The Study of Cognitive Rehabilitation Effectiveness

The SCORE clinical trial is a randomized controlled treatment trial evaluating the effectiveness of cognitive rehabilitation in post-deployment military service members who sustained a concussion.

Chapter 5: Integrated Behavioral Health and Cognitive Rehabilitation Interventions for Persistent Symptoms Following Mild Traumatic Brain Injury (SCORE Arm 4)

Part VIII: Client Manual for Group Behavioral Health Interventions

Acknowledgements

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Congress established DVBIC in 1992 after the first Gulf War in response to the need to treat service members with TBI. DVBIC's staff serves as the Defense Department's primary TBI subject matter experts. DVBIC is part of the U.S. Military Health System and is the TBI operational component of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE). Learn more about DVBIC at dvbic.dcoe.mil.

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SCORE Disclaimer

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Chapter 5:
Integrated Behavioral Health and Cognitive Rehabilitation Interventions for Persistent Symptoms Following Mild Traumatic Brain Injury (SCORE Arm 4)

Part VIII:
Client Manual for Group Behavioral Health Interventions

Introduction

The following materials were delivered as part of "Arm 4/Integrated Interdisciplinary Cognitive Rehabilitation" for the Study of Cognitive Rehabilitation Effectiveness (SCORE). This client manual includes supplemental material for clinicians, such as examples and answer keys as well as documentation and coding tips.

This 60-hour intervention took place over 6 weeks. This intervention was unique in the inclusion of both traditional cognitive rehabilitation components and a psychological intervention.

Every effort was made to ensure therapist continuity as well as to provide flexible appointment times for client convenience. Clients participated in 4 hours daily, with 3 hours of traditional cognitive rehabilitation therapy and 1 hour of psychotherapy targeting anxiety and depression. Clients also participated in 3 hours of group therapy each week – 2 hours of traditional cognitive rehabilitation group therapy and 1 hour of group psychotherapy targeting post-concussion symptoms, such as sleep and mood.

In addition, clients had 3 hours of homework to include: 1 hour of psychotherapy homework each week, and 2 hours of cognitive rehabilitation (1 hour of traditional cognitive rehabilitation group therapy and 1 hour of proctored computer-based) homework.

All SCORE participants received the standard of care, which included education (see Chapter 2) and symptom-based medical management consistent with the VA/DoD Clinical Practice Guidelines for the Management of Concussion/MTBI.[1]

Professionals with a variety of different backgrounds, including experienced occupational therapists and speech language pathologists, delivered the cognitive portions of this intervention. Doctoral-level psychologists delivered the psychotherapy portions of the program.

Use the following SCORE Daily Planners to help track your homework and organize your day.

SCORE DAILY PLANNER

WEEK 1

THINGS TO DO	M	T	W	TR	F	Sa	Su
1.							
2.							
3.							
4.							
5.							
Notes:							

WEEK 2

THINGS TO DO	M	T	W	TR	F	Sa	Su
1.							
2.							
3.							
4.							
5.							
Notes:							

SCORE DAILY PLANNER

WEEK 3

THINGS TO DO	M	T	W	TR	F	Sa	Su
1.							
2.							
3.							
4.							
5.							
Notes:							

WEEK 4

THINGS TO DO	M	T	W	TR	F	Sa	Su
1.							
2.							
3.							
4.							
5.							
Notes:							

SCORE DAILY PLANNER

WEEK 5

THINGS TO DO	M	T	W	TR	F	Sa	Su
1.							
2.							
3.							
4.							
5.							
Notes:							

WEEK 6

THINGS TO DO	M	T	W	TR	F	Sa	Su
1.							
2.							
3.							
4.							
5.							
Notes:							

1. Behavioral Health Group Manual

Invisible Wounds of War

Putting your experiences into context

Why are you here?

- Experiencing a range of *cognitive* problems:
  - Concentration Problems
  - Memory Problems
  - Mental Fatigue

Why are you here?

- These problems have been persistent and have interfered with your daily lives.
  - Resistant to treatment

Purpose of SCORE! groups:

- Enhance your understanding of these types of cognitive problems
- Provide evidence based strategies to improve your ability to manage them
- Create specific personal goals which will help you to move toward a more meaningful and satisfying life

For today:

1. The nature of war and the personal costs of war
2. TBI and the recovery process
3. Factors related to recovery from concussion
4. Vignette Exercise
5. Taking it to the field: extra practice

The nature of war

- Expectations:
  - Objectives are clear
  - Exciting
  - Humanitarian
  - Noble
- Reality:
  - Objectives are often unclear
  - Often unpredictable and chaotic
  - Can be terrifying and horrific

Personal costs of war

- Impact on your beliefs
  - About yourself:
    - Power and control
    - Self esteem
  - About others:
    - Trust
  - About the world around you:
    - Safety
- Impact on your family and friends
- Impact on your health and lifestyle

Impact of TBI

- Definition from the Defense and Veterans Brain Injury Center (DVBIC):
  - An injury to the brain resulting from an external force and/or acceleration/deceleration mechanism
    - Blast
    - Fall
    - Direct impact
    - Motor vehicle accident
  - Causes an alteration in mental status
    - Loss of consciousness
    - Confusion
    - Disorientation
    - Post traumatic amnesia

Impact of TBI

- TBI is an event, *not* a set of symptoms.
  - TBI = concussion
- TBI can sometimes result in temporary onset of a range of symptoms:
  - Headache
  - Dizziness
  - Concentration Problems
  - Memory Problems
  - Fatigue
  - Sleep Disturbance
  - Irritability
  - Anxiety/depression
  - Apathy
  - Mood swings

Course of TBI recovery

- Most post concussive symptoms appear immediately after injury.
- Measurable improvement is seen within hours of injury.
- Full recovery for the vast majority (>95%) is complete within 1 to 6 weeks.

