

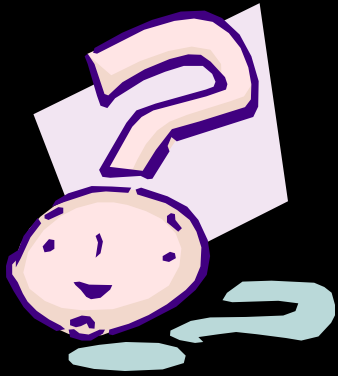
# The Brain Injury Family Intervention

## Implementation and Outcomes



Jeffrey S. Kreutzer, Ph.D., ABPP  
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Medical Center

**Objective:** To describe the Brain Injury Family Intervention (BIFI), efficacy research, and implications.



# **an injured person's point of view ...**

**"In my accident three things were damaged:  
the utility pole, the car, and me.**

**They knew what to do with the utility pole and the car.**

**They didn't know what to do with me, and they still don't"**

from the VA statewide community based needs assessment



**an injured person's  
point of view ...**

**"If someone had told me what the next  
four years would be like,  
I would have laid down and died."**

from the VA statewide community based needs assessment

# Marital stability after brain injury: An investigation and analysis

Jeffrey S. Kreutzer\*, Jennifer H. Marwitz, Nancy Hsu, Kelli Williams and Amy Riddick  
*Department of Physical Medicine and Rehabilitation, Virginia Commonwealth University, Richmond, VA, USA*

**Abstract.** *Objective:* To examine rates of separation and divorce after traumatic brain injury and identify factors relating to risk of marital breakdown.

*Participants:* 120 persons who sustained a mild, moderate, or severe traumatic brain injury and who were married at the time of injury.

*Methods:* Survivors were contacted between 30 and 96 months postinjury when demographic and marital status information was solicited. Injury information was obtained from medical records.

*Findings:* A majority of patients remained married. The rate of divorce was 17% and 8% was the separation rate. People who were married longer before their injury, victims of non-violent injuries, older persons, and persons with less severe injuries were more likely to remain married. Gender, ethnicity, educational level, time elapsed since injury, and postinjury employment status were unrelated to risk for marital breakdown.

*Conclusion:* Research findings do not support contentions that persons with brain injury are at greater risk for divorce relative to the general population. Nor do findings suggest that males are more likely to leave injured female partners. More research is needed to assess marital quality and the potential benefits of intervention programs designed to develop and maintain mutually supportive relationships.

**Table 4. Summary Table of Brain Injury Marital Stability Studies**

| <b>Author/Year</b>        | <b>Sample<br/>Size</b> | <b>Time<br/>Postinjury</b> | <b>Severe<br/>Injury</b> | <b>Separation</b> | <b>Rates of</b> |                  |
|---------------------------|------------------------|----------------------------|--------------------------|-------------------|-----------------|------------------|
|                           |                        |                            |                          |                   | <b>Divorce</b>  | <b>Breakdown</b> |
| Panting/1972              | 10                     | 2 – 7 yrs                  | 73%                      | 10%               | 30%             | 40%              |
| Thomsen/1984              | 9                      | 10 – 15 yrs                | 100%                     | not given         | not given       | 78%              |
| Tate/1989                 | 31                     | 3.4 – 9.7 yrs              | 100%                     | not given         | 54%             | not given        |
| Anderson-<br>Parenté/1990 | 23                     | not given                  | not given                | not given         | not given       | 57%              |
| Wood/1997                 | 131                    | 8 yrs (avg)                | 76%                      | 34%               | 15%             | 49%              |
| Wood/2005                 | 48                     | 5.5 yrs (avg)              | 100%                     | not given         | not given       | 48%              |
| Kreutzer/2006             | 120                    | 4.1 yrs (avg)              | 57%                      | 8%                | 17%             | 25%              |

No doubt, each patient, each family member, and each family is unique.



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



# A Structured Approach to Family Intervention After Brain Injury

**Objective:** Given the limitations of the literature, a structured approach to helping families after brain injury is clearly needed. **Main Outcome Measures:** On the basis of considerable clinical experience and research review, this article describes the Brain Injury Family Intervention (BIFI), developed to address common issues, concerns, and challenges. The foundation of the BIFI is a curriculum that includes 16 intervention topics, self-evaluation tools, and treatment strategies. **Conclusions:** Despite individual differences, families often encounter similar problems in their attempts to resume normal lives. A structured approach to family intervention can help mitigate commonly encountered problems. Key words: *family intervention, support systems, therapy*

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**family systems theory  
and CBT principles**

