



Cut Suit Week:

A link between the protective factors of hardiness during traumatic events

Cut Suit Week (more formally titled the Intensive Surgical and Trauma Skills Course) is a week-long event that provides training to the students and various law enforcement agencies, such as the Border Patrol, the California Highway Patrol, and the Chula Vista Police Department. During Cut Suit Week, students rotate through different medical and surgical roles in mass casualty scenarios of increasing stress, as well as attend lectures on various topics of military medicine.



Strategic Operations (STOP) hosted the event in collaboration with Rocky Vista University's Military Medicine Track team. Individuals participated in a series of exercises designed to teach medical students how to deliver quality care under high levels of stress. Over the course of this training, students are thrust into back-to-back scenarios in which they rotate their roles: as patients, as ER physicians, as trauma surgeons, or simply as observers, standing in the catwalks above to watch the action unfold below.

Improving the quality of trauma care is a growing focus of groups like the American College of Surgeons, which launched a Trauma Quality Improvement Program in 2008. According to the Centers for Disease Control and Prevention (CDC), trauma is the leading cause of death for children and adults under age 44. More realistic trauma training could help bring those numbers down.

What is hardiness and how can it serve as a protective factor

Medical professionals, as well as others who are exposed to trauma in their workplace setting (such as police or emergency personnel) may experience severe PTSD symptomatology. Personality traits such as hardiness could be protective against mental health outcomes and help individuals withstand stress and trauma (Potard et al., 2018).

How do people get to be resilient? Several factors can contribute to a person's resiliency level (e.g., childhood experiences, environmental factors) The primary psychological factor contributing to people's resiliency is their hardiness level.

People's hardiness levels determine how they react and respond to stressful and unexpected situations.



Hardiness is a generalized mode of functioning that influences how people interpret the world and make sense of their experiences. People's hardiness levels determine how they react and respond to stressful and unexpected situations.

There are three components that make up a person's hardiness level:



CHALLENGE

Seeing change and novelty as exciting and as an opportunity for you to learn and grow.



CONTROL

Having a sense of self-efficacy and the belief that you can influence outcomes in your life.



COMMITMENT

Being engaged and seeing most parts of your life as interesting and meaningful.

Each of these components of hardiness facilitates a flexible, confident, and passionate approach to life, ensuring a strong degree of resiliency when responding to stressful conditions.

Measuring hardiness during Cut Suit Week

A total of 35 students (27 males, 8 females; mean age = 27 years) completed the Hardiness Resilience Gauge™ (HRG™) before and after Cut Suit Week. The HRG is a 28-item measure of hardiness that results in a Total Hardiness score and scores on each of the Challenge, Control, and Commitment subscales. In this report, results are presented as averages across the 35 students. Specifically, scores for Total Hardiness, Challenge, Control, and Commitment are presented for Time 1 (i.e., prior to Cut Suit Week) and Time 2 (i.e., after Cut Suit Week). All the scores presented in this report are standard scores, with means of 100 and standard deviations of 15. The Total Hardiness score is a first-of-its-kind score validated in the U.S. military.



On average, students scored in the Mid to High range for Total Hardiness, Challenge, Control, and Commitment at both time points. More importantly, students' scores on Total Hardiness, Challenge, Control, and Commitment all significantly increased over Cut Suit Week.

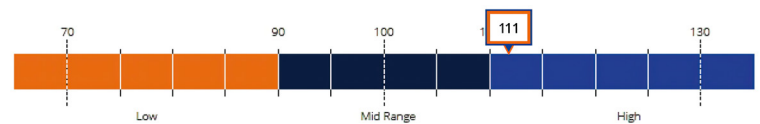
Students' scores on Total Hardiness, Challenge, Control, and Commitment all significantly increased over Cut Suit Week.



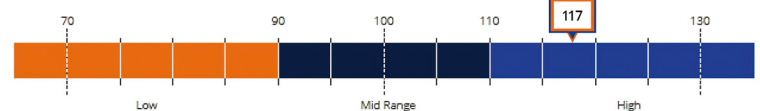
TOTAL HARDINESS

Total Hardiness gives a general indication of how hardy the group of students is and how resilient they are when faced with stressful and changing situations. This score encapsulates the students' scores on the three facets of Hardiness: Challenge, Control, and Commitment.

Results Before Cut Suit Week



Results After Cut Suit Week



At Time 1, the average Total Hardiness of students fell in the **High** range. Scores ranged from 87-130, with one student falling in the Low range of Total Hardiness, 15 students falling in the Mid-range, and 19 students falling in the High range. At Time 2, after Cut Suit Week, the average Total Hardiness of students also fell in the **High** range. Scores ranged from 90-135, with seven students falling in the Mid-range and 28 in the High range.

The High average Total Hardiness score indicates that the students are likely to:

- Be highly capable of tackling stressful situations
- Often be protected from the negative effects of stress
- Pursue actionable strategies aimed at alleviating stress
- Be future-oriented and focus on lessons learned from the past

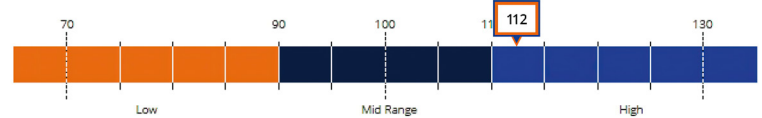
The increase in average Total Hardiness scores from 111 to 117 is statistically significant ($t(34) = 5.52$, $p < .001$), indicating that students Total Hardiness scores significantly increased over the course of Cut Suit Week.