(McCrea et. al, 2008)

Research has shown that many factors are related to recovery from concussion.

Factors related to recovery

- **Injury-related factors**:
  - Traumatic nature of injury
    - Both physical AND psychological
  - Complicating medical problems
    - Pain
    - Medication side effects
- **Post-injury factors**:
  - Sleep problems
  - Adjustment
    - Anxiety and depression
    - Often deployment related (the stress of combat)
  - Alcohol and substance use

Symptom overlap

SYMPTOM	Concussion	Anxiety / Depression	Insomnia	Pain
Memory Problems	X	X	X	X
Concentration Problems	X	X	X	X
Fatigue	X	X	X	X
Sleep Problems	X	X	X	X
Irritability	X	X	X	X
Anxiety	X	X	X	X
Depression	X	X	X	X
Apathy	X	X	X	X
Mood Swings	X	X	X	X
Headache	X	X	X	X
Dizziness	X	X	X	X

Symptoms persisting beyond the expected recovery period are most often related to factors beyond concussion.

Setting the stage

- This makes sense given the sequence of events soldiers are likely to experience:
  - Stress of deployment
  - The nature of war
  - The personal costs of war
- Readjustment from deployment is inherently difficult!

Setting the stage

- And now to make matters worse:
  - No job
    - Loss of purpose
  - Lack of structure
    - Told to focus on "getting better"
  - What is likely to happen?
    - Problems become magnified
    - Lack of balance in life

You call it: David (see page 33)

- David, a 22 year old 11B who wanted to be a soldier all his life had been deployed to Afghanistan for about 6 weeks when he was involved in an IED blast followed by a fire fight.
- David lost consciousness for several seconds after the IED blast, and later took a GSW to his left shoulder.
- Over the next week, David began to experience:
  - Headaches
  - Dizziness
  - Memory and concentration problems
  - Sleep Disturbance
  - Irritability and anxiety
  - Mood swings
- Approximately 6 weeks after his injury, David reports that the majority of his symptoms have now resolved.

You call it: John

- John, a second young soldier from the same unit, was involved in the same IED blast and firefight.
- John "saw stars" for several seconds after the IED blast, and later took a GSW to his right calf.
- Over the next week, John began to experience:
  - Headaches
  - Dizziness
  - Memory and concentration problems
  - Sleep Disturbance
  - Irritability and anxiety
  - Mood swings
- Three months later, John reports that his problems seem to have become "worse and worse."

What's the same?

- Similar age
- Both soldiers were injured in the same incident
  - IED blast
  - Firefight
- Both "saw stars"
- Both began experiencing symptoms almost immediately after the injury
- Symptoms were identical

What's Different?

1st Soldier	2nd Soldier
Gunshot wound to left shoulder	Gunshot wound to right calf
Symptoms resolved in 6 weeks	Symptoms continue to get worse 3 months later

Summary

- There are definite costs associated with being a warrior.
- We know that the course of mild TBI recovery is steady and relatively fast (1-6 weeks).
  - It is not consistent with long-term dysfunction.
- It is important to think about the big picture when considering the nature of your symptoms.
  - Put your life experiences into context.
  - Realize that your symptoms could also be related to various other problems (e.g., anxiety, depression, sleep problems).

Summary

- The goal of today's group is not to discount your cognitive symptoms as "all in your head."
- The goal is to give you a broader perspective which includes other factors that may be contributing to your cognitive symptoms.
- If you don't focus your efforts on the right factors, you won't get much better!

Who's in Command?

The self-fulfilling prophecy

For today:

1. Setting the stage
2. The mind-body connection
3. The self-fulfilling prophecy
4. Experiential exercise
5. Taking it to the field: extra practice

Setting the stage

- Think about your experiences leading up to this point:
  1. Stress of deployment
  2. The nature of war
  3. The personal costs of war
- And right now?
  - Mission is unclear

Setting the stage

- How might these experiences be affecting you:
  - Emotionally?
  - Physically?
  - Behaviorally?
  - Cognitively ?
- Why is it important to think about the big picture when considering the nature of your problems?

The mind-body connection

- Rene Descartes (1596-1650)
  - French mathematician, philosopher, physicist
  - "I think, therefore I am"
- Believed that the mind and body can readily influence each other → "Mind-Body Connection"
  - The body can be affected by the mind, and vice versa
- This suggests that your beliefs about your medical care can actually influence treatment outcomes.
  - But how?

The Mind-Body Connection

- Beliefs can create a "self-fulfilling prophecy."
  - The Placebo Effect:
    - Expectations for a positive outcome often lead to a positive outcome.
    - Example:
      - Although placebo pills have no pharmacological activity, people taking them often describe a variety of positive effects.
  - The Nocebo Effect:
    - Expectations for a negative outcome often lead to a negative outcome.
    - Example:
      When doctors tell patients that a procedure will be painful, those patients report experiencing significantly more pain than others who weren't forewarned.

