Translating Science into Recovery for Traumatized Children and Adults

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Continuing Medical Education

Commercial Disclosure

I, Julian D. Ford, am co-owner of Advanced Trauma Solutions (ATS), Inc., Sole Licensee of the University of Connecticut for the TARGET© Treatment/Training Model
Learning Objectives

Attendees will be able to:

- Describe the prevalence of psychological trauma and victimization in community and high-risk populations
- Identify the core features of PTSD and contract them with the 3 core features of Developmental Trauma Disorder (DTD)
- Describe 3 areas in the brain that show altered trauma-related patterns of activation and connectivity in PTSD and DTD
- Describe a practical framework for clinicians and peer/family support for youth and adults in recovering from DTD and PTSD
Treating Complex Traumatic Stress Disorders in Children and Adolescents

Scientific Foundations and Therapeutic Models

edited by
Julian D. Ford
Christine A. Courtois
Exposure to Traumatic Stressors and PTSD are Prevalent and Associated with Internalizing/Externalizing in Childhood

➢ **61%** of nationally representative sample of U.S. children exposed to victimization in the past year (Finkelhor et al., 2009)

➢ **62%** of nationally representative sample of U.S. adolescents had experienced a traumatic stressor, **5%** had experienced PTSD (McLaughlin et al., 2013)
17,000 adults screened in medical clinic @Kaiser Permanente HMO (Anda et al., 2006)
Polyvictimized Children and Youth: Prevalence

➢ Nationally representative sample of 2,030 U.S. children, 10% were poly-victims: 9+ (age 3-6) to 15+ (age 15+) types (of 30 possible) of victimization lifetime (Finkelhor et al., 2009)

➢ Nationally representative sample of 3,351 trauma-exposed U.S. adolescents, LCA found 8% poly-victims (6-11 types traumatic events including physical or sexual abuse ➔ at risk for PTSD, depression, and delinquency (Ford et al., 2009)
Figure 1. Latent classes of adolescents identified based on self-reported exposure to psychological trauma: witnessing someone: 1, shot; 2, cut or stabbed; 3, sexually assaulted; 4, mugged or robbed; 5, threatened with a weapon; 6, physically assaulted; Personal exposure to: 7, serious accident; 8, natural disaster; 9, serious injury; and 10, incident involving fear of death. Unwanted sexual activity involving: 11, perpetrator’s penile penetration; 12, digital or object penetration; 13, oral sex; or 14, molestation; 15, victim’s forced touching of perpetrator’s sexual organs; and 16, victim’s forced penetration of perpetrator. Personal exposure to: 17, attack with a weapon; 18, attack without a weapon; 19, threat with a weapon; 20, physical assault with object; 21, physical assault with fists; 22, spanking requiring medical care; 23, physical assault leaving marks; and 24, being physically burned (Ford et al., 2010)
Polyvictimized Children and Youth: Prevalence in High Risk Samples


➢ N=1959 pre/teens in juvenile detention: 41% had histories of on average ≥ 9 types of potential traumatic events and 3-7 types of DSM-IV traumatic victimization (Ford et al., 2013)
Fig. 1. Exploratory latent class analysis: a three-class solution with 19 victimization (V) and non-victimization (NV) trauma history indicators:
1(NV) Being in an accident; 2(NV) Seeing a really bad accident; 3(NV) Being in a natural disaster; 4(NV) Someone close to you being badly injured/sick; 5(NV) Someone close to you died; 6(NV) Being so sick you thought you might die; 7(NV) Being separated from primary caregiver; 8(NV) Someone close to you trying to kill or hurt self; 9(V) Being physically attacked; 10(V) Being threatened with physical assault; 11(V) Being mugged; 12(V) Being kidnapped; 13(V) Attacked by an animal; 14(V) Witnessing family members physically fighting, shooting guns, or stabbing each other; 15(V) Witnessing family members threaten to kill or hurt each other; 16(V) Witnessing people outside the family fight, hit, beat, shoot with a weapon, or otherwise physically attack each other; 17(V) Being in a war or terrorist attack; 18(V) Being made to see or do something sexual; 19(V) Witnessing sexual abuse/assault (Ford, Grasso, & Hawke, in press).
“Briefly, the thalamus and sensory cortex process threat[s] … and convey this information to the amygdala. Prefrontal regions … modulate amygdala response, turning it down with the realization that something is not actually a threat or … irrationally amplifying it. The hippocampus also processes this information and plays a key role in retrieving relevant explicit memories … [and] modulates … response to psychological stressors. … The amygdala integrates this information and signals [lower brain areas, e.g., locus ceruleus], which regulates autonomic, [HPA], and noradrenergic response.”
Reformulations of Traumatic Stress Disorders $2^0$ Emerging Brain Science

