia	0.59
Negative affect	0.36

TABLE 4 Long-term changes in growth domains.

Outcome	Baseline		Endpoint		Follow-up	
	Mean	SD	Mean	SD	Mean	SD
PTG	52.03	29.20	79.12	30.47	79.97	31.40
Positive Affect	27.20	7.94	38.26	5.74	30.09	7.98
ISLES	41.66	11.60	51.35	10.49	52.77	9.86

TABLE 5 Long-term changes in PTGI-X subscales.

Outcome	Baseline		Endpoint		Follow-up	
	Mean	SD	Mean	SD	Mean	SD
Appreciation of Life	8.35	4.20	9.89	3.87	9.69	4.04
Personal Strength	8.76	5.49	13.95	5.00	13.65	5.30
New Possibilities	10.73	7.60	16.00	6.46	15.93	6.87
Relating to Others	13.62	8.78	22.34	9.37	22.68	9.28
Spiritual-Existential Change	10.57	8.42	16.95	8.89	18.03	8.43

means and standard deviations for each PTGI-X subscale at each time point.

Long term changes in symptomatology domains

A series of repeated measures ANOVAs were conducted to examine changes in symptomatology-related outcome measures over three time points (baseline, endpoint, and follow-up). Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated for PCL-5 scores, χ^2 (2) = 15.82, $p < 0.001$, depression scores, χ^2 (2) = 23.17, $p < 0.001$, anxiety scores, χ^2 (2) = 12.80, $p = 0.002$, ISI scores, χ^2 (2) = 12.91, $p = 0.002$, and negative affect scores, χ^2 (2) = 11.52, $p = 0.003$, and therefore a Greenhouse-Geisser correction was used for each of these analyses. The analysis of PCL-5 scores revealed a significant main effect of time, $F(1.67, 146) = 33.87$, $p < 0.001$. Pairwise comparisons indicate that PCL-5 scores significantly decreased by 15.66 points (43%) from baseline to endpoint ($p < 0.001$) and remained stable until follow-up, exhibited by a further decrease of 2.43 points ($p = 1.00$) and a total decrease of 49% from baseline to follow-up. The analysis of depression subscale scores revealed a significant main effect of time, $F(1.57, 114.49) = 21.05$, $p < 0.001$. Pairwise comparisons indicate that depression subscale scores significantly decreased by 3.37 points (48%) from baseline to endpoint ($p < 0.001$) and remained stable until follow-up, exhibited by a further decrease of 0.31 points ($p = 1.00$) and a total decrease of 53% from baseline to follow-up. The analysis of anxiety subscale scores revealed a significant main effect of time, $F(1.72, 125.55) = 9.09$, $p < 0.001$. Pairwise comparisons indicate that anxiety subscale scores did not significantly decrease from baseline to endpoint ($p = 0.534$), but did significantly decrease by 1.55 points from endpoint to follow-up ($p = 0.029$) resulting in a total decrease of 45% from baseline to follow-up. The analysis of stress subscale scores revealed a significant main effect of time, $F(2, 146) = 29.30$, $p < 0.001$. Pairwise comparisons indicate that stress subscales scores significantly decreased by 4.22 points (44%) from baseline to endpoint ($p < 0.001$) and remained stable until follow-up exhibited by a non-significant further decrease in scores by 0.04 points ($p = 1.00$) and a total decrease of 44% from baseline to follow-up. The analysis of ISI scores revealed a significant main effect of time $F(1.72, 125.42) = 15.60$, $p < 0.001$. Pairwise comparisons indicate ISI scores significantly decreased by 4.38 points (32%) from baseline to endpoint ($p < 0.001$) and remained stable until follow-up, exhibited by a non-significant further decrease in scores by 0.32 points ($p = 1.00$) and a total decrease of 34% from baseline to follow-up. The analysis of negative affect subscale scores revealed a significant main effect of time $F(1.74, 127.19) = 20.33$, $p < 0.001$. Pairwise comparisons indicate that negative affect subscale scores did not significantly decrease from baseline to endpoint ($p = 0.674$), but did significantly decrease by 5.00 points from endpoint to follow-up ($p < 0.001$), resulting in a total decrease of 27% from baseline to follow-up. Table 6 includes means and standard deviations for each symptomatology measure at each time point.

