Trauma-Informed Physical Therapy for Survivors of Torture

Combined Sections Meeting 2015

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Session Type: Educational Sessions
Session Level: Multiple Level

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HPA The Catalyst is the Section on Health Policy & Administration of the American Physical Therapy Association
Trauma Informed Physical Therapy for Survivors of Torture

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Session Learning Objectives

After this session, participants will be able to:
1. Discuss the physical, mental health, and social consequences of torture and trauma
2. Discuss the clinical presentation and potential mechanisms associated with chronic pain in survivors of torture and trauma
3. Describe a model of Trauma Informed Physical Therapy Services (TIPS) for survivors of torture and trauma
4. Identify ways to include information about torture, its impact and treatment in physical therapy curricula

Definition of a “refugee”

- Person living outside his/her country
- Unable to gain protection from own country
- Based on persecution or well-founded fear of persecution on account of:
  1. Race
  2. Religion
  3. Nationality
  4. Membership in a particular social group
  5. Political opinion

Refugee Act of 1980

- Signed by Jimmy Carter
- Created Federal Refugee Resettlement Program
- Assist them to achieve economic self-sufficiency as quickly as possible after arrival in the U.S.

Disclosure

There are no relevant financial relationships to disclose
Refugee or Asylum Seeker?

An applicant for refugee status is outside the United States.

Vermont

Newest Refugee Origins

- Iraq
- Burma/Myanmar
- Bhutan

Largest numbers

- Bosnia (1990’s primarily) 1,705
- Vietnam (1990’s primarily) 1,069
- Somalia (2003 – currently) 684
- Bhutan (2008 – currently) 1,564

Impact on Vermont

- > 6,000 New Americans in Vermont
- Approximately 10% of the combined population of Burlington & Winooski represent re-settled refugees
- Impact on VT’s cultural diversity
- Increased need for cultural diversity education & services for refugees
- Winooski HS > 40% ELL
- King Street after school 90% of 90 kids

II. Prevalence of Torture and Trauma in the Refugee Population and Impact on Health
5-35% of Refugees are Torture Survivors  
(Campbell, 2007)

Clinical Experience - 67% are Survivors of Torture

- Types of Torture
  - Psychological Torture: 34% (e.g., witnessing beheading)
  - Witness Torture of Others: 27% (e.g., rape of family member)
  - Beating: 24%
  - Rape or Sexual Torture: 16%
  - Secondary Survivor: 15%
  - Deprivation: 11%
  - Kidnapping/Disappearance: 10%
  - Wounding/Maiming: 10%
  - Forced Postures: 5%
  - Asphyxiati0n: 3%
  - Sensory Stress: 3%
  - Electrical Torture: 2%
  - Burning: 2% Dental Torture: 2%

Definition of Torture

  “an act committed by a person acting under the color of law specifically intended to inflict severe physical or mental pain or suffering upon another person within his custody or lawful control.”

Historical Perspective

- Throughout history torture used as a method of political interrogation, punishment, & coercion often to extract information
- Medieval times considered “Golden Age of Torture” torture devices such as torture rack

Declaration of Human Rights

- 1948 – As a result of WW II atrocities, torture was declared unacceptable and the UN adopted the Universal Declaration of Human Rights

1948 Declaration of Human Rights

- Article 5 states:
  “No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment.”
Other International Treaties

- Geneva Convention (3rd) relative to the Treatment of Prisoners of War, 1929
- Geneva Convention (4th) protection of Civilian Persons in Time of War, 1949

Torture Victims Relief Act (1998)

- Specialized treatment (e.g., ability to listen to torture stories, psych, soc, legal and medical needs)
- 2009 funds appropriated to 36 programs

III. The World Confederation for Physical Therapy Policy Statement on Torture

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WCPT Policy Statement: Torture

- First adopted at the 13th General Meeting of WCPT June 1995
- Revised and re-approved at the 16th General Meeting of WCPT June 2007
- Revised and re-approved at the 17th General Meeting of WCPT June 2011

WCPT Policy Statement: Torture

- “Physical therapists shall not:
  - countenance, condone or participate in the practice of torture or cruel, inhuman or degrading procedures
  - provide any premises, instruments, substances or knowledge that facilitates torture or other forms of cruel, inhuman and degrading treatment or that diminishes the ability of a person to resist such treatment
  - be present during any procedure where cruel, inhuman or degrading treatments are being used or threatened.

