

RESILIENCE: BOUNCING BACK AFTER BRAIN INJURY

Jeffrey S. Kreutzer, Ph.D.

Virginia Commonwealth
Traumatic Brain Injury Model System

Learning Objectives

Participants will be able to ...

- define resilience
- differentiate between patients' resilient and non-resilient characteristics
- delineate the goals and assumptions of resilience-focused interventions
- identify the characteristics of the RAI - Resilience and Adjustment Intervention

What is Resilience?

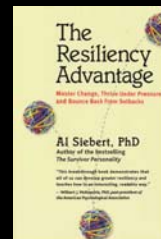
Definition: “... the ability to withstand and rebound from disruptive life challenges... involves dynamic processes fostering adaptation within the context of significant adversity.”



From Walsh, F. (2003) Family Process, 42 (1).

Defining Resilience, Resilient, and Resiliency

- Cope well in the face of ongoing disruptive change
- Maintain good health and energy in the face of constant pressure
- Overcome adversities, bounce back from setbacks
- Change to a new way of working or living when maintaining the old way is not possible
- Do all this without behaving in harmful or dysfunctional ways



Goals in Learning to be Resilient

- Remain calm under pressure
- Improve creative, analytical, and practical problem solving skills
- Maintain optimism, humor, and positive feelings in the face of challenges
- Avoid thinking of one's self (and others) as a victim
- Be self-reliant and socially responsible
- Understand that learning leads to a better life
- Derive good fortune from misfortune

From Siebert, A., *The Resiliency Advantage*, © 2005

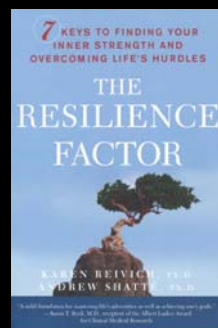
Laying the Groundwork for Resilience

- Life change is possible
- Thoughts and emotions are essential components of our humanity
- Thinking accurately is essential
- Focus on strengths while avoiding a tendency to focus on the negative

From Reivich & Shatte, *The Resilience Factor*, © 2002

Life Change is Possible

“... people can change their lives. This is a powerful concept, a modern one. The notion that humans are not bound and gagged by the fallout of their early childhoods, that they can change their behavior at any time in their lives, seems such a truism to some people today. Historically, people have believed that lasting change was not possible. Even now, many people cling to the notion that the first few years of life determine everything about a person and her future.”



Positive Psychology

“.. This new social science aims to create an empirical body of knowledge of optimal human functioning... Two basic goals: To increase understanding of the human strengths through the development of classification systems and methods to measure these strengths; To infuse this knowledge into effective programs and interventions design to build strengths rather than remediate weaknesses.”

From Reivich & Shatte, *The Resilience Factor*, © 2002

Strength-Based Care Models

- “Disciplines which have embraced a shift toward strength-based models of care have done so for both practical and humanistic reasons
- Researchers (e.g., Duncan, 2010) have established that a dominant factor in positive therapeutic outcomes is a therapy client’s orientation toward hope and change.

Godwin & Kreutzer, *Brain Injury*, 2013

Focus on Strengths

“Resilience is the basic strength underpinning all the positive characteristics in a person’s emotional and psychological makeup. A lack of resilience is the major cause of negative functioning. Without resilience there is no courage, no rationality, no insight. It is the bedrock on which all else is built.”

From Reivich & Shatte, *The Resilience Factor*, © 2002

COMMENTARY

Embracing a new path to emotional recovery: Adopting resilience theory in post-TBI psychotherapy

Emilie E. Godwin, & Jeffrey S. Kreutzer

Department of Physical Medicine and Rehabilitation, Virginia Commonwealth University, Richmond, VA, USA

Abstract

In this commentary, clinical researchers examine the potential benefits of adopting Resilience Theory in the practice of psychotherapy after brain injury. This commentary presents the development of the paradigmatic shift that has given rise to the resilience movement. Additionally, the primary tenets of resilience theory are explored and the utility of the theory in practice is explained. Finally, an argument for the match between the hallmarks of resilient populations and the post-TBI needs related to emotional recovery is presented.

