Childhood Trauma and Eating Disorders: Clinical and Scientific Impact and Practical Interventions

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Objectives for Today

1. Examine the trauma-psychopathology association for eating disorders
2. Review the psychobiological impact of trauma
3. Participants will gain a practical understanding of screening and assessment of child trauma.
4. Participants will become familiar with evidence-based and trauma-specific treatments that help children and families recover from traumatic events.
Part 1: Child Maltreatment
Types of Abuse
Physical Abuse
Physical Abuse

**Signs of neglect**
- Physically and emotionally neglected child may exhibit dull “vacant” stare and signs of poor hygiene; pallor suggests anemia
- Wasted buttocks caused by malnutrition
- Wasting of subcutaneous tissue and untreated skin lesions in physically neglected child
- Abdominal distention caused by malnutrition
- Malnourished child with emaciated appearance and distended abdomen; height and weight are often well below percentiles normal for age

**Staging of injuries - bruises**
- Acute bruise with marked swelling (1–3 days)
- Purple (1–5 days)
- Green (5–7 days)
- Yellow (7–10 days)
- Brown (>10 days)

**Staging of injuries - subdural hematomas**
- Acute hemorrhage
- Fluid
- Organizing membranes
- Organized clot mistaken for atrophic brain tissue on CT scan
- Fresh subdural hematoma (acute)
- Organizing subdural hematoma (weeks)
- Organized subdural hematoma (months)
Sexual Abuse

- Fargo Forum, 1/16/17
Emotional Abuse

https://www.youtube.com/watch?v=1G7nohXbolc
Children and Abuse

• 10 – 13% of America’s children have been kicked, burned, bit, punched, hit with an object, beaten or threatened with weapon by a parent

• 25% of school children experience a trauma

• 20% of traumatized children have a mental health diagnosis and only 10% of those receive treatment

• 21 – 32% of U.S. women were sexually abused before age 18

Kilpatrick, 1996
Vogeltanz et al., 1999
NCTSN School committee, 2008
ACE STUDY

Adverse Childhood Experiences

1. Child physical abuse.
2. Child sexual abuse.
4. Emotional neglect.
5. Physical neglect.
6. Mentally ill, depressed or suicidal person in the home.
7. Drug addicted or alcoholic family member.
8. Witnessing domestic violence against the mother.
9. Loss of a parent to death or abandonment, including abandonment by parental divorce.
10. Incarceration of any family member for a crime.

(Anda & Felitti, 2009)
The ACE Study
(Felitti et al., 1998)

<table>
<thead>
<tr>
<th>Disease</th>
<th>4 or More Adversities (Odds Ratio)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>2.2</td>
</tr>
<tr>
<td>Obesity</td>
<td>1.6</td>
</tr>
<tr>
<td>Depression</td>
<td>4.6</td>
</tr>
<tr>
<td>Suicide Gesture</td>
<td>12.2</td>
</tr>
<tr>
<td>Alcoholism</td>
<td>7.4</td>
</tr>
<tr>
<td>Illicit Drugs</td>
<td>4.7</td>
</tr>
<tr>
<td>Injectable Drugs</td>
<td>10.3</td>
</tr>
<tr>
<td>Sexual Promiscuity</td>
<td>3.2</td>
</tr>
<tr>
<td>STD</td>
<td>2.5</td>
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</table>
## The ACE Study
(Felitti et al., 1998)

<table>
<thead>
<tr>
<th>Disease</th>
<th>4 or More Adversities (Odds Ratio)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Disease</td>
<td>2.2</td>
</tr>
<tr>
<td>Cancer</td>
<td>1.9</td>
</tr>
<tr>
<td>Stroke</td>
<td>2.4</td>
</tr>
<tr>
<td>Bronchitis/Emphysema</td>
<td>3.9</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1.6</td>
</tr>
<tr>
<td>Hepatitis</td>
<td>2.4</td>
</tr>
<tr>
<td>Fair/Poor Health</td>
<td>2.2</td>
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</table>
Ace Study