Gender differences in post-intervention outcomes

Multiple one-way ANCOVAs were conducted to determine a statically significant difference between male and female participants on each growth and symptomatology-related outcome measure at endpoint, controlling for participant baseline scores. After adjustment for pre-intervention scores, there was only one outcome measure, DASS anxiety subscale scores, that resulted in a statistically significant difference in post-intervention scores between male and female participants, $F(1, 181) = 4.17$, $p = 0.043$, partial $\eta^2 = 0.023$. Analysis of covariance results, in addition to adjusted means and standard errors, for all outcome measures can be found in Table 7.

Gender differences in long-term outcomes

Finally, multiple one-way ANCOVAs were conducted to determine a statistically significant difference between male and female participants on each growth- and symptomatology-related outcome measure at follow-up, controlling for participant endpoint scores. After adjustment for endpoint scores, no outcome measure at follow-up indicated a statistically significant difference between male and female participants. Analysis of covariance results, in addition to adjusted means and standard errors, for all outcome measures at follow-up can be found in Table 8.

Discussion

The present study examined the impact of a manualized, posttraumatic growth-oriented training program on various growth and symptomatology-related outcome variables among U.S. military veterans. The utilized training program, the Warrior PATHH program,

TABLE 6 Long-term changes in symptomatology domains.

Outcome	Baseline		Endpoint		Follow-Up	
	Mean	SD	Mean	SD	Mean	SD
PTSD	36.80	18.20	21.14	13.05	18.70	14.20
Depression	6.99	5.27	3.62	3.25	3.31	3.74
Anxiety	5.55	4.47	4.62	3.89	3.07	3.35
Stress	9.68	4.59	5.46	3.33	5.42	4.09
Insomnia	13.77	7.29	9.39	5.51	9.07	5.74
Negative Affect	24.00	7.59	22.51	6.48	17.51	6.87

TABLE 7 Effect of gender on post-intervention outcomes.

Outcome	Male (n = 155)		Female (n = 29)		F	p	partial η^2
	Mean[a]	SE	Mean[a]	SE			
PTG	77.26	2.40	77.89	5.58	0.011	0.918	0.000
Positive Affect	37.47	0.56	37.51	1.29	0.001	0.976	0.000
ISLES	50.36	0.88	50.82	2.05	0.042	0.838	0.000
PTSD	20.58	1.06	17.41	2.47	1.38	0.242	0.008
Depression	3.34	0.24	2.39	0.56	2.38	0.125	0.013
Anxiety	4.45	0.28	3.00	0.65	4.17	0.043	0.023
Stress	5.19	0.26	4.00	0.61	3.22	0.074	0.017
Insomnia	9.21	0.43	8.17	1.00	0.923	0.338	0.005
Negative Affect	21.66	0.60	19.69	1.39	1.70	0.194	0.009

[a]Adjusted means after controlling for baseline scores are presented.

TABLE 8 Effect of gender on long-term outcomes.

Outcome	Male (n = 63)		Female (n = 11)		F	p	partial η^2
	Mean[a]	SE	Mean[a]	SE			
PTG	79.77	3.98	81.13	9.52	0.017	0.896	0.000
Positive Affect	29.93	1.02	31.01	2.44	0.167	0.684	0.002
ISLES	52.05	1.23	56.90	2.94	2.33	0.132	0.032
PTSD	19.56	1.79	13.80	4.28	1.54	0.219	0.021
Depression	3.51	0.47	2.17	1.14	1.19	0.279	0.017
Anxiety	3.28	0.42	1.83	1.02	1.71	0.196	0.023
Stress	5.73	0.51	3.66	1.22	2.44	0.123	0.033
Insomnia	9.21	0.73	8.23	1.75	0.267	0.607	0.004
Negative Affect	17.67	0.88	16.62	2.11	0.211	0.647	0.003

[a]Adjusted means after controlling for endpoint scores are presented.

is not conceptualized as a psychotherapeutic intervention. Rather, this manualized training program is peer based and developed to help veterans develop the tools necessary to increase their capacity to regulate thoughts, emotions, and actions in a civilian environment. The primary focus of the Warrior PATHH training is the facilitation of PTG and its five domains. However, the integrated nature of the training means that many elements of empirically based PTSD treatments have been incorporated into the design. The incorporation of these elements implies that completion of the training program should also have an impact on the presentation of PTSD related symptomatology.