Keywords

Counselling, family, head injury, psychological, psychotherapy

History

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Relationship Between Resilience, Adjustment, and Psychological Functioning After Traumatic Brain Injury: A Preliminary Report

Herman R. Lukow, PhD; Emilie E. Godwin, PhD; Jennifer H. Marwitz, MA; Ana Mills, PsyD; Nancy H. Hsu, PsyD; Jeffrey S. Kreutzer, PhD

Objective: To examine the relationship between resilience, psychological distress, adjustment, and community participation after traumatic brain injury (TBI). **Setting:** Large university health system. **Participants:** Adult survivors of mild to severe TBI ($N = 96$). **Design:** Descriptive, preliminary. **Main Measures:** The Connor-Davidson Resilience Scale (10-item version) was used to assess resilience, the Brief Symptom Inventory (BSI-18) was used to characterize psychological distress, and the Mayo-Portland Adaptability Index (MPAI-4) was used to measure ability, adjustment, and participation. **Results:** Resilience scores were substantially lower than those of the general population. Significant relationships were found between resilience, psychological distress, and adjustment. Partial correlations (adjusting for the other MPAI-4 indices) showed significant correlation ($P < .05$) between MPAI-4 Adjustment and resilience. Partial correlations (adjusting for the other BSI-18 scales) also showed significance for Depression ($P < .01$) and resilience. Resilience scores differed significantly ($P < .001$) between individuals meeting BSI-18 caseness criteria for psychological distress ($n = 55$) and those not meeting criteria ($n = 41$). **Conclusions:** Individuals with TBI are at risk for low resilience, which was found to correlate with psychological distress and psychosocial maladjustment. Developing interventions to strengthen resilience skills has the potential to improve postinjury psychosocial adjustment, an important area for future research. **Key words:** psychological adjustment, psychological distress, resilience

The Resilience and Adjustment Intervention



RAI

Research project partly funded by the U.S. Department of Education, National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR).

Common TBI Challenges and Skills Necessary for Resilience

Common TBI Deficits and Challenges	Skills Necessary for Resilience
Anxiety, depression	Even temperament, emotional stability
Survivor focus on deficits, frequent comparisons to pre-injury functioning	Positive outlook, optimism
Irritability, aggressive behaviors	Self-regulatory skills and even-tempered behaviors
Discomfort with socialization	Social perception, arousal of liking response in others
Impaired self awareness	Insightful modification of behavior
Cognitive deficits, impaired executive functioning	Good problem solving skills
Diminished communication skills	Effective communication

1. Assumptions Underlying the Resilience and Adjustment Intervention

- Successful survivorship is based in individual resilience.
- Survivors who embody, or who learn to adopt traits identified as key to resilient living will find increasing success in their recovery and growing satisfaction with their postinjury lives.

2. Assumptions Underlying the Resilience and Adjustment Intervention

- Achieving postinjury emotional wellness requires a clear understanding of injury-related symptoms, commonly encountered challenges, and recovery processes.

3. Assumptions Underlying the Resilience and Adjustment Intervention

- A key feature of resilience is developing insight into one's own behavioral response to trauma.
- Survivors who are more aware of their strengths and limitations are more likely to lead productive and meaningful lives.

4. Assumptions Underlying the Resilience and Adjustment Intervention

- Resilient individuals are skillful at problem solving, goal setting, communicating, and managing stress and intense emotions.
- Helping survivors develop these skills benefits their ability to be productive and maintain quality relationships.

5. Assumptions Underlying the Resilience and Adjustment Intervention

- Survivors are more likely to improve when they develop resilient traits, such as being actively engaged in recovery, and are able to maintain a positive outlook.

Goals of the RAI Program

1. To provide survivors with fundamental information about common symptoms and challenges after TBI
2. To help survivors develop core abilities, enabling them to more effectively problem solve and efficiently achieve personal goals
3. To teach coping strategies that facilitate the process of emotional recovery, helping survivors to feel better about themselves, their lives, and their relationships

Goals of the RAI Program

4. To teach survivors effective communication skills, enabling them to develop effective long-term support systems
5. To instill hope and a positive outlook by identifying progress and personal strengths, and helping survivors access community resources

RAI Implementation

- ✓ Five week, seven session format with two or three topics covered during each sixty minute session
- ✓ Total of 16 topics covered via self-assessment, discussion, and structured learning experiences
- ✓ Sessions implemented hierarchically; earlier topics provide foundation for later topics

RAI Implementation

- ✓ Time span between sessions allows for homework completion, reflection, trying out strategies and solutions to problems
- ✓ Sessions conducted by single qualified therapist with single survivor

No doubt, each patient is unique.