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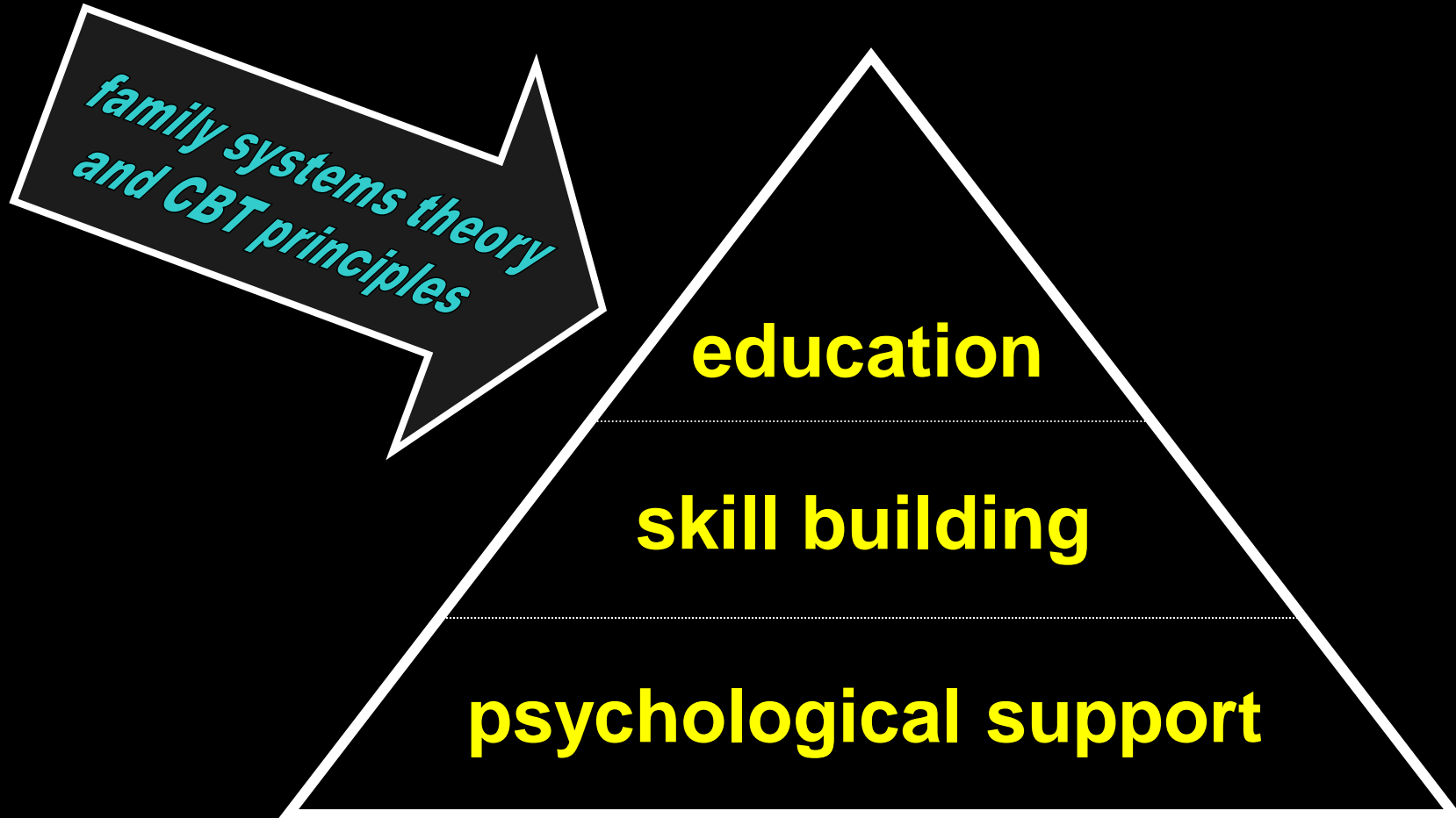


# Brain Injury Family Intervention Procedures

- ❑ Records review and screening
- ❑ Obtain pre-treatment measures from **survivor and family member(s)**
- ❑ Five 120 minute treatment sessions per family at two week intervals
- ❑ Obtain post-treatment measures immediately and 3 months after

# Brain Injury Family Intervention

## Primary Components



# Effective Stress Management

JEFF KREUTZER  
LAURA TAYLOR



GUIDE # 3

 **National Resource Center  
for traumatic brain injury**  
*Tools for therapy, education, self-help, and support*

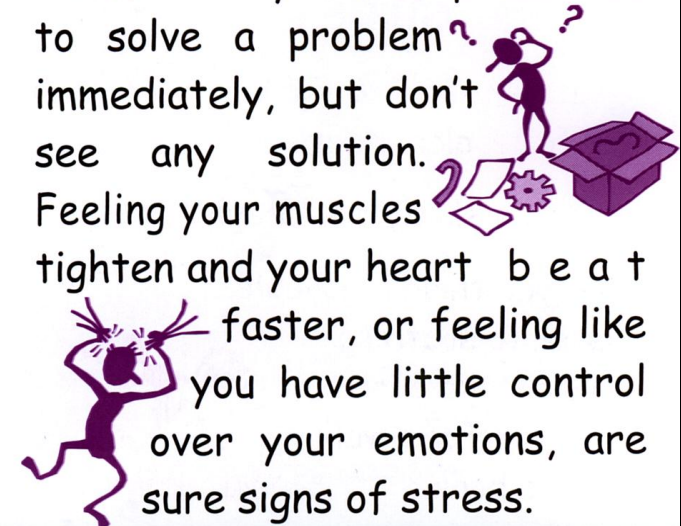
## BRAIN INJURY AND STRESS

For many survivors, brain injury brings on a period of intense and prolonged stress. Injury brings on dramatic life changes, worries about recovery, work or school problems, and financial hardships. Many survivors worry that life will never be normal again. Understanding stress is a first step toward better coping.