- ICD-11 Complex PTSD
- DSM-5 Revised PTSD Criteria (+ Dissociative sub-type)
- Developmental Trauma Disorder
B. Intrusive Re-experiencing (1+)

1. Spontaneous Involuntary Distressing Memories
2. Nightmares (content OR affect related to trauma(s))
3. Flashbacks (may be partial orientation x3)
4. Intense or prolonged distress 2^0 cues (inc. symbolic)
5. Marked physiological reactions to reminders
DSM-5 PTSD Criteria

C. Active Avoidance (1+)

1. Avoids internal reminders (thoughts, feelings, physical sensations) of traumatic event(s)

2. Avoids external reminders (people, places, conversations, activities, objects, situation) of traumatic events
DSM-5 PTSD Criteria (New in Green Font)

D. Negative Alterations in Cognitions/Mood Beginning In/After Trauma (2+)

1. Psychogenic amnesia (typically dissociative)
2. Persistent exaggerated negative expectations about world/other (distrust), future (despair), self (damaged)
3. Persistent distorted blame of self or others re trauma
4. Pervasive negative emotional states
5. Anhedonia
6. Detachment/estrangement from others
7. Persistent inability to experience positive emotions
DSM-5 PTSD Criteria (New in Green Font)

E. Altered Arousal or Reactivity Beginning In/After Trauma (2+)

1. Irritable or aggressive behavior
2. Reckless or self-destructive behavior
3. Hypervigilance
4. Exaggerated startle response
5. Concentration problems
6. Sleep disturbance (restlessness or insomnia)
DSM-5 PTSD Criteria (New in Green Font)

Dissociative Sub-Type of PTSD =
Addition of Symptoms of Dissociation

1. Depersonalization or
2. De-realization
Criterion A.

Traumatic victimization (physical, sexual) + Attachment disruption (primary caregiver separation/loss, or rejection (neglect, verbal abuse))
Developmental Trauma Disorder

Criterion B.

Affective/Physiological Dysregulation

B. 1. Inability to modulate or tolerate extreme affect states (e.g., fear, anger, shame, grief), including extreme tantrums, immobilization

B. 2. Inability to modulate/recover from extreme bodily states: aversion to (a) touch, (b) sound; (c) unexplained bodily problems
Criterion B.

Affective/Physiological Dysregulation

B. 3. Diminished awareness/dissociation of emotional or bodily feelings

B. 4. Impaired capacity to describe emotions (alexithymia) or bodily states
Developmental Trauma Disorder

Criterion C.

Attentional/Behavioral Dysregulation

C. 1. Attention-bias toward or away from potential threats

C. 2. Impaired capacity for self-protection, including extreme risk-taking or thrill-seeking
Developmental Trauma Disorder

Criterion C.

Attentional/Behavioral Dysregulation

C. 3. Maladaptive self-soothing

C. 4. Habitual (intentional or automatic) or reactive self-harm

C. 5 Inability to initiate or sustain goal-directed behavior
Developmental Trauma Disorder

Criterion D.

Self and Relational Dysregulation

D. 1. Persistent extreme negative self-perception—self-loathing or viewing self as damaged/defective

D. 2. Attachment insecurity: attempt to care for caregivers, or difficulty tolerating reunion after separation from primary caregiver(s)
Developmental Trauma Disorder

Criterion D.

Self and Relational Dysregulation

D. 3. Extreme persistent distrust, defiance or lack of reciprocal behavior in close relationships

D. 4. Reactive physical/verbal aggression
Developmental Trauma Disorder

Criterion D.