Yet, research and clinical experience indicates that most survivors have similar concerns and many face similar challenges.



Curriculum Based Approach

- **Education** regarding common challenges, issues, and concerns
- **Psychological support**
- **Skill building** abilities associated with improvement in the targeted domain
- Components adapted from validated Brain Injury Family Intervention



Inside the
RAI Manual

RAI Intervention Protocol

Session I

Understanding the Effects of Brain Injury

Check-in and Update:

Check in with the individual about their current status and ask if there have been any major life changes or important events since completing the pretest forms.

General RAI Introduction:

Introduce yourself to the participant and thank them for having agreed to participate in the intervention. In the process of gaining informed consent/assent for participation, assure that the survivor understands the purpose of the intervention: To help survivors better adjust to life after TBI by promoting qualities of resilience. Ask the survivor, "**Have you heard the term "resilience" before?"** and, if yes, "What is your understanding of what resilience means?" If no, or for those who answered yes – after they have provided their definition, describe,

"Resilience is basically the ability to adjust to your injury and to do well in the long term. We know that there are certain skills that resilient people usually have. This program will help you develop or strengthen those skills so that you can better respond to the challenges of living with a TBI."

I will give you a copy of all of the materials that we cover in session and ask you to review them. You will also be able to keep this binder which is already organized for you by topic. **Each week you will get new material to put in your binder. Then, at the end of the session I will give you more materials to read for homework. The homework will cover the topics we have discussed in session and is written specifically for survivors.** The readings are short and can be read in small chunks.

Introduction of Topics for Session I

Briefly introduce the three topics for discussion:

- Topic 1: Typical consequences of brain injury
- Topic 2: Differences between emotional and physical recovery
- Topic 3: Coping effectively with loss and change

Reminder:

As this is a first session, be sensitive to the fact that participants may be anxious. Use clinical skills for joining and assessing as you move through the first session topics. Do your best to create a welcoming and affirming environment.

Materials (see Appendix 1):

For discussion during session:

Twelve Things to Know about Recovery after Brain Injury Fact Sheet- one copy for the individual and one copy for the therapist.

For homework:

- o *Facts about Concussion and Brain Injury [CDC Fact Sheet]*
- o *Brain Injury is Long Term [Chapter 2, Getting Better (and better) After Brain Injury: The Survivor's Guide (2nd ed.)]*

Goals: Following discussion of this topic, survivors will be able to -

- o recount important facts about brain injury recovery (steps 1-2)
- o identify which recovery facts would be helpful for their own recovery (steps 3-4)

Process:

Step 1 -

Inform the survivor that you will be reviewing important information about what is common and typical for post injury, and also strategies to improve recovery. Say:

"We will go over this information together. If you have questions, please let me know."

Step 2 -

Hand the participant the *Twelve Things to Know about Recovery after Brain Injury Fact Sheet*. Ask the survivor if they are comfortable with reading aloud so that you could take turns reading it together, or if they would prefer for just you to read aloud. Depending upon their response, either take turns reading the facts aloud or read them all aloud to the survivor. After each fact, prompt the survivor to reflect and comment on what they have just heard or read. You might say, **"Have you heard this fact before? How do you feel about this information?"**

Step 3-

Once you have read through the entire fact sheet, ask the survivor,

"Which of these facts seemed most important to you? Why do you think this fact sticks out to you as being very important?"

Elicit additional details by considering including questions such as:

- Are any of these facts particularly upsetting to you? Which ones? What about the fact is disturbing?
- Have you seen examples of any of these facts in your life? Which ones? Please tell me about the examples in your life?
- Which of these facts would you most want to share with family and/or friends? Why?

Step 4

Bring this topic to a close by saying:

"We have just discussed some of the common consequences of injury and some of the keys to successful rehabilitation. Understanding how these facts apply in your life will help you to better respond to rehabilitation goals and objectives. You will have some additional readings on this topic which will be included in your homework. Next, we will talk about two different parts of recovery from TBI – emotional recovery and physical recovery."