## WHAT IS STRESS?

The word stress is used often and in many different ways. Psychologists define stress as an emotional and physical response to a frightening or unpleasant situation. Stress is worse when you feel pressured to solve a problem immediately, but don't see any solution.

Feeling your muscles tighten and your heart beat faster, or feeling like you have little control over your emotions, are sure signs of stress.





## THE 13-ITEM STRESS TEST

To help you understand how much stress you are facing, circle T for True or F for False for each item below.

1. I have a lot to do. T F
2. I have more to do than I can handle. T F
3. I'm not being productive. T F
4. I'm trying really hard, but getting nothing done. T F
5. My symptoms are getting worse. T F
6. I can't afford to take breaks or time off. T F
7. I'm pushing myself too hard. T F

8. I don't sleep very well. T F
9. Too many people are telling me what to do. T F
10. I am not treating people the way I want to be treated. T F
11. I feel totally exhausted. T F
12. Nobody is happy with what I do. T F
13. I can't stand living like this. T F

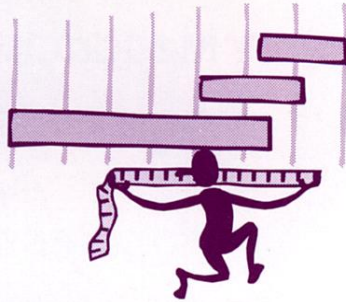
*SCORING: THE MORE TRUE RESPONSES YOU CIRCLE, THE GREATER THE STRESS AND PRESSURE YOU'RE FEELING.*

*collaborative self-examination*



## HOW CAN I COPE WITH STRESS EFFECTIVELY?

- ◇ Avoid putting yourself down or pushing yourself too hard.
- ◇ Realize that taking on too much too soon may lead to frustration and failure.
- ◇ Set reasonable goals and expectations for yourself.
- ◇ Make a "to do" list, rank order the items by priority, start with #1, and work down the list.
- ◇ Work on only 1 or 2 problems at a time.
- ◇ Talk to other survivors about how they cope successfully.



- ◇ Seek support and help from trusted friends and family members.
- ◇ Think positive thoughts and keep a good sense of humor.
- ◇ Keep up a healthy lifestyle by exercising, eating right, and avoiding caffeine, alcohol, drugs, and tobacco.
- ◇ Breathe slowly and deeply.
- ◇ Do something enjoyable....  
listen to soothing music, take a long bath, go for a walk, read a book.



- ◇ Don't forget to take breaks. Everyone needs them.
- ◇ Close your eyes and imagine yourself in a pleasant situation.
- ◇ Have a back up plan in case your first plan does not work.
- ◇ Talk to your doctor about worrisome symptoms to help sort out their cause and possible need for treatment.



REALIZE THAT  
STRESS IS A NORMAL  
PART OF LIFE. LEARN TO  
BE PATIENT WITH YOURSELF  
AND RECOGNIZE THAT  
EVERYONE STRUGGLES  
AND FEELS STRESS  
AT TIMES.

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# Brain Injury Family Intervention

## Session Content Areas - Overview

1. Effects of brain injury on the survivor and family
2. Understanding recovery
3. Solving problems and setting goals
4. Managing stress and intense emotions
5. Strategies for optimal recovery

# Brain Injury Family Intervention

## Session I Topics

### Effects of Brain Injury on the Survivor and Family

1. What is normal after brain injury?
2. Brain injury happens to the whole family

# BIFI Session I

## Intervention Manual

### **Topic 1: What is normal for brain injury? Common problems after brain injury.**

#### **Materials (see Appendix 1):**

For discussion during session:

- Brain Injury Problem Checklist (BIPCL; patient and family versions) – one copy for each family member, one copy for each therapist
- Writing implement for each family member

For homework:

- Chapter 1 from *Getting Better and Better after Brain Injury: A Guide for Families, Friends, and Caregivers*

#### **Goals: Following discussion of this topic, family members will be able to --**

- recognize and appreciate common injury consequences (Step 1)
- recognize each family member's point of view about the survivor's injury (Steps 2,3,4)
- identify similarities and differences in each others' perspectives (Step 5)
- recognize that many of the changes noticed by family members are common effects of injury (Step 6)

#### **Process:**

##### **Step 1 -**

Inform family members that you will be asking them to complete a problem checklist, the BIPCL. Explain that the



# The Family Change Questionnaire

1. How did you feel when you first learned that your injured family member was hurt?
2. How did you feel when you realized that your injured family member was going to live.