Self and Relational Dysregulation

D. 5. Psychological boundary deficits
(excessive seeking of intimate contact or reliance on peers/adults for safety/reassurance)

D. 6. Dysregulated empathic arousal
(intolerant/indifferent or overly reactive to others’ distress)
Developmental Trauma Disorder
Field Trial Clinician Survey

$S = 303$ International, $1018$ United States

82% female, 82% White, 7% Hispanic

Median age = 45

34% Psychology, 29% Social Work, 27% Counseling, 13% MFT, 7% Psychiatry, 6% Child Welfare, 6% Educators, 4% Case Managers, 4% Pediatrics
Developmental Trauma Disorder
Field Trial Clinician Survey

DTD items most discriminable from PTSD (95% CI ≥ 4.0) N = 227-252

a) Repeated Caregiver Separation (5.0-5.8)
b) Repeated Caregiver Absences (5.0-5.8)
c) Excessive Intimacy Seeking (5.0-5.7)
d) Impaired Emotional Boundaries (4.8-5.5)
e) Expectancy of Irresolvable Loss (4.6-5.4)
f) Somatic Dysregulation-Body Function (4.3-5.1)
g) Somatic Dysregulation-Pain/Conversion (4.0-4.7)
DTD items most discriminable from PTSD (Cont’d) (95% CI ≥ 4.0) N = 227-252

h. Risky Behavior (4.6-5.3)
i. Self-Harm (4.3-5.0)
j. Self-Soothing (4.0-4.6)
k. Affect Dysregulation-Mood Repair (4.0-4.7)
l. Affect Dysregulation-Positive Affect (4.2-4.9)
m. Affect Dysregulation-Expressive (4.3-5.0)
Developmental Trauma Disorder Field Trial Interview Study

\[ N = 236 \text{ ages 7-18 years old; 50\% female} \]

- 30\% African American/Biracial, 17\% Hispanic, 3\% Asian American
- Trauma Histories: 9\% No trauma, 11\% one type trauma, 38\% poly-victim, 62\% traumatic loss, 45\% family violence, 24.5\% neglect, 21\% sexual abuse, 21\% emotional abuse, 17\% community violence
Developmental Trauma Disorder Field Trial Interview Study

**DTD Semi-Structured Interview**

15 Items (4 Criterion B, 5 Criterion C, 6 Criterion D)

**Item Inter-rater Reliability** Kappa ≥ .70

**Total/Sub-scale Internal Consistency** α = .61-.72
**Developmental Trauma Disorder**

**Field Trial Interview Study:**

**Confirmatory Factor Analysis**

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>CFI</th>
<th>TLI</th>
<th>BIC</th>
<th>RMSEA</th>
<th>SRMR</th>
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<td>1-Factor</td>
<td>147.07*</td>
<td>0.93</td>
<td>0.91</td>
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<td>3-Factor</td>
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<td>0.92</td>
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<td>Hybrid</td>
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<td>4404.35</td>
<td>0.06 [0.04, 0.07]</td>
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**Note.** CFI, Comparative Fit Index, TLI, Tucker-Lewis Index, BIC, Bayesian Information Criterion, RMSEA, Root Mean Square Error of Approximation, SRMR, Standardized RMR. A 10-point or greater difference in BIC between non-nested models indicates that the model with the smaller BIC is statistically superior with 150:1 odds (Kass & Raftery, 1995).

* $p < .001$
### Developmental Trauma Disorder Field Trial Interview Study: Latent Class Analyses

<table>
<thead>
<tr>
<th>Model</th>
<th># Parameters</th>
<th>LL</th>
<th>BIC</th>
<th>LRT</th>
<th>Entropy</th>
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</table>

Note. LL indicates the log-likelihood, BIC is the Bayesian Information Criteria, LRT is the p-value from the Lo–Mendell–Rubin adjusted likelihood ratio comparing the K class model to the K+1 class model.
LCA on TESI DSM-IV A2 Traumas

Class Probability

High (35.8%)  Low (25.3%)  Moderate (38.9%)
Developmental Trauma Disorder
Field Trial Interview Study Construct
Validity: LCA/DTD-SI Relationships

Pillai’s Trace MANOVA $F = 9.91, p < .001$

Class Effects (Bonferronni comparisons)

DTD B Sum, $F(2,226) = 19.34, p < .001$; High/PV (2.76 ± .14) > Moderate Trauma (2.33 ± .13) > Low Trauma (1.41 ± .17)

DTD C Sum, $F(2,226) = 10.70, p < .001$; High/PV (2.59 ± .15) > Moderate Trauma (1.82 ± .15) ≥ Low Trauma (1.59 ± .18)

