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

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Neurobiology of Emotion Regulation

The generation of emotion occurs as an interaction/series of actions:
- bottom-up (brain stem and limbic system) and top-down (frontal cortex) interactions
- Emotional regulation involves a widely distributed functional network with bidirectional associations among many emotion-related brain regions

Emotion dysregulation & Childhood Trauma

ED: ‘The impaired ability to regulate and/or tolerate negative emotional states. May result from 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 medications 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 challenges
- Deploying attention
- Integrating information
- Making judgment decisions
- Selecting behavioral responses

Some emotions are generated automatically/regulated automatically
- Maturation of neural and neuroendocrine systems associated with emotion can explain in emotional liability and increase in self-control throughout childhood and adolescence
- These processes include:
  - maturation of parasympathetic regulation in early childhood
  - developmental changes in Hypothalamus-Pituitary-Adrenal axis

Maturation of these systems is shaped by early experiences and care giver 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 is possible that early life adversity changes the threshold of limbic reactivity, or changes perceptual and cognitive associations related to emotion regulation

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

Adverse childhood experiences 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 risk for many of the psychiatric disorders including:
  - attachment insecurity
  - PTSD
  - depression and anxiety disorders
  - eating disorders
  - substance abuse
  - a dissociative variant of PTSD

Traumatized children also are at risk for:
- self-harm and sexualized behavior
- anger
- poor impulse control
- attention difficulties

Be aware that symptoms in maltreated children and adolescents and is associated with increased risk for PTSD and other conditions, such as depression 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

Psychiatric Comorbidities

Adults who experienced early life trauma continue to be at risk for:
- anxiety and affective disorders
- addictions
- psychiatric illnesses
- personality disorders
- dissociative identity disorder
- suicide
- revictimization

Multiple medical problems, including diabetes, heart disease, immune disorders, and chronic obstructive pulmonary disease

Childhood Trauma & Emotional Dysregulation

Early childhood emotional dysregulation is an indicator of:
- secure attachments
- responsive caregiving
- peer training-down

Caregivers provide not only for their children’s basic survival needs, but also 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

Sign of the neurobiological effects of maltreatment:
- molecular alterations to hormone response systems

In turn affects:
- impulsive
- neuronal morphology
- neurogenesis
- synaptogenesis

Functional changes:
- left hemisphere development
- decreased R/L hemisphere integration
- increased limbic electrical activity

- diminished cerebellar vermis functional activity

Emotional Development

Maltreated children (sexual trauma, neglect):
- Deficits in delay in understanding and regulating emotions
- Anticipate a negative reaction to display of negative emotions (sadness/anger to parents and peers)

These deficits can be taught as part of clinical interventions (Shapman 2000 & 2005)

Caregiver representations in maltreated children:
- disorganized, vagar, 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 faces

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 (Hollak 2000, 2001 & 2009)

Borderline Personality Disorder Precursor

Conceptualized/experiencing behavioral/dysregulation as potential precursors to BPD in children:
- affective negativism
- irritability
- liability
- impulsivity
- extreme conflict/stage in interpersonal relationships with peers and adults

Clinical/self-harm behavior

Found consistent evidence of a relationship between maltreatment and all of the indices of dysregulation (Rognoz 2009)

Re-victimization

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

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

More Than 10% of males 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-victimization is predicted by childhood sexual abuse

Victims 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 (Min 2010, 2011, Hall 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 parents
- heightened levels of internalizing and externalizing psychopathology (1998&2001)
- impaired social functioning beginning in childhood and continuing into adulthood

References