# Brain Injury Family Intervention

## Session II

### Understanding Recovery

1. Emotional and physical recovery are two different things
2. Mastering the art of patience
3. Coping with loss and change

## Tips for Remaining Patient

- ❑ **Remember that you can choose to be patient or impatient.** You are the best person to be in charge of your emotions and the way you act. Your body is not "wired" to be impatient. Trying hard to be patient will get you the best results.
- ❑ **Try not to allow yourself to feel pressured to speed up the process.** Remind yourself that you are trying your best to get better and that recovery takes time. If others are pressuring you, remind them that recovery takes time.
- ❑ **Don't get angry.** Getting angry with yourself or your family member won't make things better. In the end, it will probably make you feel worse.
- ❑ **Be persistent.** Being persistent and working hard are the best ways to improve your life and help your injured family member get better. We've found that the most successful survivors keep picking themselves up after they fail, learn from their mistakes, and try again. When you run into roadblocks and barriers, try to tackle the problem a different way, but always keep trying.
- ❑ **Remember that success is relative.** Often we get a set idea of what success means. After injury, you may still be trying to use the same ruler to measure success as you did pre-injury. This may lead to disappointment and frustration for you and the survivor. Try to figure out a new way to judge success. Instead of comparing the person to how they were pre-injury, focus on more recent experiences. Think about progress that's been made since the injury.
- ❑ **Recognize your limitations.** Try to realize what you are having trouble with. Be kind to yourself about these limitations and remember that you are doing your best.

*practical suggestions*



# Brain Injury Family Intervention

## Session III

### Solving Problems and Setting Goals

1. Setting reasonable goals
2. Solving problems effectively

# Brain Injury Family Intervention

## Session IV

### Managing Stress and Intense Emotions

1. Managing stress effectively
2. Managing intense emotions

# Brain Injury Family Intervention

## Session V

### Strategies for Optimal Recovery

1. Taking care of yourself
2. Focusing on gains and accomplishments
3. Most important things the family learned and where to go from here

# Brain Injury Family Intervention

## Outcome Measures

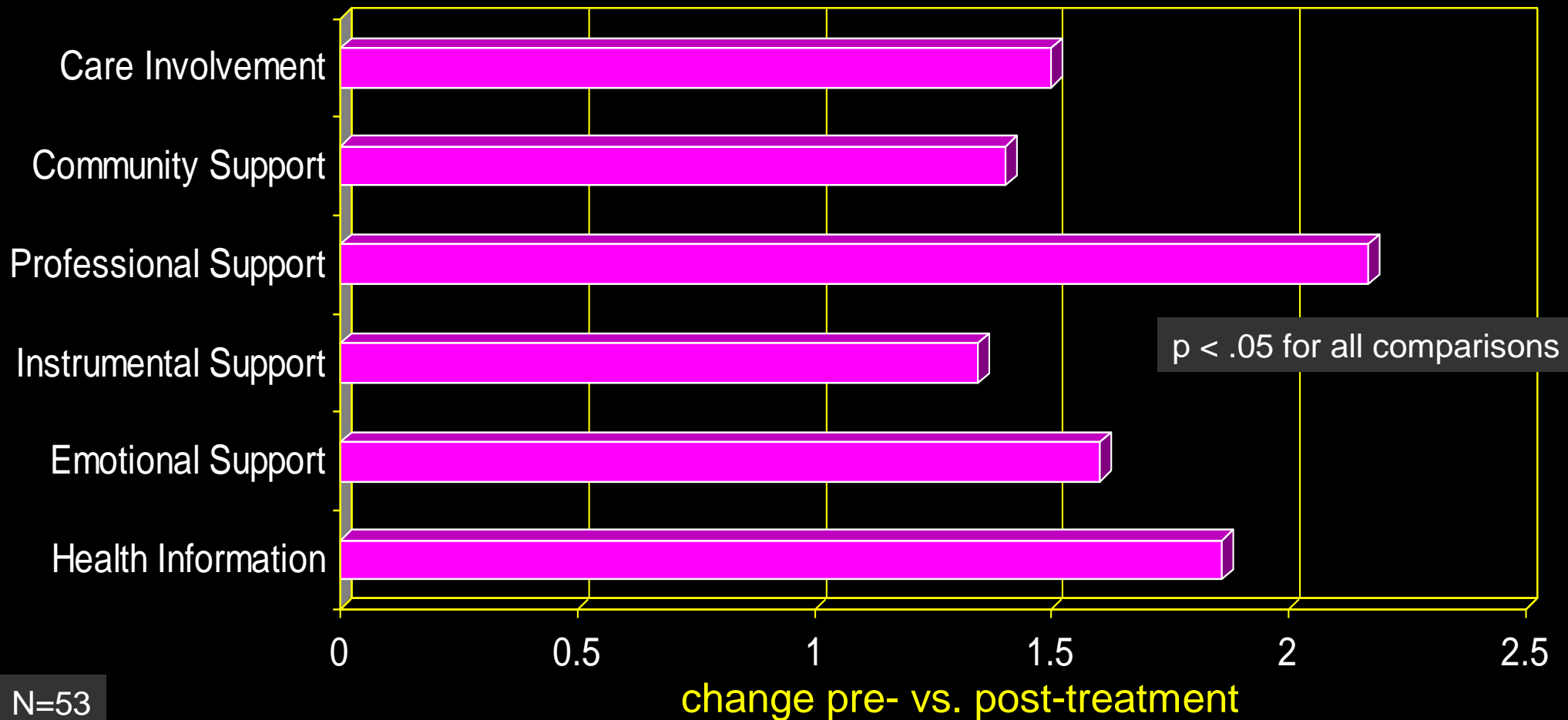
1. Family Needs Questionnaire
2. Service Obstacles Scale
3. Neurobehavioral Functioning Inventory
4. Brief Symptom Inventory
5. Satisfaction with Life Scale
6. Family Assessment Device
7. Program satisfaction and goal attainment ratings