Group exercise

- Illustrate the connection between beliefs, expectations, and behavioral outcomes
  - Group discussion: apply this idea to TBI

The Mind-Body Connection

- Applied to TBI:

"My cognitive problems are due to a brain injury"

↓

Feel out of control:
"It's a medical problem and there's very little I can do about it"

↓

Negative expectations
"It's a brain injury, probably permanent"

↓

Frustration / withdrawal

↓

Negative outcome:
Symptoms persist or become worse

The Mind-Body Connection

- An alternative:

"My cognitive problems are due to many factors"

↓

Feel empowered:
"I can do something about this!"

↓

Positive expectations
"My symptoms will likely improve with work"

↓

Hope / taking action

↓

Summary

- Food for thought:
  - Is it possible that some of my problems are a result of other factors and not simply TBI?
  - How does attributing my problems only to TBI affect my prognosis for recovery?
    - Purely a medical problem
      - → Very little control over it
        - → Poor outcome
    - If it is influenced by other factors (costs of war)
      - → Lots of control
        - → Good outcome

Asleep at the Wheel[2]

The impact of sleep on cognition

Today's agenda:

1. Setting the stage
2. Important facts about sleep
3. Strategies to improve sleep habits
4. The role of anxious thoughts in insomnia
5. Taking it to the field: strategies for dealing with anxious thoughts

Setting the stage

- Think about your experiences leading up to this point:
  1. Stress of deployment
  2. The nature of war
  3. The personal costs of war
- And right now?
  - Mission is unclear

Setting the stage

- How might these experiences be affecting you:
  - Emotionally?
  - Physically?
  - Behaviorally?
  - Cognitively ?
- Why is it important to think about the big picture when considering the nature of your problems?

Facts about sleep

- Sleep and cognitive dysfunction
  - Relationship between:
    - Attention and sleep
    - Memory and sleep
  - Memories are consolidated during sleep.
  - Disrupted sleep results in reduced cognitive functioning.

Facts about sleep

- How much sleep do I need?
  - It's different for everyone.
  - Most people sleep 6-8 hours nightly, but many require much less (3-4 hours).
  - Quality over quantity!

Facts about sleep

- What is the Circadian Rhythm?
  - The body's "internal clock"
  - Regulates 24 hour sleep cycle
  - Resets each morning when you wake up
  - Can also be influenced by:
    - Transitions in body temperature
    - Light exposure (melatonin)

Facts about sleep

- Sleep becomes deeper the longer you are asleep.
  - Stage I
  - Stage II
  - Stage III
  - Stage IV
- Deeper sleep is more restorative.
- Restlessness interrupts progression to deep sleep stages.
  - Nightmares, pain, trips to bathroom, caffeine, etc…
- Substance use interrupts progression to deep sleep stages.
  - Alcohol, nicotine, caffeine, etc…

Facts about sleep

- Most people get anxious about losing sleep.
  - Most people can handle 1-2 consecutive nights without sleep with minimal consequences
- Trying to make up for "lost" sleep is often counterproductive.
  - Disrupts the Circadian Rhythm
- The drive to sleep will naturally become stronger the longer you are awake.
  - And sleep will become deeper, more restorative

Factors impacting sleep (see page 40)

1. Stress Responses: Depression, anxiety, stress of combat
2. Environment: Temperature, noise, partner's habits, pets
3. Medical conditions: Pain, snoring, interrupted breathing
4. Substance use: Alcohol, caffeine, nicotine
5. Diet and exercise: Fluids or large meals before bedtime
6. Shift work

8 Steps to Better Sleep (see page 39)

1. Don't watch the clock.
2. Set a standard wake-up time.
3. Avoid napping.
4. Only go to bed when sleepy.
5. Get up if you can't sleep. (20 minute rule)
6. Use your bed only for sex and sleeping.
7. Develop a relaxing bedtime routine.
8. Don't worry, plan, etc. in bed.

Sleep logs (see page 35)

- Keeping a sleep log can be valuable for many reasons:
  1. Helps you practice using the sleep rules.
  2. Helps you identify specific problems with your sleep which may otherwise go unnoticed.
  3. Allows you to monitor your progress.
     - Keeps your motivation up!

Anxiety in the bedroom

- Two strategies for dealing with sleep-related anxiety:
  1. Get out of bed
     - Has your bedroom become a trigger for worry and anxiety?
     - Most people usually stop worrying after they get up.
       - Wouldn't be getting any sleep if worrying in bed anyway
     - It may take several attempts to break the association between your bedroom and worry/anxiety.

Anxiety in the bedroom

- Two strategies for dealing with sleep-related anxiety:
  2. Try using the Constructive Worry Technique
     - Many people report that they tend to worry about "unfinished business" in bed.
     - This is often the result of staying so busy during the day that no time is available to deal with problems.

Constructive Worry Technique

(see page 42)

1. At least an hour before going to bed, write down the problems facing you that have the greatest chances of keeping you awake at bedtime.
2. For each problem, think of the *next* step you might take to help fix it and write it down.
   - This does not need to be the *final* solution to the problem, since most problems have to be solved by taking a series of smaller steps anyway.
3. Repeat this for any other problems you may have.
4. At bedtime, if you begin to worry, remind yourself that you have dealt with your problems already in the best way you know how, and that you have a plan for working on them tomorrow.
   - Nothing you can do while you are so tired could possibly help any more than what you already have done.

Expectations

- It is important to follow through these recommendations *consistently* every day.
- Initially, you may feel more fatigued in the daytime as you cut out naps and begin making changes.
- You will likely see gradual improvements in your sleep over the next 6 to 8 weeks.