DTD D Sum, $F(2,226) = 22.52, p < .001$; High/PV (3.73 ± .19) > Moderate Trauma (2.48 ± .19) ≥ Low Trauma (1.81 ± .23)
Developmental Trauma Disorder Field Trial Interview Study Construct Validity: Regressions Controlling for PTSD Sx

Criterion B emotion dysregulation associated with parent-rated child alexithymia ($B = .51$)

Criterion C behavioral dysregulation associated with parent-rated child impulse dysreg ($B = .50$),

Criterion D self/relational dysregulation associated with two parent-rated Child Behavior Checklist Dysregulation score ($B = .32$)
A practical framework for clinicians and peer/family support for youth and adults in recovering from DTD and PTSD

TARGET: Trauma Affect Regulation: Guide for Education and Therapy©

1. Psychoeducation:
   - the brain’s stress response system becomes stuck in a survival “alarm” state in PTSD

2. Strengths-based trauma recovery skills:
   - PTSD can be reversed if the brain is able to regain it’s ability to re-set its own alarm
   - 3-and 7-step practical skill sets to re-set the alarm


TARGET© Outcome Studies

Recent/Ongoing Randomized Clinical Trial Studies

1. TARGET in-home family therapy with traumatized foster children (ACYF).
2. TARGET in-home family therapy with traumatized adopted children (QIC).

Published Quasi-Experimental Field Trial Studies


HIJACKED by Your BRAIN
How to Free Yourself
When Stress Takes Over

Dr. Julian Ford and Jon Wortmann

9 781402 273285 51499
The Brain Under Normal Stress

The Thinking Center (prefrontal cortex)

Filing Center (hippocampus)

Alarm System (amygdala)
normal stress
The Brain & Body Working Together

the brain

brain
spinal cord
nerves

the nervous system

Alarm System
(amygdala)

Filing Center
(hippocampus)

Thinking Center
(prefrontal cortex)
extreme stress / trauma
The Alarm Takes Control

Alarm System (amygdala)
Filing Center (hippocampus)
Thinking Center (prefrontal cortex)
FREEDOM steps

FOCUS
Slow down, Orient, Self-Check

RECOGNIZE
Stress Triggers

EMOTION
One MAIN Emotion

EVALUATE
One MAIN Thought

DEFINE
One MAIN Personal Goal

OPTIONS
Build On Your Positive Choices

MAKE a contribution
Make the World a Better Place
SOS: 3 Steps to FOCUSING

- **Step I: Slow Down**
  - Stop, Step Back, Sweep your Mind clear

- **Step II: Orient Yourself**
  - Focus your mind on ONE THOUGHT that YOU CHOOSE based on what is MOST IMPORTANT and VALUABLE in your life at this moment

- **Step III: Self Check**
  - How Much Stress? How Much Control?
  - Optional: Strength of Urges to Use?
  - Optional: Sense of Connection/Support?
Beginning of Session

- **Stress Level**: 1 (low stress), 2, 3, 4, 5, 6, 7, 8, 9, 10 (high stress)
- **Personal Control**: 1 (no control), 2, 3, 4, 5, 6, 7, 8, 9, 10 (complete control)

End of Session

- **Stress Level**: 1 (low stress), 2, 3, 4, 5, 6, 7, 8, 9, 10 (high stress)
- **Personal Control**: 1 (no control), 2, 3, 4, 5, 6, 7, 8, 9, 10 (complete control)

**SOS**
- Slow down - Orient - Self-Check
Focusing and Recognizing Triggers

- Shifts from avoidant hypervigilance to proactive/reflective mindfulness/readiness
- Increases calm attentiveness, empathic attunement, constructive problem solving
- Every alarm reaction is based on a MAIN goal that otherwise tends to be forgotten
Practice Exercise for FREEDOM

Focus (SOS)

Recognize Trigger(s)

Alarm/Reactive

- Emotion
- Evaluate (Thoughts)
- Decide (Goals)
- Options
- Mobilize for Action

MAIN

- Emotion
- Evaluate (Thoughts)
- Decide (Goals)
- Options
- Make a Contribution
MAIN Emotions, Thoughts, Goals, Options = Revisiting the Orienting Step in SOS

- **M**y core values, beliefs, loyalties, and …
- **A**ttachments that give security, love, and …
- **I**nner peace, and calm confidence.
- **N**othing is more important to me than this.
The Final Step in FREEDOM

Making a Contribution by being a role model for responsibly managing the alarm in your own brain