# **Brain Injury Family Intervention**

## **Outcome Data**

# FNQ Subscale Score Postinjury Changes

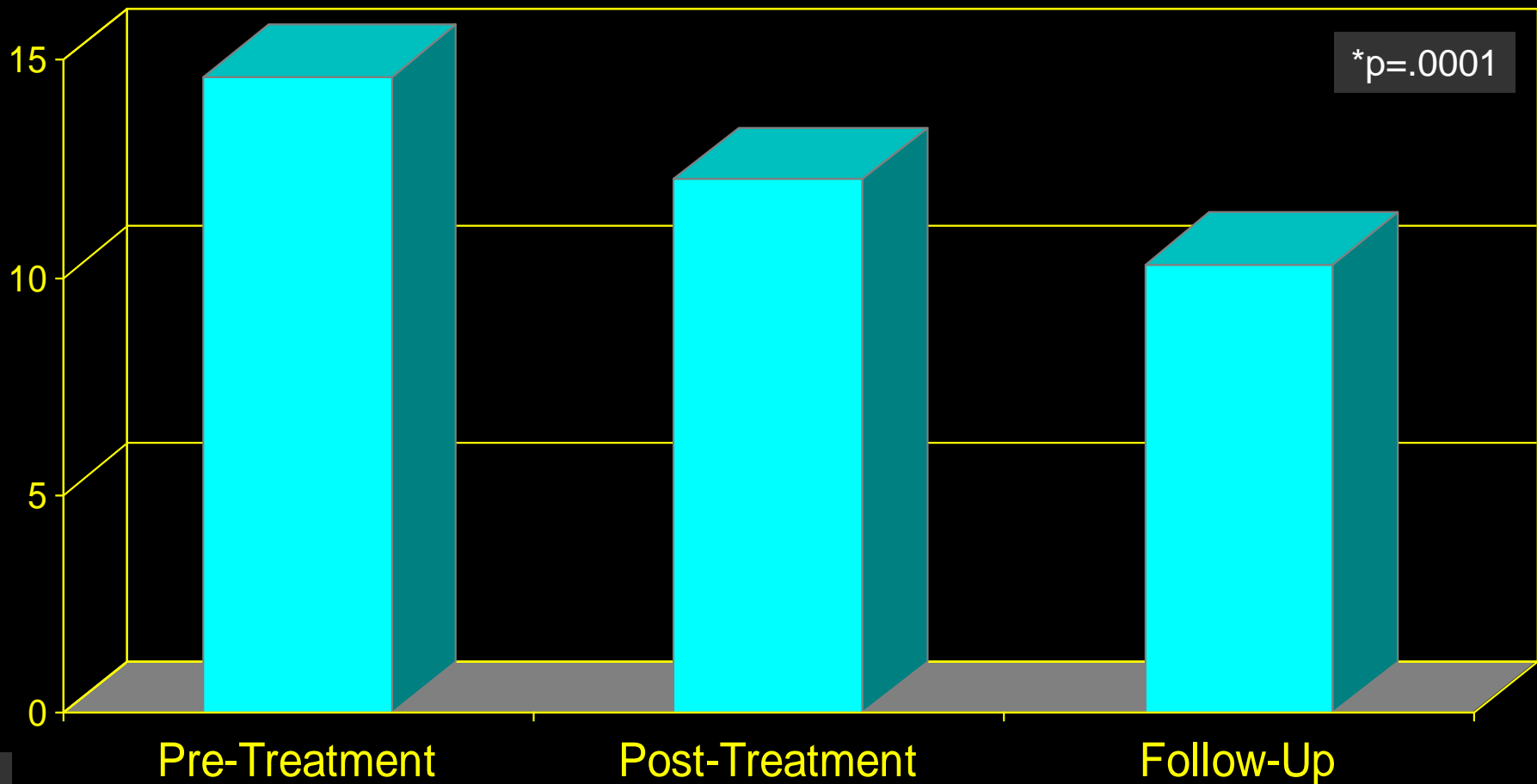
increase in mean number of met needs





# Service Obstacles Scale

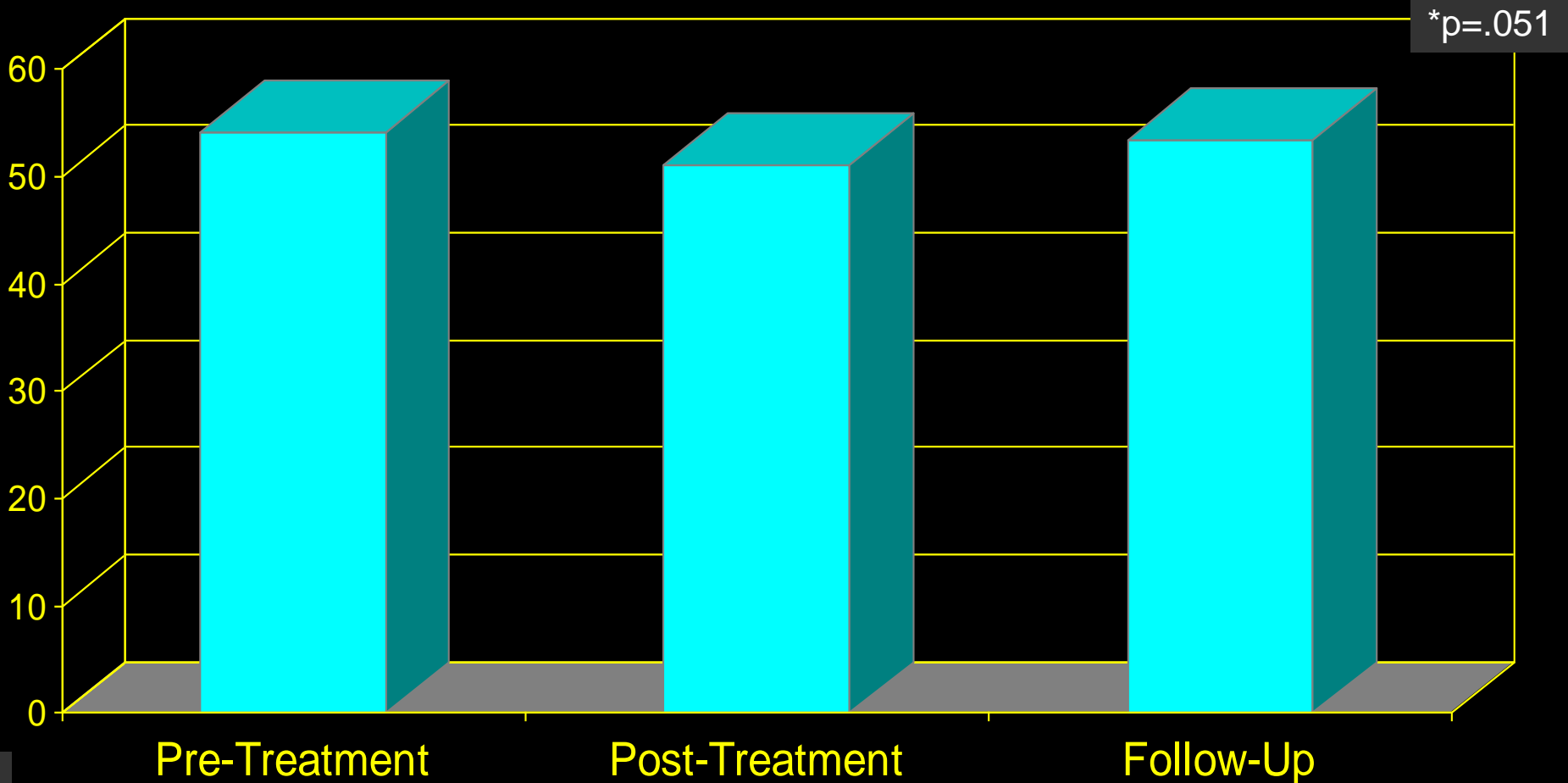