Post-intervention outcomes

In accordance with our hypotheses regarding immediate post-intervention changes, findings revealed significant improvements on all growth-related outcome measures immediately following the training. Specifically, participants reported a 54% increase in scores on the posttraumatic growth inventory (PTGI-X) from baseline to endpoint, indicating that participants experienced a noteworthy enhancement in their perception of posttraumatic growth-related domains in the aftermath of the training. Further evidence of this growth is exhibited by significant improvements on all five subscales of the PTGI-X. Similarly, a significant increase in scores was observed for the positive affect subscale of the PANAS, exhibited by a 45% increase in scores from baseline to endpoint. This suggests that participants experienced notable improvement in their overall positive emotional states following the training. Finally, findings revealed a significant increase in scores on the ISLES from baseline to endpoint by 29%, indicating that participants are able to report an increased sense of meaning following their previous trauma exposure. The observed effect sizes for each paired sample comparison, as presented in Table 2, further support the robustness of this study's findings. The magnitude of change found in each growth-related outcome variable provides additional evidence for the meaningful impact of training program on participants self-reported experiences. Overall, the results provide strong empirical support for the effectiveness of the Warrior PATHH training program in promoting posttraumatic growth, positive affect, and the integration of stressful experiences immediately following training.

While the program was not focused on treatment, it is very noteworthy that participants reported significant reduction of PTSD symptomatology scores by 49% from baseline to endpoint. This suggests a notable alleviation of PTSD related symptoms among participants. Additional significant reductions were found for depression (60%), anxiety (28%), and stress (50%) scores from

baseline to endpoint. Finally, insomnia symptom scores decreased by 36% and negative affect by 16% from baseline to endpoint. The degree to which each of these domains changed from baseline to endpoint is demonstrated by paired sample comparisons in Table 3.

Long term 18 months follow-up outcomes

The observed increase in growth domains and decrease in symptomatology domains across participants immediately following the Warrior PATHH program sheds light on just how powerful an intensive training of this type can be. However, it is important to examine whether the improvements are maintained long-term after the individuals return to their normal environment. For example, each individual who attends the training has removed themselves from many of the daily stressors they experience, is given a strict schedule to adhere to, and is surrounded by individuals with similar experiences who are more likely to understand their struggles. Once the individual returns home, they are again exposed to any routine daily stressors, are responsible for their own schedule, and may not have the same level of empathetic community found during training. Significant results at the 18 months follow-up would indicate a high level of impact from the training, resulting in changes that are maintained for one and a half years post-training.

Data from repeated measures ANOVAs indicates that, for those who provided data at all three time points ($n = 74$), the significant increase in all growth-related outcome measure scores from baseline was maintained at the 18 months follow-up. Both PTGI-X and ISLES scores did not differ significantly from endpoint to follow-up, indicating stability and lasting benefits from the training program. Although there was a significant decrease in positive affect scores between endpoint and follow-up assessments, the scores remained significantly higher than baseline, indicating a lasting positive impact of the training.

Scores on all symptomatology-related outcome measures that exhibited a significant decrease from baseline to endpoint remained stable at the 18 months follow-up, maintaining their significant decrease from the baseline assessment. While both anxiety and negative affect scores experienced a non-significant decrease from baseline to endpoint, scores for both domains experienced a significant decrease from baseline to follow-up assessment.

Examination of gender of participants

The present study also aimed to investigate the potential differences between male and female participants on various growth and symptomatology-related outcome measures at both endpoint and follow-up. The results of multiple one-way ANCOVA's indicate that after adjusting for pre-intervention scores, there was only a single outcome measure, DASS anxiety subscale scores, that showed a small but statistically significant difference in post-intervention scores between male and female participants. The effect size, as indicated by the partial η^2 value, was very small, only explaining approximately 2.3% of the variance in scores on the anxiety subscale.

Interestingly, no significant gender differences were found for any other growth or symptomatology related outcome measure at endpoint or follow-up, after controlling for the appropriate covariates. These findings indicate that on almost all outcome variables assessed, male and female participants showed similar levels of improvement at endpoint and maintenance of such improvement at follow-up.

The discrepancy in samples size for the analyses examining gender differences at follow-up should be noted, as male participants ($n = 63$) far outnumbered female participants ($n = 11$). This overall small sample of participants may have influenced the statistical power to detect differences between genders. Furthermore, the smaller sample size of female participants may have limited the ability to detect any effects that could have been present.

The findings of these analyses are encouraging in that both female and male veterans seem to experience the same level of benefit from the posttraumatic growth-oriented training employed in this study. More specifically, the large increases in PTG and decreases in PTSD symptomatology were exhibited by participants, regardless of gender. These results indicate that the current training protocol seems to adequately address the needs of both male and female veterans, however future studies with larger and more balanced gender samples are needed to further explore the potential influence of gender on the assessed variables.