The image shows a bar chart titled "Ace Study." The x-axis represents ACE Score, and the y-axis represents % Attempting Suicide. The chart illustrates a significant increase in the percentage of attempts as the ACE Score increases, particularly from 0 to 3. The score of 4+ shows the highest percentage among the categories shown.
The ACE Study
(Felitti et al., 1998)
Part 2: Trauma and Psychopathology: A Closer Look at Eating Disorders
THE AMERICAN JOURNAL OF PSYCHIATRY

Editorial

“Sexual Abuse,” Pathogenesis, and Enlightened Skepticism
FIG. 3. Cumulative curves on the delivery of food pellets to isolates and normals during the course of 24 hr. Each curve represents the mean of three animals over ten testing sessions with ad lib access to food upon a bar-press.
Is there a relationship between trauma and disordered eating in traumatized samples?
Childhood maltreatment and eating disorder pathology: a systematic review and dose-response meta-analysis

M. L. Molendijk, H. W. Hoek, T. D. Brewerton and B. M. Elzinga
Method

- 3938 studies examined some aspect of CM and psychopathology related to ED; 82 included in review
- 13059 individuals with ED
- 15092 individuals considered healthy controls (HC)
- 7736 individuals considered psychiatric controls (PC)
Results

1. CM in ED higher than in HC (odds ratios >2)
2. CM in ED higher than in PC (odds ratio = 1.31)
   - Effect lasts after controlling for possible publication bias
3. CM in ED associated with greater psychiatric comorbidity, suicidal behavior, and self harm
Conclusion

1. CM linked to ED-particularly binge eating

2. Dose response relationship of CM and psychopathology
Impact of Psychological Trauma on ED Treatment
The impact of childhood sexual abuse in anorexia nervosa

Jacqueline C. Carter\textsuperscript{a,b,*}, Carmen Bewell\textsuperscript{a,c}, Elizabeth Blackmore\textsuperscript{a}, D. Blake Woodside\textsuperscript{a,b}

\textsuperscript{a} Department of Psychiatry, Toronto General Hospital, University Health Network, Toronto, Ont., Canada
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Received 29 May 2005; received in revised form 31 August 2005; accepted 24 September 2005
Method

- 77 hospitalized AN patients
- 37 (48%) reported CSA before AN
- CSA more depression, anxiety, interpersonal problems and OCD
Did CSA Influence Dropout?

Proportion still in treatment or completed successfully

- AN-R, without CSA (n = 29)
- AN-R, with CSA (n = 17)
- AN-BP, without CSA (n = 11)
- AN-BP, with CSA (n = 20)

Weeks after starting treatment
So, how may early trauma operate to increase risk?
Possible Mediators/Mechanisms

Trauma ➔ • Shame
               • Dissociation
               • Impulse Control
               • Anxiety
               • Substance Use
               • Cognitions
               • Mood Instability ➔ ED

(Andrews, 1997; Kent et al., 1999; Hart & Waller, 2002; Murray & Waller, 2002; Wonderlich et al., 2001)
Psychobiological Mediation (Animal Studies)

Suomi, 1991; Kraemer, 1992; McEwen, 1998; Meaney et al., 1988; Sapolsky et al., 1986

EARLY STRESS → Altered Biological Stress Response → Behavioral Response
Suppressed HPA Axis and Trauma (Carpenter et al., 2007)
Suppressed HPA Axis and Trauma (Carpenter et al., 2007)

![Graph showing changes in plasma cortisol (nmol/L) over elapsed time for controls and maltreated individuals.](image-url)
Does Child Maltreatment Damage the Brain?