\*lower scores denote fewer perceived obstacles



n=53

# Depression Subscale Brief Symptom Inventory

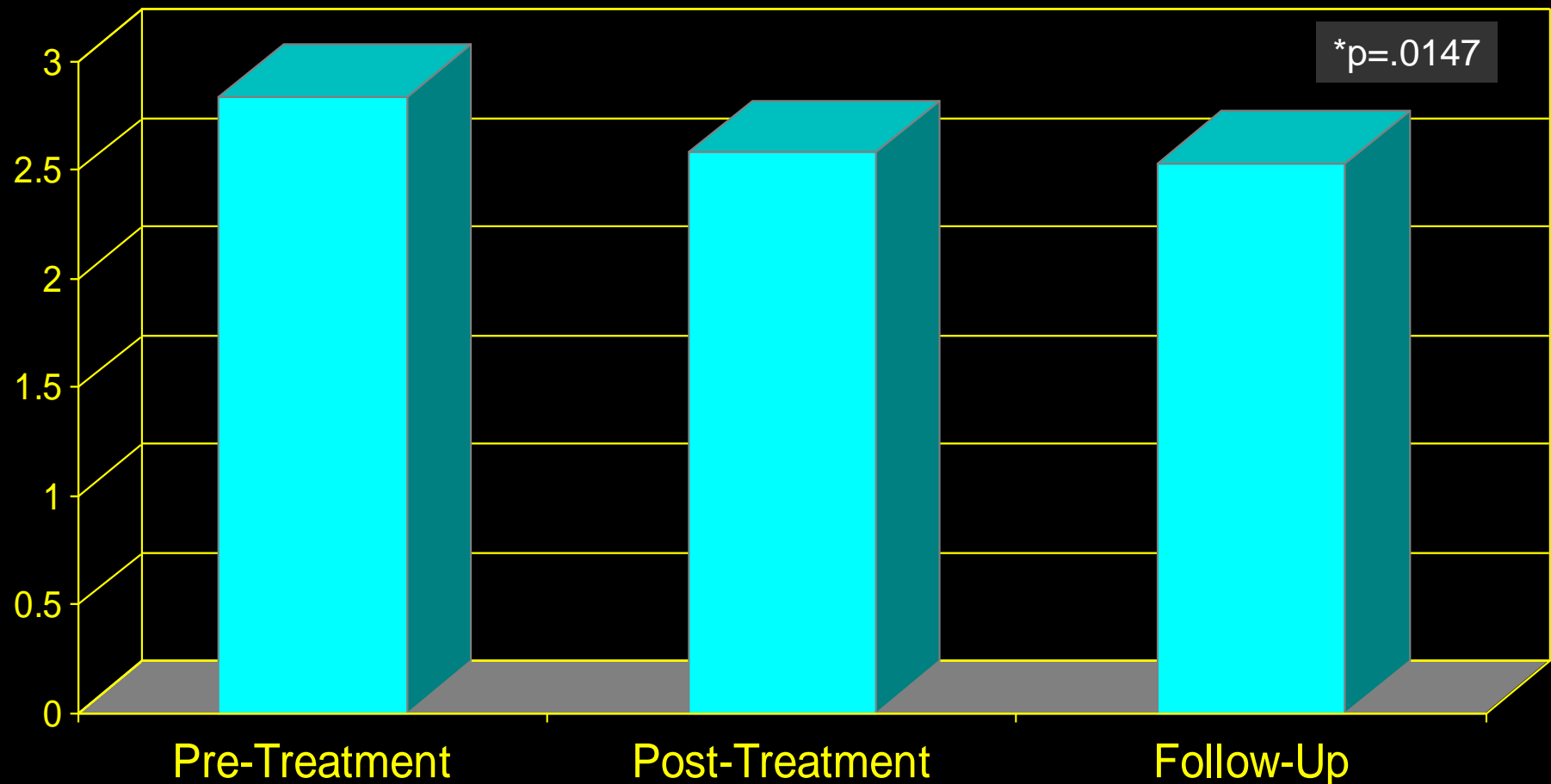
\*lower scores denote lower levels of emotional distress