Resilience and Adjustment Intervention Session I

Understanding the Effects of Brain Injury

1. Understand the typical consequences of brain injury
2. Appreciate the difference between emotional and physical recovery
3. Cope effectively with loss and change

Common Physical and Emotional Problems after Brain Injury

Directions: Below is a list of problems that often occur after brain injury. Review the list and place a check in the box next to any problems you might now have.

<input type="checkbox"/> move slowly	<input type="checkbox"/> feel hopeless
<input type="checkbox"/> headache	<input type="checkbox"/> difficulty enjoying activities
<input type="checkbox"/> balance problems	<input type="checkbox"/> frustrated
<input type="checkbox"/> tired	<input type="checkbox"/> uncomfortable around others
<input type="checkbox"/> dizzy	<input type="checkbox"/> scared, frightened
<input type="checkbox"/> fuzzy or blurred vision	<input type="checkbox"/> nightmares, bad dreams
<input type="checkbox"/> sensitive to noise	<input type="checkbox"/> feel worthless
<input type="checkbox"/> trouble with coordination	<input type="checkbox"/> can't get mind off certain thoughts
<input type="checkbox"/> no energy	<input type="checkbox"/> worried
<input type="checkbox"/> weak	<input type="checkbox"/> lonely
<input type="checkbox"/> ringing in the ears	<input type="checkbox"/> no confidence
<input type="checkbox"/> trouble sleeping	<input type="checkbox"/> sad, blue
<input type="checkbox"/> trip over things	<input type="checkbox"/> irritable



Common Losses or Changes after Brain Injury

Directions: Brain injury often brings about drastic life changes. To help you understand how your life has changed, read the list below and put a check mark in the box next to the items that are true for you.

- Loss of health and well-being.
- Change in daily activities and responsibilities
- Loss of skills and abilities.
- Less able to care or support other family members.
- Loss of independence.
- Unable to live on your own or manage finances.
- No longer able to drive or work.
- Loss of confidence.
- Can't go out by yourself or be left alone.
- Feeling alone and different than others.
- No longer have an active social life, including dating



Twelve Things to Know about Recovery after Brain Injury Fact Sheet

Below is a list of things that may be helpful for you to know about recovery after brain injury. Some of the ideas are well accepted while others may be subject to debate.



1. The most rapid recovery takes place within three months of injury.
2. Taking on too much too soon can slow or reverse recovery.
3. Many people who have a serious brain injury are not able to work for at least a year or two.
4. Good sleep and resting during the day can help your recovery.
5. Recovery can continue for five or ten years or longer.
6. Drinking alcohol can slow recovery.
7. Talk to your doctor about driving, school, and work. Follow their advice about what you should and shouldn't do.
8. No two brain injuries are exactly the same. People can recover and different rates and have different strengths and limitations.
9. Most people get better with practice and training. Mental and physical exercise can help you continue making gains.
10. Everyone with a brain injury, no matter how severe, has the ability to learn. Learning allows you to do things better and more efficiently.
11. Learn from others. See what works for other people and what doesn't.
12. Ask for feedback and suggestions from people who care about you.

Participant ID: _____ Date: _____

Learning Survey: Session 1

PLEASE CIRCLE THE NUMBER WHICH BEST DESCRIBES HOW MUCH YOU AGREE OR DISAGREE WITH EACH OF THESE STATEMENTS.

As a result of this meeting,...

1. I better understand what problems are common after brain injury.

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

2. I better understand the difference between physical and emotional recovery.

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

3. I better know how to cope with the losses and changes in my life.

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

4. I believe that the information we learned today will help me to better bounce back after my brain injury.

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

How helpful was this meeting?

1	2	3	4
Not at all	A little bit	Moderately	Very

goal attainment ratings

helpfulness rating

Resilience and Adjustment Intervention Session II

Active Engagement in Recovery

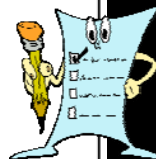
4. Realize the important role you have in your own recovery
5. Recognize what you can do to help yourself and feel better

"Am I Ready To Work on Getting Better?" Test



Directions: For each of the following statements, circle **T** if the statement is true or mostly true about you, or **F** if the statement is false or mostly false about you.