In a child’s brain elevated catecholamines and cortisol may lead to:

- Loss of neurons
- Delays in myelination
- Deviant pruning processes
- Inhibiting of neurogenesis

(Lauder, 1988; Sapolsky, 1990; DeBellis et al., 2002; Dunlop et al., 1997; Tanapat et al., 1998; Bremner, 1999)
**Biological Correlates of Trauma in Children with PTSD**

**MRI Based Volume**
- ↓ Total Brain (Early Onset, Duration)
- ↓ Corpus Callosum
- ↓ Prefrontal Cortex
- ↑ Superior Temporal Gyrus
- ↑ Hippocampal Volume
- ↓ Cerebellum
- Ø Pituitary

(Reicher et al., 1997; Carrion et al., 2001; DeBellis et al., 1999, 2002a, 2002b; 2004; 2006; Thomas & DeBellis, 2004; Tupler & DeBellis, 2006)
Summary

• Trauma elicits psychobiological changes that may result in increased impulsive dysregulated behavior (i.e., binge, purge, self-harm).

• Trauma may reduce effectiveness of psychiatric and psychological treatment
Part 3: Screening, Assessment, and Treatment of Child Trauma
PTSD (untouched) elicits psychiatric disorders which perpetuate the PTSD ("vicious cycle"
Process Without Early Identification and Intervention

Child Trauma → Psychobiological Change

Behavior Change

Family Change

Social Change

Diagnosis (often multiple at this stage) → Lengthy Passage of Time

Treatment (often not trauma specific)
Process With Early Intervention

Child Trauma → Psychobiological Change → Trauma Screen → Refer → Trauma Assessment → Refer → Trauma-Specific, Evidence-Based Treatment
Traumatic Event Defined

Witnessed or experienced event that posed a real or perceived threat

- Domestic Violence
- Sexual Abuse
- Physical Abuse
- Neglect
- Community Violence
Posttraumatic Stress Disorder (PTSD)

A. Exposure to a traumatic event
B. Intrusion symptoms (memories, nightmares, flashbacks, etc.)
C. Persistent avoidance of stimuli associated with the trauma
D. Negative alterations in cognitions and mood that are associated with the traumatic event
E. Alterations in arousal and reactivity that are associated with the traumatic event
F. Persistence of symptoms for more than one month
G. Significant symptom-related distress or functional impairment
H. Not due to medication, substance or illness
PTSD in Children Under Six

A. Exposure to traumatic event
B. Intrusion- play reenactment of trauma, distressing dreams not clearly linked to trauma
C. Avoidance of cues or negative alterations in cognitions
D. Arousal, reactivity
E. Persistence of symptoms for more than one month
F. Significant symptom-related distress or functional impairment
G. Not due to medication, substance or illness
### Differences between Screening and Assessment

<table>
<thead>
<tr>
<th>Screening</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Evaluating for the possible presence of a problem (identification)</td>
<td>• Comprehensive process intended to help diagnose, define, or develop treatment</td>
</tr>
<tr>
<td>• Outcome is typically a yes or no</td>
<td>• Tends to be longer and more resource intensive</td>
</tr>
<tr>
<td>• Brief</td>
<td>• Used selectively with based on individual need</td>
</tr>
<tr>
<td>• Can be used universally or with targeted groups</td>
<td>• Often require extensive training</td>
</tr>
<tr>
<td>• Frontline workers</td>
<td></td>
</tr>
</tbody>
</table>

(NCTSN, 2012; SAMSHA, 2014)
# Screening and Assessment of Youth PTSD Symptoms

<table>
<thead>
<tr>
<th>SCREENING</th>
<th>ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure</td>
<td>Age Range</td>
</tr>
<tr>
<td>MN TSSCA (Trauma – Internalizing)</td>
<td>Child 5-18</td>
</tr>
<tr>
<td>PSC-17 (Trauma – Externalizing)</td>
<td>Parent 3-18</td>
</tr>
<tr>
<td>CATS</td>
<td>Parent 3-18</td>
</tr>
<tr>
<td></td>
<td>Child 7-18</td>
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</tbody>
</table>
University of Minnesota’s Traumatic Stress Screen for Children and Adolescents (TSSCA)

Name of Child/Adolescent: ___________________________  DOB: ___________  Gender: □ M  □ F
Interviewer Name/ID: ___________________________  Assessment Date: ___________

Below is a list of problems that people sometimes have after experiencing a bad or upsetting event. Bad or upsetting events might include being threatened or hurt, seeing someone else threatened or hurt, or feeling like your life was in danger.