Summary

- Insomnia can be the result of many things:
  - Poor sleep habits
    - Put your mind in a wakeful state of mind
    - Lead to associating the bedroom with non-sleep activities
  - Anxious thoughts
    - Misconceptions about the need for sleep and how the sleep cycle works
    - Related to "unfinished business"
- Quality over quantity!
- Keep your expectations realistic!
  - These habits are developed over time, and will take time to change.

Behind the Wire[3]

Strategies for dealing with stress

Today's agenda:

1. Setting the stage
2. Stress and the stress response
3. Subjective nature of stress
4. Strategies to manage the stress response
5. Exercise: Unintended consequences of attempts of manage stress

Setting the stage

- Think about your experiences leading up to this point:
  1. Stress of deployment
  2. The nature of war
  3. The personal costs of war
- And right now?
  - Mission is unclear

Setting the stage

- How might these experiences be affecting you:
  - Emotionally?
  - Physically?
  - Behaviorally?
  - Cognitively ?
- Why is it important to think about the big picture when considering the nature of your problems?

What is stress?

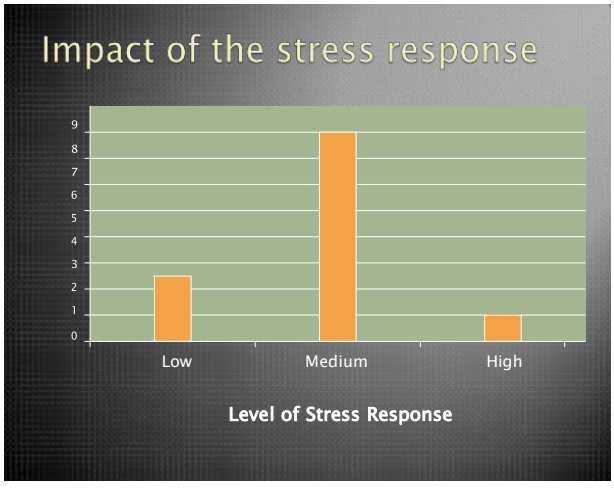
- A natural physical and emotional response to events we perceive as challenging, or beyond our resources or ability to cope
- Stress is subjective:
  - What is perceived as "stressful" to some can actually be enjoyable to others.
    - Combat
    - Public speaking
    - Bungee jumping
    - Scary movies

The stress response

- Part of the "fight or flight" response
  - A response that prepares the person to either fight or run
  - Heightens awareness:
    - Speeds up thought processes
  - Heightens preparedness:
    - Adrenaline rush
    - Increases breathing rate
    - Increases heart rate / blood flow
    - Increases muscle tension
    - Lightens the load: speeds up elimination of wastes

Impact of the stress response

- Can be a hindrance if it becomes too intense or lasts too long:
  - Makes us feel overwhelmed
  - Breaks down performance
- But can also be beneficial:
  - Activates us to respond to challenges
  - A moderate amount can improve performance



The stress response can impact:

- Thinking
  - Poor attention and memory
  - Confusion and indecisiveness
  - Slowed processing
  - Lack of attention to detail
- Mood
  - Irritability
  - Anxiety
  - Depression
  - Apathy

The stress response can impact:

  - Muscle tension
  - Headaches/dizziness
  - Can't sleep
  - Feel tired
  - Sexual problems
- Behavior
  - Defensiveness
  - Alcohol and drug use
  - Withdrawal from pleasurable activities
  - Avoidance

Avoidance

- Many people live their lives trying to avoid "stressful" situations.
- Can we really prevent ourselves from being exposed to stress?
- What are the costs of avoidance?
  - Increased frustration when we can't
  - If used long term → decreased quality of life

Exercise

- Illustrate the costs of using avoidance as a strategy to cope with stressors.
  - Examples:
    - The stress of combat
    - Depression and withdrawal

Is there another solution?

- What if instead of trying to minimize or "control" our exposure to stressors, we focus on building resilience instead?
  - Raises our tolerance for difficult situations
  - Live fuller lives due to not constricting our range of activities

Exercise

- Expanding your perimeter:
  - Illustrate the benefits of alternative strategies for building resilience toward the stress of combat.
- What are some ways to go about this?
  - Exposure principles

Getting started…

- You are the expert!
  - Have solved many problems in life, but are just "stuck"
- Focus on the solution, not the problem
  - Becoming bogged down in the past or ruminating about the problem is not helpful.
- Ask yourself!
  - What would life be like if this were no longer a problem for me?

Getting started… (see page 46)

- What activities are you doing right now that you enjoy?
  - Do more of them!
- What activities have you stopped doing that you used to enjoy?
  - Start doing them again!
- What are some new ideas for activities that you might enjoy?
  - Novelty is important!

Summary

- Stress can be good or bad, depending on how you look at it.
- Withdrawal typically only makes things *worse.*
- Trying to avoid stressors is not a viable long-term solution.
- Instead, try building resilience to challenging or difficult circumstances.

A Life Worth Living

An operator's manual for resuming life down range

Today's agenda:

1. Setting the stage
2. Building resilience towards stress
3. The impact of deployment
4. Values-based living

Setting the stage

- Think about your experiences leading up to this point:
  1. Stress of deployment
  2. The nature of war
  3. The personal costs of war
- And right now?
  - Mission is unclear

Setting the stage

- How might these experiences be affecting you:
  - Emotionally?
  - Physically?
  - Behaviorally?
  - Cognitively ?
- Why is it important to think about the big picture when considering the nature of your problems?