n=53

# Neurobehavioral Functioning Inventory Depression Scale

family members' ratings of the patient...



n=53

**Table 2. Means, standard deviations, and percentage of goals rated as met**

| Goals  | Family      |                     | Patient     |                     |
|--|-------------|---------------------|-------------|---------------------|
|  | Mean (SD)   | Agreed goal was met | Mean (SD)   | Agreed goal was met |
| <b>Session 1 – Effects of brain injury on the survivor and family</b>        |             |                     |             |                     |
| Better understand what problems are common after brain injury                | 4.29 (.611) | 92%                 | 4.07 (.750) | 84%                 |
| Better understand how other family members see injury                        | 4.18 (.713) | 86%                 | 4.05 (.740) | 84%                 |
| Better understand how injury has affected others in my family                | 4.24 (.619) | 90%                 | 4.23 (.643) | 92%                 |
| <b>Session 2 – Understanding recovery</b>                                    |             |                     |             |                     |
| Better understand different between physical and emotional recovery          | 4.38 (.705) | 95%                 | 4.29 (.687) | 90%                 |
| Learned about being more patient   | 4.41 (.613) | 94%                 | 4.16 (.772) | 87%                 |
| Learned ways to cope better with loss and change                             | 4.33 (.596) | 94%                 | 4.03 (.789) | 81%                 |
| <b>Session 3 – Solving problems and setting goals</b>                        |             |                     |             |                     |
| Learned how to set reasonable goals  | 4.35 (.595) | 95%                 | 4.23 (.844) | 85%                 |
| Better recognize obstacles to solving problems for myself and my family      | 4.35 (.630) | 92%                 | 4.23 (.739) | 90%                 |
| Learned to solve problems more effectively                                   | 4.29 (.663) | 89%                 | 4.21 (.710) | 84%                 |
| <b>Session 4 – Managing stress and intense emotions</b>                      |             |                     |             |                     |
| Learned how to manage stress more effectively                                | 4.29 (.663) | 92%                 | 4.15 (.755) | 85%                 |
| Better understand how the injury has affected my emotions                    | 4.31 (.642) | 90%                 | 4.10 (.877) | 78%                 |
| Learned about good communication   | 4.35 (.630) | 92%                 | 4.05 (.723) | 80%                 |
| Learned how to control emotions better                                       | 4.05 (.638) | 82%                 | 3.90 (.941) | 75%                 |
| <b>Session 5 – Strategies for optimal recovery</b>                           |             |                     |             |                     |
| Better recognize the importance of asking for help and taking care of myself | 4.52 (.593) | 95%                 | 4.36 (.731) | 93%                 |
| Better understand the benefits of focusing on progress and accomplishments   | 4.63 (.520) | 99%                 | 4.33 (.811) | 90%                 |
| Learned about steps we can take to extend recovery                           | 4.53 (.535) | 98%                 | 4.30 (.715) | 89%                 |
| <b>Overall Goal Attainment Rating Across Sessions</b>                        | 4.19 (.450) | 92%                 | 4.34 (.423) | 85%                 |

\* Ratings of 1= strongly disagree; 2=disagree; 3 = neither; 4 = agree; 5 = strongly agree