PCL-5 threshold scores

The PCL-5 was used to assess prevalence and severity of PTSD symptomatology among participants completing the training program. The high impact of the training on post-intervention and long-term follow up PCL-5 scores warrants further investigation. While the use of the PCL-5 was strictly to assess prevalence and severity of PTSD symptoms, and not a tool used to make a diagnosis, an investigation of the participants who fall above and below the diagnosis threshold score can be informative. For example, a provisional PTSD diagnosis can be made with a score of 33 or greater on the PCL-5. At the baseline assessment ($n = 184$), there were 120 individuals with scores greater than 33 and who theoretically would qualify for this provisional diagnosis. Immediately following the training, only 31 individuals had scores greater than 33, indicating that 89 individuals (74%) have theoretically reduced symptomatology to a point that would no longer meets the diagnostic threshold. For those who provided data at all three study time points ($n = 74$), there were 40 individuals with PCL-5 scores greater than 33, meeting criteria for a provisional PTSD diagnosis at the baseline assessment. At the endpoint assessment, only 12 individuals had scores greater than 33, indicating 28 fewer individuals (70%) met the diagnostic criteria regarding PCL-5 scores. One and a half years later at the 18 months follow-up assessment, 15 individuals had PCL5 scores greater than 33 indicating a rise in PTSD symptoms over the course of 18 months for 3 of the individuals. This rise in the number of individuals who exceed the diagnostic threshold is expected over time but highlights the need for continued support beyond the immediate post-intervention period.

Together, these results underscore the positive impact of the Warrior PATHH training program in reducing PTSD symptomatology among veterans, despite its primary focus of increasing PTG. The substantial impact on reported PTSD symptomatology, exhibited by a 49% decrease in reported symptoms from baseline to endpoint, warrants further investigation to identify factors associated with increased PTG and symptom improvement.

Limitations

The present study is not without its limitations, primarily the lack of a control group. While a single-group design is appropriate for the current study, future studies should consider employing randomized controlled trail designs to further investigate the effects of the training and help establish causal relationships. The ethics and complexity of adding a control group to a study of this nature should be carefully examined to account for many of the factors present in the current training protocol.

While demographic variables were collected, certain variables that may be of interest to the field were not collected in this study (i.e., nature of trauma, time since trauma, and age of service). Analysis of the relationship between these and outcome variables may identify certain patterns in training benefit.

Finally, the findings of this study were based on a specific manualized intervention within a specific population, U.S. military veterans. While the sample size and analyses allow for the results to be generalizable to U.S. military veteran populations, they may not be generalizable to other study populations. Future studies should consider adapting and employing the utilized training among other populations that are at an increased risk of trauma exposure.

Conclusion

In conclusion, the results of this study demonstrated significant improvements in growth-related outcomes, including posttraumatic growth, positive affect, and the integration of stressful life experiences, immediately following the training. These improvements were generally maintained until the follow-up assessment, 18 months later, indicating the potential for enduring positive effects. Additionally, participants showed significant reduction in symptoms related to PTSD, depression, anxiety, stress, insomnia, and negative affect. These reductions in symptom-related measures were also maintained until the follow-up assessment. Together, the evidence indicates that the employed posttraumatic growth-oriented training program provides benefits to veterans extending beyond increases in posttraumatic growth, addressing many of the issues that veterans face following exposure to trauma.

An important implication of the impact of this training program involves the use of peer-based delivery. The substantial impact of this peer-based approach suggests that a properly designed program delivered by peers who have a high degree of cultural competence may provide a unique pathway to addressing mental health needs. There is also the implication that peers may be especially effective at delivering such programs as they optimize the important relational component that is central to success.

Data availability statement

The datasets presented in this article are not readily available because of concerns for confidentiality. Requests to access the datasets should be directed to the corresponding author, GE, gary_elkins@baylor.edu.

Ethics statement

The studies involving humans were approved by Baylor University's Institutional Review Board. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

JR: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing. RT: Conceptualization, Data curation, Investigation, Methodology, Project administration, Supervision, Writing – review & editing. BM: Conceptualization, Data curation, Investigation, Methodology, Project administration, Supervision, Writing – review & editing. CA: Conceptualization, Writing – review & editing. GE: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Supervision, Writing – original draft, Writing – review & editing.