- Physical therapists’ fundamental role is to alleviate distress. No motive – whether personal, collective or political – shall prevail against this higher purpose.”

WCPT Policy Statement: Torture

- “Practicing physical therapists should understand the general and specific physical and psychological functional limitations and impairments that can result from torture, and the appropriate functional assessments and treatments for survivors.
- The curriculum for professional physical therapist entry level and continuing professional development programmes should include the prevention and prohibition of torture as well as the examination/assessment/evaluation and intervention/treatment of victims of torture.”
International Association for the Study of Pain (IASP) Declaration on Torture (2009)

- **Mission**
  
  "to stimulate and support the study of pain and to translate that knowledge into improved pain relief worldwide."

- **Vision**
  
  "Working together for pain relief throughout the world."

- **Preamble**
  
  - The most preventable form of human pain is that inflicted in the form of torture and inhumane treatment, whether physical or psychological.
  - The participation by IASP members in acts of torture or inhumane treatment is therefore against the fundamental principles of the Association.

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**What is Pain?**

Pain is a disturbed sensation that may cause disability, suffering or distress

An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage


International Association for the Study of Pain (IASP) Taxonomy

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**Neuroplasticity and Central Sensitization**

- **Central sensitization - IASP definition**
  
  "Increased responsiveness of nociceptive neurons in the central nervous system to their normal or subthreshold afferent input"

- Neuronal sensitivity is altered by changes in:
  
  - Threshold
  - Gain
  - Spatial input


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- "Central sensitization represents an uncoupling of the clear stimulus response relationship that defined nociceptive pain."

- "In addition to activity-dependent synaptic plasticity, changes in microglia, astrocytes, gap junctions, membrane excitability and gene transcription all can contribute to the maintenance of central sensitization"
Biopsychosocial Model of Pain (Loeser & Fordyce, 1988)

- Nociception
  - neural process of encoding noxious stimuli
- Pain
  - sensory perception of noxious stimuli
- Suffering
  - negative affective reaction
- Pain Behavior
  - what person does/doesn’t say or do
- Social
  - environmental context

Pain is complex

- Biological
  - short term (stress cascade, ↓ ability to heal)
  - central sensitization and neuroplasticity
  - individual & genetic differences
- Psychological
  - prior experience – trauma
  - thoughts, feelings, beliefs, coping
  - cognitive & communication skills
- Social
  - beliefs, stereotypes, attitudes, and disparities

Chronic Pain in Survivors of Torture

“Among the multitude of problems presented by torture survivors referred for treatment, persistent pain in the musculoskeletal system is recognized as one of the most frequent physical complaints.”


Prevalence of Chronic Pain in Torture Survivors


- 60 survivors of torture and age/sex matched controls
- 87% of survivors had chronic pain decades after torture experience


- 78% of survivors of torture in study (n=115) reported multiple sites of persistent pain years after injuries

Pain Locations in Survivors of Torture


- Headache (50%)
- Back (40%)
- Leg pain (29%)
- Pelvis/abdomen (17%)
- Shoulders/arms (15%)
- Chest pain (11%)
- Widespread (8%)

- Study findings challenge the assumption that chronic pain in survivors of torture is mostly a manifestation of psychological distress
- Chronic pain often unrecognized and undertreated

Post Traumatic Stress/D and Chronic Pain

- PTS/D and chronic pain co-occur (~80%)
- Mutual Maintenance Theory
- Perpetual Avoidance Model
  - re-experiencing trauma
  - triggers arousal – increases muscle tension
  - increases pain
  - pain results in avoidance of movement and physical activity
  - avoidance triggers re-experiencing

Liedl et al. (2011). Physical activity within a CBT intervention improves coping with pain in traumatized refugees: Results of a randomized controlled design. Pain Medicine, 12, 234-245.
Pain Neuroscience Education

Terms
• Pain physiology education
• Pain biology education
• Neurophysiology of pain education
• Therapeutic neuroscience education

Goals
• Elicit pain beliefs and address fears, myths, misunderstandings
• Educate about the neurophysiology of pain
• Desensitize the CNS
• Increase movement and function

Pain Neuroscience Education Research

• Active area of research internationally
• Major research contributors:
  o Butler and Moseley, NZ and Australia
  o Louw and PuenteDura, International Spine and Pain Institute, Iowa
  o Jo Nijs et al., University of Brussels

Pain Neuroscience Education in Survivors of Torture


• 4 groups with 10 individuals per group, recruited from Transcultural Psychosocial Organization Cambodia, working with Danish DIGNITY Institute Against Torture’s model
• Pain School - 10 two hour sessions consisting of thematic units (e.g., pain mechanisms, pacing, etc.)