**Table 3. Frequency distributions, means, and standard deviations for session helpfulness ratings**

|   | <b>Helpfulness Ratings - Survivor</b>  |          |          |          |                  |
|---|--|----------|----------|----------|------------------|
| <b>Session</b>  | <b>1</b>                               | <b>2</b> | <b>3</b> | <b>4</b> | <b>Mean (SD)</b> |
| 1. Effects of brain injury on the survivor and family | 0%                                     | 0%       | 34%      | 66%      | 3.7 (.48)        |
| 2. Understanding recovery                             | 0%                                     | 5%       | 37%      | 58%      | 3.5 (.60)        |
| 3. Solving problems and setting goals                 | 0%                                     | 8%       | 29%      | 63%      | 3.6 (.65)        |
| 4. Managing stress and intense emotions               | 0%                                     | 11%      | 19%      | 70%      | 3.6 (.69)        |
| 5. Strategies for optimal recovery                    | 0%                                     | 3%       | 11%      | 86%      | 3.8 (.44)        |
|   | <b>Helpfulness Ratings - Caregiver</b> |          |          |          |                  |
| <b>Session</b>  | <b>1</b>                               | <b>2</b> | <b>3</b> | <b>4</b> | <b>Mean (SD)</b> |
| 1. Effects of brain injury on the survivor and family | 0%                                     | 2%       | 8%       | 90%      | 3.9 (.41)        |
| 2. Understanding recovery                             | 0%                                     | 0%       | 10%      | 90%      | 3.9 (.31)        |
| 3. Solving problems and setting goals                 | 0%                                     | 3%       | 23%      | 74%      | 3.7 (.51)        |
| 4. Managing stress and intense emotions               | 0%                                     | 0%       | 13%      | 87%      | 3.9 (.34)        |
| 5. Strategies for optimal recovery                    | 0%                                     | 0%       | 10%      | 90%      | 3.9 (.31)        |

**Key:** Session helpfulness ratings: 1=not at all; 2=a little bit; 3=moderately; 4=very

**100% of family members willing to recommend the program to others**



“Began open discussions, new techniques for dealing with problems, proactive ways to address concerns. Identified problems and gave us a way to address them. Since we started the program, his anger management has improved.”

**Satisfaction Measure**

**Comment from Wife**



The BIFI has been used effectively with veteran's families and adapted for adolescents, acute care populations...

# A Critical Pathway for Meeting the Needs of Families of Patients with Severe Traumatic Brain Injury

Jean P. Marks, Luann M. Daggett

Journal of Neuroscience Nursing, April 2006 • Volume 38, Number 2

**A**bstract: Family members of patients recovering from severe traumatic brain injuries have needs that are best met through early assessment and proactive intervention. A critical pathway addressing the needs of families during the acute and postacute phases of hospitalization was developed and implemented in the neuroscience intensive care and step-down units of a university hospital. A team of 10 neurosurgical nurses used and evaluated the program.

family role changes, financial concerns, and disruption in daily routines (Leske, 2003).

The postacute recovery phase begins when the patient is transferred from the NSICU to a step-down unit, and it continues as the patient progresses to a long-term rehabilitation facility. At this time, family members are comforted by the realization that the patient is likely to survive. They are finally allowed unrestricted visitation with the patient. At the same time, family members

# A Critical Pathway for Meeting the Needs of Families of Patients with Severe Traumatic Brain Injury

*Jean P. Marks, Luann M. Daggett*

The critical pathway presents a structured approach to family care from admission through discharge (Fig 1). Specific interventions, developed from the professional literature (Leske, 2002; Serio, Kreutzer, & Gervasio, 1995; Vitaz, McIlvoy, Raque, Spain, & Shields, 2001), are indicated throughout four phases of care: Phase 1—NSICU admission, Phase 2—acute critical care and hemodynamic stabilization, Phase 3—acute critical care/mobility and weaning, and Phase 4—postacute care/prerehabilitation or pre-discharge.

The critical pathway addresses six aspects of family care adapted from the Brain Injury Family Intervention (BIFI) program (Kreutzer, Kolakowsky-Hayner, Demm, & Meade, 2002). Although the BIFI program was designed to focus primarily on rehabilitative care, the six interventions were constructed to meet the needs identified most frequently in Kreutzer, et al., by TBI families across the continuum of care:

- Health information: Addresses the need for consistent information about the patient's medical care and progress, including identification of long-term changes in cognitive and functional abilities
- Emotional support: Promotes coping and adaptation to changes in the family structure
- Involvement in care: Integrates family members into the patient care and treatment process
- Encouragement of self-care: Identifies the personal needs and self-care issues of family members
- Professional support: Promotes teamwork among healthcare professionals in planning and training family members to provide long-term care
- Community support: Helps families identify resources and community support systems.



# Brain Injury Family Intervention

## Significance and Implications

- ❑ Demonstrated benefits of standardized, family focused intervention immediately and three months following intervention
- ❑ Multi-method outcome assessment with high ratings of helpfulness, goal attainment, satisfaction from caregivers and survivors
- ❑ Adaptability for adult, adolescent, military populations
- ❑ Future research: sustainability of gains beyond 3 months; alternative intervention formats, e.g., internet, telephone

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