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Conflict of interest

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Publisher's note

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BOULDER CREST FOUNDATION SCIENTIFIC ADVISORY PANEL

The development and evolution of all aspects of Warrior PATHH is supported by the Boulder Crest Foundation Scientific Advisory Panel. The Panel includes luminaries from across the field of psychology.

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WHAT'S NEXT

2024 marks the tenth year of Warrior PATHH programming, and the program continues to prove itself far more effective than current approaches to PTSD, anxiety, depression, and suicidality. It is also clear — and a key element of the culture of Boulder Crest and all of our Warrior PATHH partners — that we can always do better to ensure that our nation's Warriors can thrive, and transform deep struggle into profound strength and lifelong growth. To that end, we have identified five actions in 2024:

IMPLEMENT 6.0 EDITION OF WARRIOR PATHH CURRICULUM

Based on our commitment to continuous improvement, and learning from our students and instructors, we have made significant changes to enhance the curriculum for 2024, in the form of edition 6.0.

ENHANCE myPATHH CONTENT

The rollout of the new myPATHH app that was part of the 5.0 curriculum has been an incredible success. Levels of engagement in both community and learning features have been substantially improved from the prior iteration of myPATHH. We plan to continue building on this success to develop new content and features which will be rolled out throughout the year.

CONTINUE RESEARCH COLLABORATION WITH BAYLOR

In 2022, Boulder Crest began collaborating with Dr. Gary Elkins of Baylor University, to provide anonymized data from Warrior PATHH participants for study and investigation. This work will continue in 2024.

CONTINUE GROWING THE CAPACITY OF THE NETWORK

Warrior PATHH continues to experience substantial growth in the number of applications, the result of students spreading the word about their transformative experiences. To keep pace with growing demand our partners have continued to increase the number of programs they will deliver and students they will serve this year. This expansion is made possible by support from the Avalon Action Alliance. As a result, we anticipate growing the number of Warrior PATHH programs from 136 in 2023 to 154 in 2024, and the number of participants from 981 in 2023 to 1,074 in 2024.

CONTINUE IMPLEMENTATION OF STAFF SERGEANT FOX SUICIDE PREVENTION GRANT FROM THE DEPARTMENT OF VETERANS AFFAIRS

In 2022, the Department of Veterans Affairs established the Staff Sergeant Fox Suicide Prevention Grant Program, focused on providing resources for community-based suicide prevention efforts. Two Warrior PATHH delivery organizations — Boulder Crest Foundation and Permission to Start Dreaming Foundation — received grants through this program and are in the second year of implementing the grant. We are hopeful that both organizations will continue to be recipients of VA funding through each of the three years of the program, and that this becomes a permanent VA program that could support Warrior PATHH across the country.

“I can’t think of a program out there that remotely compares to Warrior PATHH. I’m happy to say I have completed the 90-day commitment to PATHH. I have learned so much through this program. How to control my emotions and not let them become anger or hatred. How to listen to others and not talk over them.

I rediscovered the compassion, forgiveness, and gentle touch that I had lost. I have forgiven so many people that wronged me, so much stress, and weight has been lifted off my shoulders. For the first time in a decade, I can honestly say I’m happy, and look forward to what the future holds.”

– Nathan

"THERE IS NOTHING NOBLE IN BEING SUPERIOR TO YOUR FELLOW MAN; TRUE NOBILITY IS BEING SUPERIOR TO YOUR FORMER SELF."
— ERNEST HEMINGWAY

Warrior PATHH is the nation's first-ever program designed to cultivate and facilitate Posttraumatic Growth (PTG) in combat veterans and first responders, and train these remarkable men and women to transform times of deep struggle into profound strength and lifelong growth. Over the course of 3 months, beginning with 7 days of immersive and intensive training, students are able to make peace with their past, learn to live in the present, and begin planning for a great future – full of passion, purpose, and service – here at home.

"Warrior PATHH proceeds through the intervention steps described by Tedeschi and McNally (2011), and Calhoun and Tedeschi (2013), to facilitate Posttraumatic Growth. These steps derive from the model of the Posttraumatic Growth process that is well-validated in research studies of military service members and other trauma survivors."
– Dr. Richard Tedeschi, Psychologist and Father of Posttraumatic Growth

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"Words cannot describe the effect and internal shift inside. I am, for the first time in my life, not at war within. The peace and calm feeling is foreign to me entirely, but wonderful. Here, you have discovered how to give a person their soul back."
– Warrior PATHH Graduate