Have you ever experienced a bad or upsetting event?  ☐ Yes  ☐ No

If yes, what was the bad or upsetting event? Feel free to list more than one.

When thinking about your bad or upsetting event(s), how often have the following problems happened to you during the past month?

<table>
<thead>
<tr>
<th>DURING THE PAST MONTH, HOW OFTEN HAVE YOU...</th>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Had upsetting thoughts, images, or memories of the event come into your mind when you didn’t want them to?</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 2</td>
</tr>
<tr>
<td>2. Felt afraid, scared, or sad when something reminded you about the event?</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 2</td>
</tr>
<tr>
<td>3. Tried to stay away from people, places, or activities that reminded you of the event?</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 2</td>
</tr>
<tr>
<td>4. Had trouble feeling happiness, enjoyment, or love?</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 2</td>
</tr>
<tr>
<td>5. Been on the lookout for danger or other things that you are afraid of (for example, looking over your shoulder when nothing is there)?</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 2</td>
</tr>
</tbody>
</table>

TOTAL: ___________________________
Comparison of the PSC-17 and Alternative Mental Health Screens in an At-Risk Primary Care Sample

WILLIAM GARDNER, PH.D., AMANDA LUCAS, M.B.A., DAVID J. KOLKO, PH.D.,
AND JOHN V. CAMPO, M.D.

ABSTRACT

Objective: To validate the 17-item version of the Pediatric Symptom Checklist (PSC-17) as a screen for common pediatric mental disorders in primary care. Method: Patients were 269 children and adolescents (8–15 years old) whose parents completed the PSC-17 in primary care waiting rooms. Children were later assessed using the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version (K-SADS-PL). The PSC-17’s subscales were compared with K-SADS-PL diagnoses and measures of anxiety, depression, general psychopathology, functioning, and impairment. Results: In receiver operating characteristics analyses, the PSC-17 subscales performed as well as competing screens (Child Depression Inventory, the parent and child Screens for Child Anxiety-Related Disorders) and Child Behavior Checklist subscales (Aggressive, Anxious-Depressed, Attention, Externalizing, Internalizing, and Total) in predicting diagnoses of attention-deficit/hyperactivity disorder, externalizing disorders, and depression (area under the curve ≥0.80). The instrument was less successful with anxiety (area under the curve = 0.68). None of the screens were highly sensitive, many were insensitive, and all would have low positive predictive value in low-risk primary care populations. Conclusions: The PSC-17 and its subscales are brief than alternative questionnaires, but performed as well as those instruments in detecting common mental disorders in primary care. Continued research is needed to develop brief yet sensitive assessment instruments appropriate for primary care. J. Am. Acad. Child Adolesc. Psychiatry, 2007;46(5):611–618. Key Words: screening, primary care, mental health assessment.
Child and Adolescent Trauma Screen (CATS)

Mark 0, 1, 2 or 3 for how often the following things have bothered the child in the last two weeks:

0 Never / 1 Once in a while / 2 Half the time / 3 Almost always

1. Upsetting thoughts or images about a stressful event. Or re-enacting a stressful event in play.
2. Bad dreams related to a stressful event.
3. Acting, playing or feeling as if a stressful event is happening right now.
4. Feeling very emotionally upset when reminded of a stressful event.
5. Strong physical reactions when reminded of a stressful event (sweating, heart beating fast).
6. Trying not to remember, talk about or have feelings about a stressful event.
7. Avoiding activities, people, places or things that are reminders of a stressful event.
8. (Ages 7+ only): Not being able to remember an important part of a stressful event.
9. (Ages 7+ only): Negative changes in how s/he thinks about self, others or the world after a stressful event.
10. (Ages 7+ only): Thinking a stressful event happened because s/he or someone else did something wrong or did not do enough to stop it.
11. Having very negative emotional states (afraid, angry, guilty, ashamed).
12. Losing interest in activities s/he enjoyed before a stressful event. Including not playing as much.
13. Feeling distant or cut off from people around her/him.
14. Not showing or reduced positive feelings (being happy, having loving feelings).