1. T F I know my strengths and limitations.
2. T F I have clear goals and focus on making things better.
3. T F I keep trying even when things seem difficult.
4. T F I try to learn from my mistakes and press on.
5. T F I am willing to ask for help.
6. T F I am willing to admit when I make a mistake.
7. T F When people ask if I need help, I respond politely.
8. T F When people talk, I'm sure to listen.
9. T F When I'm not sure how to do something, I ask.
10. T F I look for the positive in other people and situations.
11. T F I'm polite and respectful to others.
12. T F I can learn a lot from other people.
13. T F I'm thankful when people offer me constructive feedback.
14. T F I communicate my feelings, needs, concerns, and ideas.
15. T F I do my best to be patient with myself, my goals, and other people.
16. T F I pay attention to how I'm feeling.
17. T F I work hard to control my discouragement and anger.
18. T F I think about other people's feelings.
19. T F I can clearly see the benefits of trying hard.
20. T F I try to do things that are good for me.
21. T F I choose to spend time with people who can help me reach my goals.
22. T F I am an important and responsible member of my treatment team.
23. T F I understand that success means doing more rather than less.



Resilience and Adjustment Intervention Session III

Setting Reasonable Goals


6. Appreciate that success is relative
7. Improve your ability to be patient
8. Understand and implement effective goal setting strategies

Resilience and Adjustment Intervention Session IV

Solve Problems Effectively

9. Learn and use more effective problem solving strategies





TIPS TO HELP YOU BETTER SOLVE PROBLEMS

Survivors face many complex problems. These problems may be related to the injury or simply to obstacles that come up in every day life. You may feel overwhelmed by your problems. Here are some questions to ask yourself and some tips to try before you give up.

How are you feeling as you approach your problem?

- **Try to solve problems when calm.** Emotions often get in the way of effective problem solving. Wait until your feelings settle down.
- **Try not to get frustrated when new problems emerge.** Realize that new problems often come up after old ones are solved.

If you are feeling stressed or overwhelmed, what should you do?

- **Set priorities and try to solve one problem at a time.** Setting priorities is a good strategy especially when you feel overwhelmed. Make a list of the main problems you face. Rank and work on them in terms of importance, starting with #1. Begin working on the next one only after you've solved the first.
- **Be patient and fight the temptation to give up too soon.** Most people want their problems solved right away. Remember that solving problems typically takes time. Patience and persistence are the basic ingredients of successful problem solving.

Resilience and Adjustment Intervention Session V

Managing Stress, Anger, and Other Intense Emotions

10. Monitor and manage stress more effectively
11. Better manage intense emotions including frustration, anger, and fear

THE SIGNALS OF STRESS SCALE

Directions: Put a check in the box next to each item that describes you.

- I am really irritable.
- I have too many things to do.
- I really have trouble sleeping.
- I'm trying really hard but getting nothing done.
- I really worry about getting sick.
- I can't afford to take breaks or time off.
- I am pushing myself too hard.
- Everything I do seems difficult.
- I have no idea what to do.
- I am not treating people the way I want to be treated.
- I feel tired all the time.
- Everyone complains about what I do.

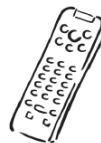


Scoring: The more items you checked, the more stress you may be under.

TIPS TO HELP YOU BETTER CONTROL ANGER

Directions: Think about and try the ideas in the list below. Find the ones that work best for you.

- Recognize that you are in charge of yourself** and have the power to control your anger.
- Realize that controlling anger is a skill**, with practice you will get better.
- Realize that treating people kindly will help you more often achieve your goals** than scaring people with anger.
- Know that hurting others won't make your life better**, make people like you, or help you get what you want.
- Take your "emotional temperature" often**. Noticing signs of anger early will help you stay in control.
- Take control of yourself**. Tell yourself to relax; breathe deeply and slowly.



Resilience and Adjustment Intervention Session VI

Communicating Effectively and Rebuilding Relationships

12. Rebuild relationships and overcome loneliness
13. Learn and apply more effective communication strategies
14. Develop strategies for comfortably discussing injury with others



Communication Checklist

Directions: Place a check in the box next to each item that is true or mostly true about you.