Results

• 34/40 completed the Pain School
• Disability rating index (DRI) - all items (except running and outdoor walk) improved significantly
• Brief Pain Inventory - reduction of pain scores; significantly reduced “mean pain for last 24 hours”

Conclusions:
• Pain School content was culturally adapted and transferable
• Clients and therapists rated intervention relevant and helpful
• Quantitative outcomes – improvements with significant effect sizes

Summary

Chronic Pain in Survivors of Torture

• Chronic pain is prevalent
• Biopsychosocial model of pain
• Neuroplasticity and central sensitization
• Comorbid PTS/D and chronic pain
• Pain Neuroscience Education - promising pilot project
• Collaboration between Psychologists and PTs needed to meet the health care needs of this population

Mental Health Services and Trauma Informed
Physical Therapy Services (TIPS) for Survivors of Torture and Trauma

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What Do We Know So Far?

... mental health studies

- 30.6% of refugees and Asylum seekers meet PTS/D (Steel et al., 2009 Meta Analysis)
- Refugees and Torture Survivors often present with more somatic than emotional symptoms (Van Ommeren et al., 2002; Hinton, Um, & Ba, 2001)
- Most common "Western" defined mental health concerns
  - Posttraumatic Stress (PTS/D)
  - Anxiety
  - Depression
  - Somatic Complaints

Mental Health Concerns

Coping with:
- Poverty
- Unemployment
- Grief over loss of Family Members
- Loss of Culture/Home
- Language barriers
- New culture
- Trauma/torture experiences

Cultural Adaptations for Refugee Engagement (CARE)

Clinical Process Adaptations:
- Safety and Emotional Regulation
- Non-Diagnostic Approach
- Psychological Flexibility
- Timing and Control
- Non-judgment
- Spirituality
- Clinical Boundaries
- Knowledge of Mental Health Practices

Connecting Cultures with ACT Bhutanese Groups (8 Modules)

Pre-Assessment and Cultural Consultant for Binder
1. Safety/Present Moment and Mindfulness
2. Values/Definition of Torture and PTS/D, CTS
3. Coping and Committed Action
4. Cognitive De-Fusion
5. Observing Self/Lifeline-NET
6. Acceptance
7. Narrative Exposure with Scribe
8. Celebration and Certificates
#2 Values

Subjective units of distress

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<tr>
<td>एक</td>
<td>दो</td>
<td>तीन</td>
<td>चार</td>
<td>पांच</td>
<td>छ</td>
<td>सात</td>
<td>आठ</td>
<td>नौ</td>
<td>दस</td>
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</table>

#5 Life line

Trauma Informed Physical Therapy Services (TIPS)

PT examination
- Avoid re-traumatization
  - Communication skills: introduction, explanation of the purpose of the interview, avoid prolonged waiting for client
  - Allow client to feel that they are in control of the interview, avoid rushing, or asking questions too quickly
  - Open ended questions with redirection as necessary
  - Explain exam procedures and why you are doing them

- Use of interpreter
  - Best to have professional interpreter vs family member
  - Speak and look at the client
  - Allow time for question to be asked and for client to answer
  - Ask for clarification if necessary
Trauma Informed Physical Therapy Services (TIPS)

- PT Examination Outcome Measures
- Important to track function via standardized functional tool as pain, strength and ROM may not change
  - Oswestry, NDI, OPTIMAL, LEFS
  - Pain: Brief Pain Inventory, Disability Rating Index

Avoid re-traumatization

Instrument assisted soft tissue mobilization…..