Exercise

- Discussion on coping with deployment
  - Often, soldiers focus their efforts exclusively on one area of their lives while deployed (work).
    - Can be an effective short term coping strategy
    - But creates an imbalance
  - So, one key to building resilience is to restore the balance you had prior to deployment.
  - But how?

Restoring balance

- Identify important value domains:
  - Family
  - Friends and social Life
  - Work and career
  - Recreation and fun
  - Health and physical self-care
- Think about your values in each of these areas.

Restoring balance

- Living more consistently with your values in each of these areas will restore balance to your life and:
  - Build resilience towards stress
  - Strengthen your sense of "identity"
  - Improve your overall quality of life

Restoring balance

- The good news:
  - You can find ways to live more consistently with your values *regardless* of your life situation.
  - Example: Victor Frankl
    - Concentration camp survivor
    - Wrote "Man's Search for Meaning"
- Living consistently with your values is key to creating a meaningful life.

Values-based living

- If having difficulty identifying your values:
  1. Try identifying a previous period of your life where you were more satisfied.
  2. What was different?
     - What activities did you focus your time and energy on?
     - What does this say about your values?
  3. Be honest with yourself.
     - Don't set values based on their "political correctness."

Exercise

- Group walk-through and discussion of values worksheets

Summary

- Values-based living is an excellent strategy for building resilience toward stressors.
  - Creates a more balanced, meaningful life experience
- Start by envisioning what you would like life to be and begin to act accordingly.
  1. Identify your values and interests.
  2. Live more consistently with them.
  3. If health problems are an issue, always test your limits BEFORE restricting your activities.

The Happiness Trap[4]

How to win in spite of major losses

Today's agenda:

1. Setting the Stage
2. Influence of expectations on emotions
3. Myths of happiness
4. Alternatives to happiness
5. Exercise

Setting the stage

- Think about your experiences leading up to this point:
  1. Stress of deployment
  2. The nature of war
  3. The personal costs of war
- And right now?
  - Mission is unclear

Setting the stage

- How might these experiences be affecting you:
  - Emotionally?
  - Physically?
  - Behaviorally?
  - Cognitively ?
- Why is it important to think about the big picture when considering the nature of your problems?

Exercise

- Coin toss exercise
- What were your expectations about that task?
  - Probably hard wired → all about winning, being successful
- How did you feel afterward?
- Importance of context
  - Equal probability of winning or losing
- Redo exercise remembering context
  - Did your reaction change?

On Happiness

- In a similar way, many people hold certain expectations about their emotional state.
  - Most importantly, about happiness
- Why is happiness important?
  - We want to "feel good"
- In fact, many people spend their entire lives pursuing this.
- What are some of your expectations regarding happiness?

The Happiness Trap[4]

1. Happiness is a natural state for all humans.
   - Most people are happy most of the time.
2. If you're not happy, something's wrong with you.
3. To have a good life, you must get rid of negative feelings.
4. You should be able to control what you think and feel.
5. Happiness can be manufactured
   - "If I just had…"

Reality or Myth?

1. Happiness is a natural state for all humans.
   - Most people aren't necessarily happy most of the time.
     - A 1994 study reported that more than 29 percent of 15 to 54 year-olds experienced sufficient symptoms over the previous 12 month period to qualify for at least one diagnosis. (Kessler et al., 1994)
     - A 2005 study found that approximately 40 percent of a community sample experienced suicidal ideation over the previous week. (Chiles & Strosahl, 2005)

Reality or Myth?

2. If you're not happy, something must be wrong with you.
   - If you're not happy all the time, you are *normal*.

Reality or Myth?

3. You should be able to control what you think and feel.
   - Think of your mind as a 24 hour radio station.
   - Typically broadcasts more negative than positive thoughts about yourself and others
   - *Exercise*:
     - For the next 20 seconds think of anything BUT a yellow jeep…

Reality or Myth?

4. Happiness can be manufactured
   - Do more "things" equal more happiness?

Reality or Myth?

5. To have a good life, you must get rid of negative feelings.
   - Life would probably be very boring.
     - Can't have the highs without the lows
   - Negative feelings motivate adaptation.
   - So maybe negative feelings are actually an important part of a living a "good" life?

Reality or Myth?

- Costs associated with these myths
  - Spend a lot of time unsuccessfully attempting to control our thoughts and feelings
    - This usually only amplifies them
  - Spend a lot of time trying to manufacture happiness
    - "Things"
    - Sex / relationships
    - Alcohol / substances
    - Rock and roll
  - These things sap a lot of our time and energy
  - Distract us from focusing on the things we really value
- Is it worth it?

An alternative to happiness…

- It is possible to have a good life in spite of unhappy feelings?
- How?
  - Remember the coin exercise…

Acceptance

- Consider changing your expectations about your emotional state.
  - Be more realistic!
- Accept that unhappiness is:
  - A normal part of life
  - A useful and necessary emotion
- Accept that you can't always control your thoughts and emotions.
  - But you can control how you respond to them

Acceptance

- Getting started:
  - Instead of wasting your time and energy on trying to directly control your thoughts and emotions…
    - And feeling worse when you're unsuccessful…
  - Refocus on activities you value and/or enjoy.
    - Work
    - Family
    - Leisure
    - Health / exercise

Exercise

- Mindfulness tape
- What was that like?
- You will learn additional strategies to help you do this in your individual therapy sessions.
  - Turn down the volume on that radio station.