- I don't know how I'm feeling.
- Nobody understands me.
- I don't like to be around other people.
- I'm worried about what others think of me.
- Nobody cares about me.
- I have a hard time describing my feelings.
- I don't want to burden people with my feelings.
- I don't like to talk about my feelings.
- I don't know who to talk to about my problems.
- I can't hide my feelings like I used to.
- I avoid showing my true feelings.
- I don't want to upset people by talking about my feelings.
- I'm afraid to let my guard down.
- I don't feel anything anymore.
- Most people don't care what I have to say.



Resilience and Adjustment Intervention Session VII

Communicating Effectively and Rebuilding Relationships

15. Avoid a negative focus, feeling guilty, or blaming others
16. Appreciate positive aspects of your new life and develop a positive attitude

Guilty – or – Not Guilty?

Directions: People often feel guilty about things they did before and after they were injured. Read the list of statements below and check off the ones that describe how you feel now.

- I should be doing more to get better.
- What happened is my fault.
- I wish I would have done something to prevent the accident.
- I can't let this happen again.
- I have made many mistakes.
- Everyone blames me for the accident.
- I get blamed for everything that goes wrong.



Primary Project Objective

To examine the short-term efficacy of the Resilience and Adjustment Intervention (RAI), a seven session, seven hour program designed to improve resilience, emotional well being, and adjustment

RESEARCH

Statistical Analyses

- Descriptive statistics including means and standard deviations calculated for variables of interest
- Within-subject, repeated measures (MANOVA) to ascertain pre- vs. post-treatment differences

RAI

Participant Demographics

▪ Female	52%
▪ Caucasian	73%
▪ \geq High School Education	79%
▪ Preinjury employed/student	79%
▪ Postinjury employed/student	27%
▪ Vehicular accident	52%
▪ Moderate or Severe TBI	46%
▪ Age (mean)	42 y/o

N=33

Injury Characteristics

Characteristic	Mean	Range
▪ Acute care LOS (days)	21.6	0-180
▪ Rehab LOS (days)	16.9	0-119
▪ Months postinjury	57.2	4-356
▪ LOC (days)	8.8	0-89
▪ GCS – admission	8.7	3-15

N=33

CD-RISC Framework

Assessment via a resilience model based on hardiness and persistence, specifically:

- Not giving up
- Coping with unexpected events
- Tolerating stress
- Overcoming illness & hardship
- Tolerating pressure
- Overcoming negative outcomes
- Coping with unpleasant feelings

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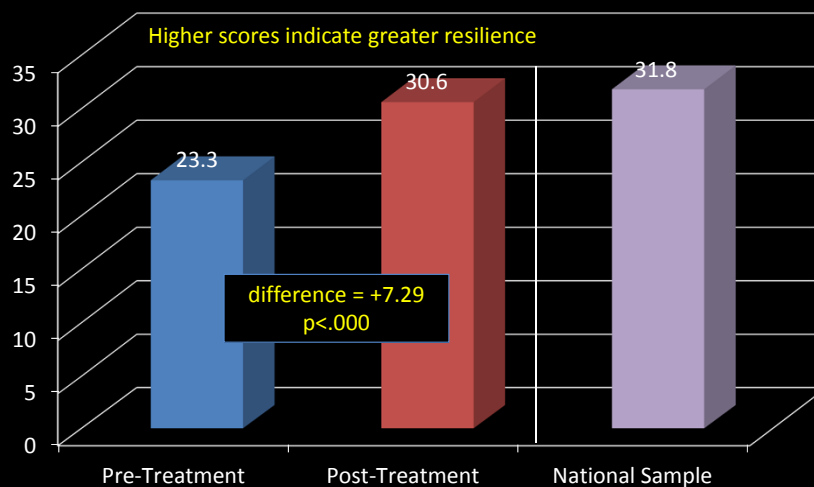
Factor Structure of the 10-item CD-RISC

Items	Saturation
1. Able to adapt to change	0.843
2. Can deal with whatever comes	0.834
3. Tries to see humorous side of problems	0.836
4. Coping with stress can strengthen me	0.838
5. Tends to bounce back after illness or hardship	0.849
6. Can achieve goals despite obstacles	0.833
7. Can stay focused under pressure	0.845
8. Not easily discouraged by failure	0.851
9. Thinks of self as strong person	0.828
10. Can handle unpleasant feelings	0.843