Trauma Informed Physical Therapy Services (TIPS)

- PT Evaluation

- PT Interventions
  - Pain Neuroscience Education
  - Functional component
  - Exercise specific program as appropriate
  - Cardiovascular component as appropriate
  - Graded Motor Imagery

Lumbar Traction

Cervical Traction

Electrical Stimulation
Graded Motor Imagery

○ “GMI is an individually tailored treatment process which has successfully been used for persistent and complex pain states”
○ “It aims to give flexibility and creativity back to the brain via graded exposure”

From GMI poster


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Graded motor imagery - L/R discrimination

• Chronic pain: diminished ability to distinguish between L/R
• L/R discrimination needed for normal recovery from chronic pain


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Graded motor imagery - L/R discrimination

• Uses reflection of uninvolved extremity movement to simulate involved extremity- exercising involved hand in the brain w/out actually moving it
• More advanced and done after L/R discrimination has improved


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Graded motor imagery - explicit motor imagery

“Thinking about moving without actually moving - imagined movements”

“There are many different ways to go through the process and the most common method used in GMI is a first person perspective of feeling your own movement and postures. Graded activation of the brain through observation, imagining movements and actual movements.”


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Challenges

• Language barrier/use of interpreters
• Cultural
  – Exercise
  – shoe wear
• Financial - insurance issues, job constraints, home environment
• Psychological-
  – dissociation
  – lack of sleep can aggravate symptoms
Vicarious Trauma

- Clinician needs to be prepared for hearing difficult histories
- Provider can become traumatized
  - Anxiety, depression, PTSD like symptoms
  - De-brief with other caregivers or psych team
- Work with mentor who can offer assistance or advice

VII. Case vignettes

Case Study 1: HM

37 yo male from Sudan, with 10+ year history of low back pain

<table>
<thead>
<tr>
<th>Examination</th>
<th>Initial Exam</th>
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<tbody>
<tr>
<td>Oswestry</td>
<td>57%</td>
</tr>
<tr>
<td>Right sided low back pain</td>
<td>5-8/10 per VAS</td>
</tr>
<tr>
<td>LE strength</td>
<td>4/5 LLE hip extension (otherwise 5/5 throughout)</td>
</tr>
<tr>
<td>Abdominal strength</td>
<td>Normal upper abdominals Poor lower abdominals</td>
</tr>
<tr>
<td>Pulpation</td>
<td>Moderate tenderness and spasming right lumbar para spinal \n</td>
</tr>
</tbody>
</table>
Treatment

- Lumbar stabilization exercises, exercises to correct faulty movement patterns, recumbent bike, US to right paraspinals for 3 visits.
- D/C US at 4th visit, other interventions progressed
- Initiated GMI at visit 4

Graded motor imagery left/right discrimination

- Tested at 4th visit

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<tr>
<th></th>
<th>Left</th>
<th>Right</th>
<th>Level</th>
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<tbody>
<tr>
<td>Accuracy</td>
<td>100%</td>
<td>75%</td>
<td>one</td>
</tr>
<tr>
<td>Speed</td>
<td>2.8</td>
<td>2.4</td>
<td>one</td>
</tr>
</tbody>
</table>
- Desired norms are 85% or greater accuracy at speeds of 1.6 seconds or less

Follow up (4 weeks later, 8 visits)

<table>
<thead>
<tr>
<th></th>
<th>Initial exam</th>
<th>4 weeks later</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oswestry</td>
<td>37%</td>
<td>28%</td>
</tr>
<tr>
<td>Right sided low back pain</td>
<td>5-8/10 per VAS</td>
<td>unchanged</td>
</tr>
<tr>
<td>LE strength</td>
<td>4/5 LLE hip extension (otherwise 5/5 throughout)</td>
<td>5/5</td>
</tr>
<tr>
<td>Abdominal strength</td>
<td>Normal upper abdominals Poor lower abdominals</td>
<td>Good Lower abdominals (leg lower to 35 degrees)</td>
</tr>
<tr>
<td>L/R discrimination</td>
<td>75% R level 1</td>
<td>100% R level 1</td>
</tr>
<tr>
<td>L/R speed</td>
<td>2.8 seconds left, 2.4 seconds Right</td>
<td>1.6 seconds bilaterally</td>
</tr>
</tbody>
</table>

Case Study #2: CC

- Presentation
  - Fear of police
  - Injection
  - Unable to move
  - Dissociated, trouble focusing in, remembering
- Goals
  - Walk and hold granddaughter
- Pacing

3 weeks of once a week PT

- Practiced walking at bar
- Holding “baby”
- Walking with quad cane
VI. Inclusion of information about torture and trauma and TIPS in physical therapy curricula

References


Thank You!

- Questions
- Comments
- Discussion