Benefits of acceptance

- Will change your perspective on life
  - Feel more empowered
  - Can more easily "roll with the punches" that life dishes out
  - Renewed sense of purpose, meaning
- Makes you more accessible to loved ones

Redefining winning

- Importance of taking context into account when determining expectations
- Are your expectations for happiness realistic?
  - Unrealistic expectations are costly.
  - Don't fall into the trap!
- Consider changing your expectations:
  - Accept both the positive and negative aspects of life.
  - Maybe happiness shouldn't be the goal at all?

2. Exercise: You Call It

Part I:

Please review the following definition for traumatic brain injury (TBI) and the expected course of recovery from uncomplicated TBI.

Two-part definition of traumatic brain injury (TBI):

1. An injury to the brain resulting from an external force and/or acceleration/deceleration mechanism.
   - Blast
   - Fall
   - Direct impact
   - Motor vehicle accident
2. An injury to the brain that causes an alteration in mental status
   - Loss of consciousness
   - Confusion
   - Disorientation
   - Post-traumatic amnesia

Expected course of recovery from concussion (or mild TBI):

- Most post-concussion symptoms appear immediately after injury
- Measurable improvement is seen within hours of injury
- Full recovery for the vast majority (>95%) is complete within 1 to 6 weeks

Part II:

Now, use the vignettes below to answer the following questions:

1. Based on the definition above, did both soldiers experience a TBI event?
   - ☐ Yes
   - ☐ No
2. What three things are different about David and John's experience?
   - _____
   - _____
   - _____
3. Which soldier's story is more consistent with the expected course of recovery from concussion?
   - ☐ David
   - ☐ John

Vignette 1:

- David, a 22-year-old 11B, who wanted to be a soldier all his life, had been deployed to Afghanistan for about 6 weeks when he was involved in an improvised explosive device (IED) blast followed by a fire fight.
- David lost consciousness for several seconds after the IED blast, and later took a gunshot wound (GSW) to his left shoulder.
- Over the next week, David began to experience:
  - Headaches
  - Dizziness
  - Memory and concentration problems
  - Sleep disturbance
  - Irritability and anxiety
  - Mood swings
- Approximately 6 weeks after his injury, David reports that the majority of his symptoms have now resolved.

Vignette 2:

- John, a second young soldier from the same unit, was involved in the same IED blast and firefight.
- John "saw stars" for several seconds after the IED blast, and later took a GSW to his right calf.
- Over the next week, John began to experience:
  - Headaches
  - Dizziness
  - Memory and concentration problems
  - Sleep disturbance
  - Irritability and anxiety
  - Mood swings
- Three months later, John reports that his problems seem to have become "worse and worse."

Sleep Logs

The sleep log is important because it:

- Serves as a daily reminder for the sleep strategies you are working on
- Will help you identify patterns that may be negatively impacting your sleep
- Allows you to monitor your progress over time

Use the sleep logs on the following pages to track your sleep strategies.

Sleep Log

	Day of the Week	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
	Calendar Date (MM-DD)							
1	Yestererday I napped from _____ to _____ (Note times of all naps).							
2	Last night I took _____ mg of _____ or _____ oz of alcohol as a sleep aid (Include all prescription and over-the-counter sleep aids).							
3	Last night I got in my bed at _____ (AM or PM).							
4	Last night I turned off the lights and attempted to fall asleep at _____ (AM or PM).							
5	After turning off the lights it took me about _____ minutes to fall asleep.							
6	I woke from sleep _____ times (Do not count your final awakening).							
7	My awakenings lasted _____ minutes (List each seperately).							
8	Today I woke up at _____ (AM or PM). (Note: this is your final awakening)							
9	Today I got out of bed for the day at _____ (AM or PM).							
10	I would rate the quality of last night's sleep as: Very Poor Fair Excellent **1 2 3 4 5 6 7 8 9 10**							
11	How well rested did you feel upon arising today? Not at All Somewhat Well Restored **1 2 3 4 5 6 7 8 9 10**							

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Eight Steps to Better Sleep

These instructions are designed to improve onset of sleep and to establish a regular sleep-wake schedule that is consistent with the circadian (24 hour) sleep/wake cycle:

1. ***Don't watch the clock!*** Studies show that glancing at the clock while in bed makes you more anxious and less able to fall asleep. You can still use the alarm to help you wake up, but turn the clock face around so that you can't see it from bed.
2. ***Develop a relaxing bedtime routine to help you "wind down" before bed.*** Avoid activating activities such as surfing the internet, watching television and playing video games for at least one hour before bedtime. Instead try some light reading, soft music, or a relaxation technique. Also, try starting your bedtime routine with a brief warm shower to stimulate relaxation.
3. ***Only go to bed when sleepy.*** Bear in mind being sleepy is not the same thing as being tired. It is important to be aware of this difference. Sleepiness is signaled by behavioral signs such as dropping eyelids, involuntary head nodding and yawning.
4. ***Use the bed only for sleep and sexual activity.*** Do not engage in sleep-incompatible activity in bed such as eating snacks, watching TV, reading, or surfing the internet. These activities obviously will result in arousal and make it difficult to fall asleep.
5. ***If after a while (20 minutes or so) you are unable to fall asleep or awaken and find it difficult to fall back asleep, leave the bed and go to another room and engage in a relaxing activity.*** For example, try some light reading, soft music, or use a relaxation technique until you do feel drowsy. Then return to bed when you become sleepy and repeat as often as necessary until you do fall asleep. *It is important to not watch the clock while doing this. It is your subjective estimate of time that is important.*
6. ***Keep a regular morning rise time no matter how much sleep you got the night before.*** This will help normalize the circadian (24 hour) schedule. If you don't sleep well one night, the drive to sleep will be higher the following night.
7. ***Avoid napping.*** This reduces sleep drive and will make it harder to fall asleep at night.
8. ***Don't worry or plan when in bed.*** Try using the Constructive Worry Technique.