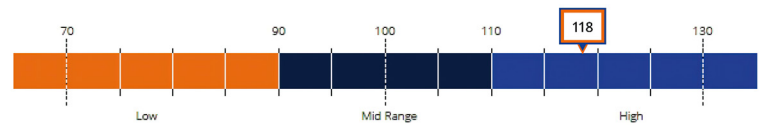
CHALLENGE

The Challenge aspect of the Hardiness model captures how likely the group of students is to embrace change and how motivated they are to learn and grow from failures. The Challenge aspect of people's hardiness profiles contributes to their ability to be flexible and adapt when faced with stressful circumstances.

Results Before Cut Suit Week



Results After Cut Suit Week



At Time 1, the average Challenge score of students fell in the **High** range. Scores ranged from 93-133, with 16 students falling in the Mid-range of scores and 19 students falling in the High range. At Time 2, the average Challenge score for students also fell in the **High** range. Scores ranged from 96-135, with seven students falling in the Mid-range and 28 in the High range.

The High average Challenge score indicates that the students are likely to:

- Enthusiastically embrace change and view it as an opportunity for learning
- Be open, curious, and willing to try new things
- Be able to adjust goals and focus when needed
- Accept responsibility for mistakes
- Be flexible and adaptable when faced with stressful circumstances
- See failure as a chance to learn and improve

The increase in average Challenge scores from 112 to 118 is statistically significant ($t(34) = 3.84, p = .001$). These results indicate that at the end of cut-suit week students were likely to be more open to embracing change and seeing failure as an opportunity for learning and growth.

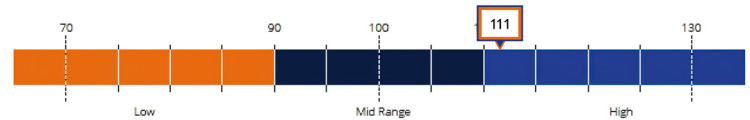




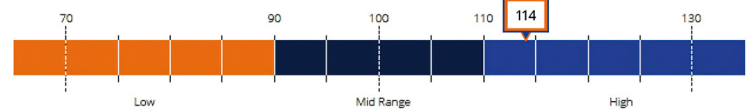
CONTROL

The Control aspect of the Hardiness model captures students' belief that they can control and influence outcomes in their lives. Having a strong sense of control over one's life facilitates the sense that one can safely and effectively manage their environment and life circumstances, even when stressful or unexpected events occur.

Results Before Cut Suit Week



Results After Cut Suit Week



At Time 1, the average Control score of students fell in the **High** range. Scores ranged from 79-130, with 13 students falling in the Mid-range of scores and 22 students falling in the High range. At Time 2, the average Control scores of students also fell in the **High** range. Scores ranged from 87-130, with ten students falling in the Mid-range and 25 in the High range.

The High average Control score indicates that the students are likely to:

- Hold a strong belief that they can influence outcomes in their lives
- Make choices and accept responsibility for those choices
- Feel in control in most situations
- Work hard to achieve the outcomes they desire

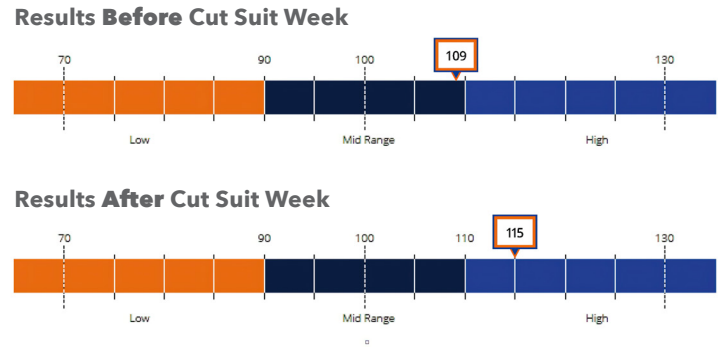
The increase in average Control scores from 111 to 114 is statistically significant, ($t(34) = 2.38, p = .02$). This improvement in scores indicates that students likely felt a stronger sense of influence over their lives after participating in Cut Suit Week.





COMMITMENT

The Commitment aspect of the hardiness model captures the extent to which students believe their lives are interesting and meaningful. Being engaged and immersed in one's life contributes to people's sense of internal balance and their ability to be attentive and aware, ultimately helping to make realistic assessments of stressful situations.



At Time 1, the average Commitment score of students fell in the **Mid-range**. Scores ranged from 75 to 130, with three students falling in the Low range, 12 in the Mid-range, and 20 in the High range. At Time 2, the average Commitment scores of students fell in the **High** range. Scores ranged from 83-130, with two students falling in the low range, seven in the Mid-range, and 26 in the High range.

The Mid to High average Commitment score indicates that the students are likely to:

- Have a strong sense of purpose in their lives
- Be passionate about what they are doing
- See experiences, big or small, as meaningful, and important
- Strive to reach their full potential
- Be attentive and in tune with the world around them

The increase in average Commitment scores from 109 to 115 is statistically significant ($t(34) = 54.22$, $p < .001$). These results indicate that students likely had a stronger sense of purpose and meaning in their lives after Cut Suit Week.

The benefits of measuring hardiness during training have been established

Further investigation regarding the utility of Cut Suit Week trainings for the management and/or prevention of PTSD should be explored in future studies. The increase in students' Total Hardiness, Challenge, Commitment, and Control scores over the course of one week shows the efficacy of immersion training in changing the perception of self and one's surrounding environment. Additionally, this study demonstrates the sensitivity of the HRG to change in hardiness, demonstrating its utility in operational settings.

The use of training exercises that create stressful, simulated events in developing one's resiliency and hardiness can potentially aid in the training and development of military groups and medical personnel, including first responders. Individuals with low levels of hardiness prior to the training may benefit from additional coaching to assess their readiness for the intensity of these roles and challenges they will soon face. Individuals with high levels of hardiness could be coached to rely on their resiliency and fortitude to cope with these stressful events, further developing their strengths.