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Childhood Maltreatment, Emotional Dysregulation, and Psychiatric Comorbidities (poster)

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Objectives

- ✓ Developmental effects of childhood maltreatment on emotional dysregulation and psychiatric sequelae
- ✓ Emotion regulation and its developmental neurobiology
- ✓ Research evidence for associations between childhood traumatization, emotional dysregulation, and psychiatric comorbidities in children, adolescents and adults

Emotion Dysregulation & Childhood Trauma

ED: "The impaired ability to regulate and/or tolerate negative emotional states"

Plays a role in many psychiatric conditions including anxiety and mood disorders

CT : associated with interpersonal trauma and post-traumatic stress associated with a wide range of psychosocial, developmental, and medical impairments in children, adolescents and adults

ED is a core feature that may help account for this heightened risk

Emotion Regulation

Interplay between emotional and cognitive operations:

- Selecting/modifying situations with emotional significance
- Deploying attention
- Integrating information
- Making judgment decisions
- Selecting behavioral responses

Some emotions are generated automatically/regulated automatically
Other emotions require "meaning analysis" and are regulated with effortful cognitive processing

Coordination of physiological reactions, memory, cognitive appraisals, and behavior

Control over:

- How and when
- Intensity
- Positive/negative valence (felt, experienced, expressed)

Occur continuously over time

May include changes in all three domains (behavior, experience, and physiology)

Both emotional states and goal-directed behavior can be modulated by:

- Decreasing negative behavior
- Increasing positive expressive behavior
- Addressing physiological responses (cognitive-behavioral therapy or medications)

Emotional Awareness and Social Cognition are key elements in the ability to regulate emotions, and are impaired in a number of psychiatric conditions

Neurobiology of Emotion Regulation

The generation of emotion occurs as an interaction/series of actions:

- bottom-up (brain stem and limbic system to higher cortical regions)
- top-down (pre-frontal cortex to midbrain and brainstem areas via the amygdala)

Responses to emotional tasks are widely distributed throughout the brain

- Higher cortical areas are not limited to emotional regulation
- Limbic regions are not restricted to emotion activation

Rather, emotional regulation involves a **widely distributed functional network with bidirectional associations** among many emotion-relevant brain regions



Maturation

The maturation of neural and neuroendocrine arousal systems associated with emotion can explain decrease in emotional lability and increase in self-control throughout childhood and adolescence

These processes include

- maturation of parasympathetic regulation in early childhood
- developmental changes in Hypothalamic-Pituitary-Adrenal axis

Maturation of these systems is shaped by early experiences and caregiver responsiveness

Developmental influences promoting enhanced emotion regulation as children grow older include

- acquisition of language (understand/communicate emotions)
- maturation of other cognitive functions including attentional system
- having a secure attachment with caregivers

It is possible that early life adversity changes the threshold of limbic reactivity, or changes perceptual and cognitive appraisals related to threat

Children growing up in early adversity are more likely to be emotionally reactive to stress and also less capable of emotion regulation

Brain imaging studies in those who experienced childhood maltreatment point to fronto-limbic circuits as the most affected brain regions

Childhood Trauma & Psychiatric Comorbidities

The consequences of trauma vary from individual to individual and over time for the same individual

Many traumatized children do not develop PTSD or any other disorder
Youth who experience interpersonal trauma in childhood are at increased risk for a number of psychiatric disorders including:

- attachment insecurities
- PTSD
- depression and anxiety disorders
- oppositional or conduct disorders
- eating disorders
- substance abuse
- a dissociative variant of PTSD
- personality disorders

Traumatized children also are at risk for

- self-harm and sexualized behavior
- anger
- poor impulse control
- attention difficulties



Re-victimization is very common in maltreated children and adolescents and is associated with increased risk for PTSD and other comorbidities, such as depressive and substance use disorder

A number of terms have been used to describe children who have experienced early, recurrent and severe interpersonal trauma:

- Developmental Trauma Disorder
- Complex Trauma
- Polyvictimization

Those children often present with extreme dysregulation in the physical, affective, behavioral, cognitive and interpersonal domains
Developmental Trauma Diagnosis is being evaluated for clinical utility and in a national field trial study

Psychiatric Comorbidities

Adults who experienced early life trauma continue to be at risk for:

- PTSD
- anxiety and affective disorders
- addictions
- psychotic illnesses
- personality disorders
- dissociative identity disorder
- suicidal behavior
- revictimization
- multiple medical problems, including diabetes, heart disease, immune disorders, and chronic obstructive pulmonary disease

Childhood Trauma & Emotional Dysregulation

Early developmental task

- secure attachments
- responsive caregiving
- peer involvement

Caregivers provide not only for their children's basic survival needs, but **interactions with caregivers are necessary for the development of bodily self-regulation**

In humans, childhood maltreatment/repeated trauma, disrupts acquisition of appropriate emotional regulation and interpersonal skills

Disruption of skill acquisition, a result of psychological experiences

Sign of the neurobiological effects of maltreatment:

- molecular alterations to stress hormone response systems

In turn affects:

- myelination
- neuronal morphology
- neurogenesis
- synaptogenesis

Functional changes:

- left hemisphere development
- decreased R/L hemisphere integration
- increased limbic electrical irritability
- diminished cerebellar vermis functional activity

Emotional Development

Maltreated children (sexual trauma, neglect):

- Deficits/delays in understanding and regulating emotions
- Anticipate a negative reaction to display of negative emotions (sadness/anger to parents and peers)

Those skills can be taught as part of clinical interventions (Shipman 2000 & 2005)

Caregiver representations in maltreated children:

- disorganized, vague, and negatively-toned internal representations of caregivers
- problems with emotional dysregulation
- aggression
- decreased social competence (peer rejection) (Shields 1998&2001)

Neglected preschool children had more difficulty discriminating emotional expressions and identifying discrete emotions

Physically abused children displayed a response bias for angry facial expressions

Physically abused 8-11 year olds had difficulties disengaging attention from angry facial cues

In contrast, physically abused children were more accurately able to recognize early facial expression of anger, when few physiological cues were available (Pollak 2000, 2003 & 2009)

Borderline Personality Disorder Precursor?

Conceptualized emotional/behavioral dysregulation as potential precursors to BPD in children:

- affective negativity
- irritability
- lability
- impulsivity
- extreme conflict/struggle in interpersonal relationships with peers and adults
- suicidal/self-harm behavior

Found consistent evidence of a relationship between history of maltreatment and all of the indices of dysregulation (Rogosch 2005)

Re-victimization

ED underlying mechanism for risky sexual behavior and sexual re-victimization among young adult victims of child sexual and physical abuse

A history of childhood physical and sexual abuse was highly associated with increased risk for adolescent/adult rape

- **More than ¼ of women sexually re-victimized**
- **Emotional dysregulation appearing to be a mediating factor**

Other sexually risky behaviors (higher lifetime number of sexual partners including strangers) predicted by measures of emotional dysregulation

The severity of physical and sexual re-victimizations is predicted by childhood sexual abuse

Mothers with a history of sexual abuse in their own childhoods: risk for impairment in their internal attachment representations and attachment behavior with their daughters

Daughters showed impairment in emotional regulation, risk for exposure to sexual abuse (Kim 2010, 2011, Noll 2009)

Conclusions

Complex and bi-directional relationship between childhood trauma and emotional dysregulation

Childhood trauma is associated with:

- reduced ability to understand and regulate emotions
- mediated by relational/attachment difficulties with caregivers and peers
- heightened levels of internalizing and externalizing psychopathology
- impaired social functioning beginning in childhood and continuing into adulthood

References

[Childhood maltreatment, emotional dysregulation, and psychiatric comorbidities](#) Yael Dvir, Julian D. Ford, Michael Hill, and Jean A. Frazier, *Harvard review of psychiatry* (2014)