Practice Good Sleep Hygiene

Factors Impacting Sleep

Poor sleep can be caused by a number of factors, including:

- Stress, depression, and anxiety symptoms
- Environment-warmer temperatures, noise, discomfort, partner's habits, pets
- Medical conditions-pain, snoring, interrupted breathing
- Substance use (beer, liquor, amphetamines)
- Caffeine (tea, sodas, coffee, energy drinks like Red Bull)
- Nicotine (cigarettes and other nicotine products)
- Diet and exerciseShift work or being forced to stay awake when you should be asleep
- Jet lag

Tips for Sleep

- Develop a relaxing bedtime routine which may include meditation, relaxing thoughts, or progressive muscle relaxation. Avoid surfing the internet, watching television and playing video games for at least one hour before bedtime
- Make your sleeping area as comfortable as possible (comfortable mattress, cool temperature, quiet, dark)
- Don't watch the clock
- Get exposed to bright light during the day, and especially when first getting up
- Watch your diet
- Avoid large meals and fluids after 8 p.m.
- Avoid caffeine within 3 hours of going to bed. Caffeine should be limited to no more than 250 mg/day (approximately 2 cups of coffee/day or 1 energy drink)
- Avoid alcohol within 3 house of going to bed. Limit alcohol to no more than 1-2 drinks daily
- Avoid tobacco within 3 hours of going to bed
- Exercise at least 20-30 minutes in the late afternoon or early evening
- Avoid heavy exercise within the 2 hours before going to bed
- Consult with your doctor about any medications that may interfere with sleep
- *Get treatment for depression and anxiety symptoms, which have been shown to disrupt sleep*

3. Abdominal Breathing

Basics of Breathing

- Shallow, quick breathing is one of the hallmarks of stress. This type of breathing can lead to feeling dizziness, tingling sensations, and confusion, all of which further adds to stress
- Abdominal breathing is the opposite of this stressed breathing pattern. Abdominal breathing stimulates the part of our nervous system that slows down the heart and the body, leading to a feeling of calmness and peace
- Rest one hand on your abdomen and one on your chest and notice how you are breathing. If most of the movement is in your chest, you can definitely benefit from practicing the habit of abdominal breathing. If, however, your abdomen was gently rising and falling like a balloon being gently inflated and deflated, congratulations, you're already breathing in a calming and health promoting way

Instructions for Abdominal Breathing

1. Find a comfortable and quiet location. Sit straight up or lie down so that you can have full expansion of your lungs
2. Inhale slowly and deeply, letting your abdomen move outward in a relaxed and automatic way as the air fills your lungs
3. After you've taken a full breath, exhale slowly and fully while slowly saying "relax." Focus attention on your breath as it flows from your body, noticing the feel of the air as it moves past your nostrils
4. Pause for a count of 3 or 4 seconds before inhaling again. Breathe deeply and fully in with a relaxed pace and good depth, using smooth inhalations and exhalations
5. Repeat the entire breathing sequence 10-15 times

Important tips

- Expand the diaphragm on each breath in while keeping the chest still
- Practice this breathing exercise at least twice daily, 10 minutes each time

Constructive Worry Technique

1. Before going to bed, write down the problems facing you that have the greatest chances of keeping you awake at bedtime

2. For each problem, think of the *next* step you might take to help fix it and write it down

   - This does not need to be the *final* solution to the problem, since most problems have to be solved by taking a series of steps anyway
   - Repeat this for any other problems you may have

3. At bedtime, if you begin to worry, remind yourself that you have dealt with your problems already in the best way you know how, and that you will be working on them again tomorrow

   Nothing you can do while you are so tired could possibly help any more than what you already have done

4. Valued Directions Worksheet

Shown on the following pages are areas of life that some people value. We are concerned with your quality of life in each of these areas. One aspect of quality of life involves the importance you put on different areas of living. First, rate the importance of each area by circling a number on a scale of 0, 1, or 2. Not everyone will value all of these areas, or value all areas the same.

Rate each area according to *your own personal sense of importance*. If you rated an area as unimportant (0), move right on to rate the importance of the next area. If you rated an area moderately or very important (1 or 2), make a rating of how satisfied you are with the quality and depth of your experience in this area of life. Then rate how often you have done something to move you forward in this area during the last week. After completing your ratings, write down a **statement of values** for how you would like to live your life in that area (e.g., what is most important to you in that area?)

Family

How do you want to interact with your family members? What kind of partner do you want to be in an intimate relationship? What type of father do you want to be? What type of sister or brother do you want to be? What type of son or daughter do you want to be?

How important is this area to you?

0 = not at all 1 = moderately 2 = very important

Overall, how satisfied are you with the quality and depth of your experience in this area of life?

0 = not at all 1 = moderately 2 = very satisfied

How often have you done something to move you forward in this area during the last week?

