Resilience, Recovery, and Proven Strategies to Rebuild Shattered Lives

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A Project Funded by
The National Institute on Disability, Independent Living, and Rehabilitation Research

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.”

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

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Common TBI Challenges and Skills Necessary for Resilience

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

To examine the short-term efficacy of the Resilience and Adjustment Intervention (RAI), a brief intervention program designed to improve resilience, emotional well-being, and adjustment.
Study Methods

- 160 outpatients at least three months postinjury randomly assigned to a treatment or wait list control group.
- The manualized treatment was delivered in seven one hour sessions.
- The Connor-Davidson Resilience Scale was the primary outcome measure.
- Secondary measures included the Mayo-Portland Adaptability Inventory-4, BSI-18, and the 13-Item Stress Test.

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

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
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.

- move slowly
- feel hopeless
- headache
- difficulty enjoying activities
- balance problems
- frustrated
- tired
- uncomfortable around others
- dizzy
- scared, frightened
- fuzzy or blurred vision
- nightmares, bad dreams
- sensitive to noise
- feel worthless
- trouble with coordination
- can’t get mind off certain thoughts
- no energy
- worried
- weak
- lonely
- ringing in the ears
- no confidence
- trouble sleeping
- sad, blue
- trip over things
- irritable
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
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 everyday 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 complaints about what I do.

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

CD-RISC Framework

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

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

www.connordavidson-resilience-scale.com
**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

**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
The 13 Item Stress Test

- I have a lot to do.
- I have more to do than I can handle.
- I’m not being productive.
- I’m trying really hard but getting nothing done.
- I’m feeling unhealthy.
- I can’t afford to take breaks for time off.
- I’m pushing myself too hard.

The 13 Item Stress Test

- I don’t sleep very well.
- Too many people are telling me what to do.
- I am not treating people well.
- I feel totally exhausted.
- Nobody is happy with what I do.
- I can’t stand living like this.
Table 3. Baseline, post-treatment and follow-up means and standard deviations for outcome measures.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Group</th>
<th>Baseline</th>
<th>Post-treatment</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD-RISC*</td>
<td>RAI</td>
<td>21.1 (8.1)</td>
<td>28.4 (6.9)</td>
<td>25.5 (7.8)</td>
</tr>
<tr>
<td></td>
<td>WLC</td>
<td>23.4 (9.0)</td>
<td>23.7 (8.1)</td>
<td>–</td>
</tr>
<tr>
<td>MPAI-4: Adjustment Index†</td>
<td>RAI</td>
<td>55.4 (9.1)</td>
<td>51.2 (9.5)</td>
<td>50.7 (10.0)</td>
</tr>
<tr>
<td></td>
<td>WLC</td>
<td>55.8 (10.5)</td>
<td>54.5 (9.2)</td>
<td>–</td>
</tr>
<tr>
<td>MPAI-4: Ability Index†</td>
<td>RAI</td>
<td>55.0 (9.7)</td>
<td>51.0 (8.3)</td>
<td>50.7 (9.5)</td>
</tr>
<tr>
<td></td>
<td>WLC</td>
<td>53.5 (10.8)</td>
<td>54.2 (9.5)</td>
<td>–</td>
</tr>
<tr>
<td>BSI-18†</td>
<td>RAI</td>
<td>63.8 (11.7)</td>
<td>57.2 (10.6)</td>
<td>58.7 (10.4)</td>
</tr>
<tr>
<td></td>
<td>WLC</td>
<td>64.1 (10.7)</td>
<td>64.0 (9.4)</td>
<td>–</td>
</tr>
<tr>
<td>13-Item Stress*</td>
<td>RAI</td>
<td>6.7 (3.3)</td>
<td>4.5 (3.4)</td>
<td>5.0 (3.1)</td>
</tr>
<tr>
<td></td>
<td>WLC</td>
<td>6.5 (3.5)</td>
<td>6.0 (3.3)</td>
<td>–</td>
</tr>
</tbody>
</table>

* Raw score.
† T-score.
RAI: Resilience and Adjustment Intervention; WLC: Waitlist Control; CD-RISC: Connor-Davidson Resilience Scale; MPAI-4: Mayo-Portland Adaptability Inventory-4; BSI-18: Brief Symptom Inventory-18.

Table 4. Post-treatment outcome measurement differences between RAI and WLC groups.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>RAI–WLC at post-treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Difference (95% CI)</td>
</tr>
<tr>
<td>CD-RISC</td>
<td>6.70 (4.96, 8.43)</td>
</tr>
<tr>
<td>MPAI-4: Adjustment Index</td>
<td>−2.48 (−4.55, −0.41)</td>
</tr>
<tr>
<td>MPAI-4: Ability Index</td>
<td>−3.75 (−5.85, −1.65)</td>
</tr>
<tr>
<td>BSI-18</td>
<td>−6.51 (−8.73, −4.30)</td>
</tr>
<tr>
<td>13-Item Stress Test</td>
<td>−1.50 (−2.23, −0.77)</td>
</tr>
</tbody>
</table>

RAI: Resilience and Adjustment Intervention; WLC: Waitlist Control; ES: Effect size; CD-RISC: Connor-Davidson Resilience Scale; MPAI-4: Mayo-Portland Adaptability Inventory-4; BSI-18: Brief Symptom Inventory-18.
With the exception of the CD-RISC, higher scores denote worse functioning.
Figure 2. Estimated CD-RISC scores after adjusting for participant education level, time post injury and injury severity. Bounds on the estimates correspond to 95% CIs.

Table 5. Baseline to follow-up outcome measurement differences for the RAI group.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Difference (95% CI)</th>
<th>ES (d)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD-RISC</td>
<td>4.36 (2.42, 6.30)</td>
<td>0.60</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>MPAI-4: Adjustment Index</td>
<td>-4.61 (-6.95, -2.27)</td>
<td>-0.53</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>MPAI-4: Ability Index</td>
<td>-4.05 (-6.41, -1.69)</td>
<td>-0.46</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>BSI-18</td>
<td>-5.01 (-7.52, -2.50)</td>
<td>-0.53</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Stress</td>
<td>-1.60 (-2.40, -0.81)</td>
<td>-0.54</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

RAI: Resilience and Adjustment Intervention; WLC: Waitlist Control; ES: Effect size; CD-RISC: Connor-Davidson Resilience Scale; MPAI-4: Mayo-Portland Adaptability Inventory-4; BSI-18: Brief Symptom Inventory-18.

With the exception of the CD-RISC, higher scores denote worse functioning.
Conclusions

- A curriculum-based education, skill-building and support intervention can improve resilience and reduce psychological distress in persons with TBI.
- Additional research is needed to ascertain the longer term benefits of intervention and the efficacy of alternative delivery methods (e.g., phone, internet).

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.
VCU Health

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