15. Being irritable. Or having angry outbursts without a good reason and taking it out on other people or things.
16. (Ages 7+ only): Risky behavior or behavior that could harmful.
17. Being overly alert or on guard.
18. Being jumpy or easily startled.
19. Problems with concentration.
20. Trouble falling or staying asleep.

Please mark “YES” or “NO” if the problems you marked interfered with:

1. Getting along with others • Yes • No
2. Hobbies/Fun • Yes • No
3. School or daycare • Yes • No
4. Family relationships • Yes • No
5. General happiness • Yes • No

CATS – Caregiver Report for ages 3-17 Years
What Helps Youth with PTSD?
Evidence Based Treatments

https://www.youtube.com/watch?v=7dzkS0ioqqw&list=PL8FBF506DEC670ADF&index=5
PTSD Treatment Efficacy

Effect Size (Hedge's $g$)

-1 -0.5 0 0.5 1 1.5 2

Primarily Cognitive
Mixed Exposure
Primarily Exposure
Skills-based/SIT
EMDR
Psychodynamic
Hypnotherapy
Self-help
Group
Biofeedback
Acupuncture
Venlafaxine
Alpha blockers
SSRIs
TCAs
MAO-Is
Other Antidepressants
Atypical
Benzodiazepines
Mood Stabilizers

Watts et al., 2013; cited by Monson, 2017
**Trauma Specific Evidence-based**

**CHILD AND FAMILY TRAUMATIC STRESS INTERVENTION (CFTSI)**
- Brief 5-8 sessions
  - Family
  - Ages 7-18
- Building communication between child and caregiver.
- Psychoeducation on trauma, PTSD, coping strategies.
- Within 45 days of ANY TRAUMA
  - ANY TRAUMA SYMPTOMS

**TRAUMA FOCUSED COGNITIVE BEHAVIOR THERAPY (TFCBT)**
- Individual or family
  - Ages 3-18
- Psychoeducation on trauma and PTSD, parenting skills, coping strategies, trauma narrative, safety planning.
- Internal symptoms
  - (ANY TRAUMA)

**PROBLEM SEXUAL BEHAVIORS CBT (PSB-CBT)**
- Family
  - Ages 5-7-12
- Psychoeducation on body safety, body safety rules, coping strategies, and parenting skills.
- Children with problem sexual behaviors
ALTERNATIVES FOR FAMILIES CBT (AF-CBT)

- FAMILY AGES 5-18
  - Psychoeducation and skill building to improve caregiver-child relationship in families where there is a history of excessive force/discipline and conflict.
  - PHYSICAL ABUSE OR DV/EMOTIONAL ABUSE WITH OFFENDING CAREGIVER

PARENT CHILD INTERACTION THERAPY (PCIT)

- CAREGIVER AND CHILD AGES 2-12
  - Building parenting skills and coaching caregiver. Caregiver-child relationship building.
  - EXTERNAL BEHAVIOR PROBLEMS (DV, PHYSICAL ABUSE, NEGLECT)

CHILD PARENT PSYCHOTHERAPY (CPP)

- FAMILY, FOCUSES ON PARENTING AGES 0-6
  - Focusses on supporting and strengthening the caregiver-child relationship as a vehicle for restoring the child's functioning
  - ATTACHMENT PROBLEMS, TRAUMA
TCTY Outcomes: Trauma Symptom Checklist for Young Children (TSCYC): Pre and Post Treatment
Clinical Centers with Clinicians already trained by TCTY in TF-CBT
https://www.tcty-nd.org

- Resources
- Clinician Roster