Chronbach's alpha=0.854

Notario-Pacheco, Health and QOL Outcomes, 2011, 9:63

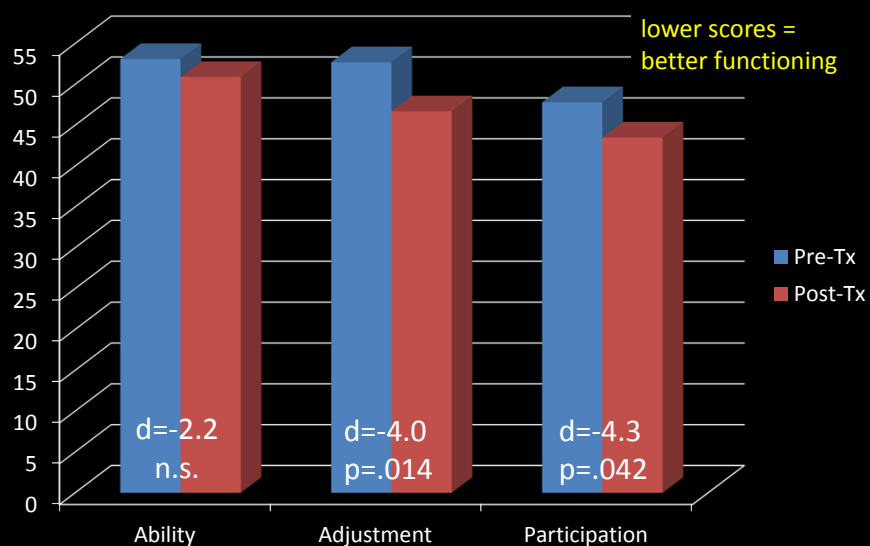
10 Item CD-RISC



Mayo-Portland Adaptability Inventory-4

- Assesses characteristics of adaptability and functioning via self-report
- 30-item Likert-type scale with items rated 1 – 4, higher scores = greater problem severity
- 3 subscales
 - Adjustment Index – emotional, behavioral self-regulation
 - Ability Index – cognitive and physical
 - Participation Index – community integration

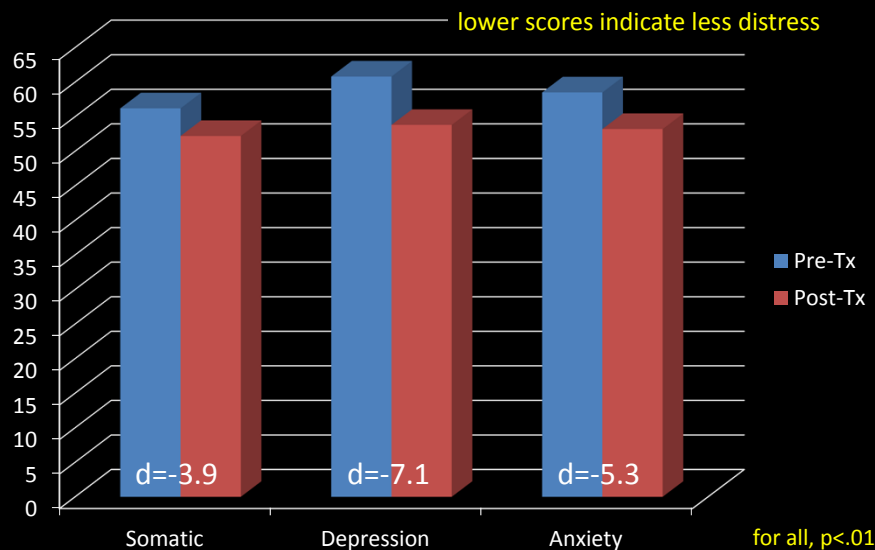
Mayo Portland Adaptability Inventory-4



Brief Symptom Inventory-18 (BSI-18)

- Self-report measure designed to quantify psychological distress in general population
- 18-item scale with higher scores reflecting greater problem frequency
- 3 subscales and General Severity Index (GSI)
 - Somatization
 - Depression
 - Anxiety

Brief Symptom Inventory-18 (BSI-18)



Satisfaction Survey

- 96.9% of participants rated the intervention as “very” or “moderately helpful”
- 100% of participants indicated that they would recommend the program to others