0 = no action 1 = once or twice

2 = three or four times 3 = more than four times

Friends / Social Life

What type of friend do you want to be? What does it mean to be a good friend? How would you behave toward your best friend? Why is friendship important to you?

Importance:	0 = not at all important	1 = moderately important	2 = very important
Satisfaction:	0 = not at all satisfied	1 = moderately satisfied	2 = very satisfied

Actions (last week):

0 = no action 1 = once or twice

2 = three or four times 3 = more than four times

Work/Career

Are there any skills you'd like to learn? What do you value about your work? Financial security? Intellectual challenge? Independence? Prestige? Getting to interact with other people? Helping people? What type of work would you like to do?

Importance:	0 = not at all important	1 = moderately important	2 = very important
Satisfaction:	0 = not at all satisfied	1 = moderately satisfied	2 = very satisfied

Actions (last week):

0 = no action 1 = once or twice

2 = three or four times 3 = more than four times

Recreation/Fun

What type of activities do you enjoy? What type of activities would you really like to engage in? Why do you enjoy them?

Importance:	0 = not at all important	1 = moderately important	2 = very important
Satisfaction:	0 = not at all satisfied	1 = moderately satisfied	2 = very satisfied

Actions (last week):

0 = no action 1 = once or twice

2 = three or four times 3 = more than four times

Health/Physical Self-Care

What issues related to health and physical well-being do you care about (e.g., sleep, diet, exercise)? Why and how do you take care of yourself?

Importance:	0 = not at all important	1 = moderately important	2 = very important
Satisfaction:	0 = not at all satisfied	1 = moderately satisfied	2 = very satisfied

Actions (last week):

0 = no action 1 = once or twice

2 = three or four times 3 = more than four times

Valued Directions Questionnaire: Follow-up

1. Which of these values is most important to me? (rank order)

2. Which of them am I actively living by right now? (rank order)

3. Which important values of them am I most neglecting? (rank order)

4. Which are the most important to start working on right away? (rank order)

Valued Activities List

What things are you already doing that are consistent with your values and interests?

1. _____

2. _____

3. _____

4. _____

What things have you stopped doing that you enjoyed in the past?

1. _____

2. _____

3. _____

4. _____

What are some new ideas for activities that might be consistent with your values?

1. _____

2. _____

3. _____

4. _____

SET A GOAL

What are two values-based activities that you can start doing before next group?

1. _____

2. _____

See the table of ideas for valued activities.

Ideas for Valued Activities

Do something! Waiting until you "feel like it" doesn't work, because inactivity only makes you feel worse.

- Seek out a temporary job
- Go to a movie
- Go dancing
- Help groups you respect
- Go to a park
- Keep a diary
- Buy a used musical instrument and learn to play
- Go to a ballgame or concert...
- Plan trips or vacations
- Buy something frivolous like a toy
- Do artwork or crafts
- Read sacred works (Bible, Torah...)
- Wear clothes you like
- Read a book or magazine
- Hear a lecture or a sermon
- Listen to a relaxation tape
- Go out in a canoe or row boat
- Work on machines (car, bike...)
- Play a board game
- Complete a difficult task
- Solve a puzzle or crossword
- Take a long bath or shower
- Write a story, poem, music...
- Sing or play an instrument
- Work at your job
- Go to a church or temple function
- Learn to say 30 words in another language
- Grill, cook, or bake something
- Solve a personal problem
- Hygiene (floss teeth, fix hair...)
- Visit someone who is ill
- Do outdoor work
- Sit in the sun
- Go to a fair or zoo
- Plan a social event
- Play with animals (dog, cat, horse...)
- Listen to music (radio, CDs...)
- Give someone a gift
- Take pictures
- Talk about sports
- Watch or participate in sports
- Help or protect someone
- Learn some jokes (i.e. books, comedy club, funny movies)
- See beautiful scenery
- Eat a good meal
- Improve health (change diet, workout...)
- Give blood
- Enjoy a sauna or jacuzzi
- Buy some watercolors and paint a picture
- Be with friends or relatives
- Join a cause (political, environmental)
- Call someone on the phone
- Daydream
- Go to a movie
- Budget your time
- Complete odd jobs around home
- Go to a restaurant
- Reminisce, talk about old times
- Get up early in the morning
- Volunteer (animal shelter, homeless shelter etc…)
- Say a prayer
- Meditate
- Read the newspaper
- Go for a walk or run
- Walk barefoot
- Play Frisbee or catch
- 10 minutes of deep breathing
- Go to a barber or beautician
- Be with someone you care about
- Rent a movie
- Start a new project
- Go to the library
- Plant seeds for a windowsill pot
- Watch people
- Sit in front of a fire in the fireplace
- Sell or trade something
- Give someone flowers
- Write a letter
- Surf the internet
- Care for houseplants
- Plant or tend a garden
- Work on or start a collection
- Spend time with children
- Go to a garage sale or auction
- Meet someone new
- Go swimming at the local gym
- Read cartoons or comic books
- Use your strength
- Ride a bike
- Go to a museum or exhibit
- Go for a scenic drive
- Walk around downtown

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Appendix A: Acronyms

CBT	cognitive behavioral therapy
DoD	Department of Defense
DVBIC	Defense and Veterans Brain Injury Center
GSW	gunshot wound
IED	improvised explosive device
SCORE	Study of Cognitive Rehabilitation Effectiveness
TBI/mTBI	traumatic brain injury/mild traumatic brain injury
VA	Veterans Affairs