RAI

ORIGINAL RESEARCH

Resilience Following Traumatic Brain Injury: A Traumatic Brain Injury Model Systems Study

Jeffrey S. Kreutzer, PhD,^{a,b,c} Jennifer H. Marwitz, MA,^a Adam P. Sima, PhD,^d Thomas F. Bergquist, PhD,^{e,f} Douglas Johnson-Greene, PhD,^g Elizabeth R. Felix, PhD,^g Gale G. Whiteneck, PhD,^h Laura E. Dreer, PhD^{i,j}

From the Departments of ^aPhysical Medicine and Rehabilitation, ^bNeurological Surgery, ^cPsychiatry, and ^dBiostatistics, Virginia Commonwealth University, Richmond, VA; Departments of ^ePsychiatry and Psychology, and ^fPhysical Medicine and Rehabilitation, Mayo Clinic College of Medicine, Rochester, MN; ^gDepartment of Physical Medicine and Rehabilitation, University of Miami Miller School of Medicine, Miami, FL; ^hResearch Department, Craig Hospital, Englewood, CO; and Departments of ⁱOphthalmology, and ^jPhysical Medicine and Rehabilitation, University of Alabama at Birmingham, Birmingham, AL.

Abstract

Objective: To examine resilience at 3 months after traumatic brain injury (TBI).

Design: Cross-sectional analysis of an ongoing observational cohort.

Setting: Five inpatient rehabilitation centers, with 3-month follow-up conducted primarily by telephone.

Participants: Persons with TBI (N=160) enrolled in the resilience module of the TBI Model System study with 3-month follow-up completed.

Interventions: Not applicable.

Main Outcome Measure: Connor-Davidson Resilience Scale.

Results: Resilience scores were lower than those of the general population. A multivariable regression model, adjusting for other predictors, showed that higher education, absence of preinjury substance abuse, and less anxiety at follow-up were significantly related to greater resilience.

Conclusions: Analysis suggests that lack of resilience may be an issue for some individuals after moderate to severe TBI. Identifying persons most likely at risk for low resilience may be useful in planning clinical interventions.

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Table 2. Means for CD-RISC Items

▪ Taking pride in accomplishments	3.6
▪ Having a relationship that helps with stress management	3.5
▪ Trying hard no matter what the outcome	3.5
▪ Knowing where to turn for help	3.5
▪ Keep trying no matter how difficult situations seem	3.4
▪ Strong sense of purpose	3.3
▪ Turning to fate or God for problem solutions	3.2
▪ Past successes enable confidence in dealing with new problems	3.2
▪ Confidence in attaining goals	3.2
▪ Steadfastness in facing challenges	3.2
▪ Likely to bounce back after facing challenges	3.1
▪ Viewing oneself as strong when facing problems	3.1
▪ Sensing that there is a reason for positive and negative experiences	3.1

Table 2. Means for CD-RISC Items

▪ Confidence in dealing with problems	3.0
▪ Adaptability to change	3.0
▪ Ability to see humor in challenging situations	2.9
▪ Enjoyment in facing challenges	2.9
▪ Maintaining positive attitude in the face of failure	2.9
▪ Able to handle distress and painful feelings	2.8
▪ Willingness to make difficult or unpopular decisions	2.8
▪ Showing leadership when facing problems	2.8
▪ Willingness to act on a hunch when necessary	2.7
▪ Strengthened by facing stress	2.7
▪ Staying focused and thinking clearly when under pressure	2.7
▪ Feeling in control of one's life	2.7
▪ TOTAL	76.8

Resilience following TBI

- Participants had a mean CD-RISC score of 76.8 (SD=17.3)
- The sample's score was significantly lower ($P=.004$) than general population mean (80.4; SD=12.8)

PRACTICAL

Our work should be guided by the experiences of the people we serve, our perception of their needs, and our sense of the most important things we can do to meaningfully improve their lives.

JSK

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Virginia Commonwealth University Medical Center



Jeffrey S. Kreutzer, Ph.D., ABPP
Jeffrey.Kreutzer@vcuhealth.org
www.tbinrc.com

Department of Physical Medicine and Rehabilitation
VCU Box 980542, Richmond, VA 23298-0542
Ph. 804 828-3704