A theoretical framework for co-occurring pain, trauma, and personality disorders

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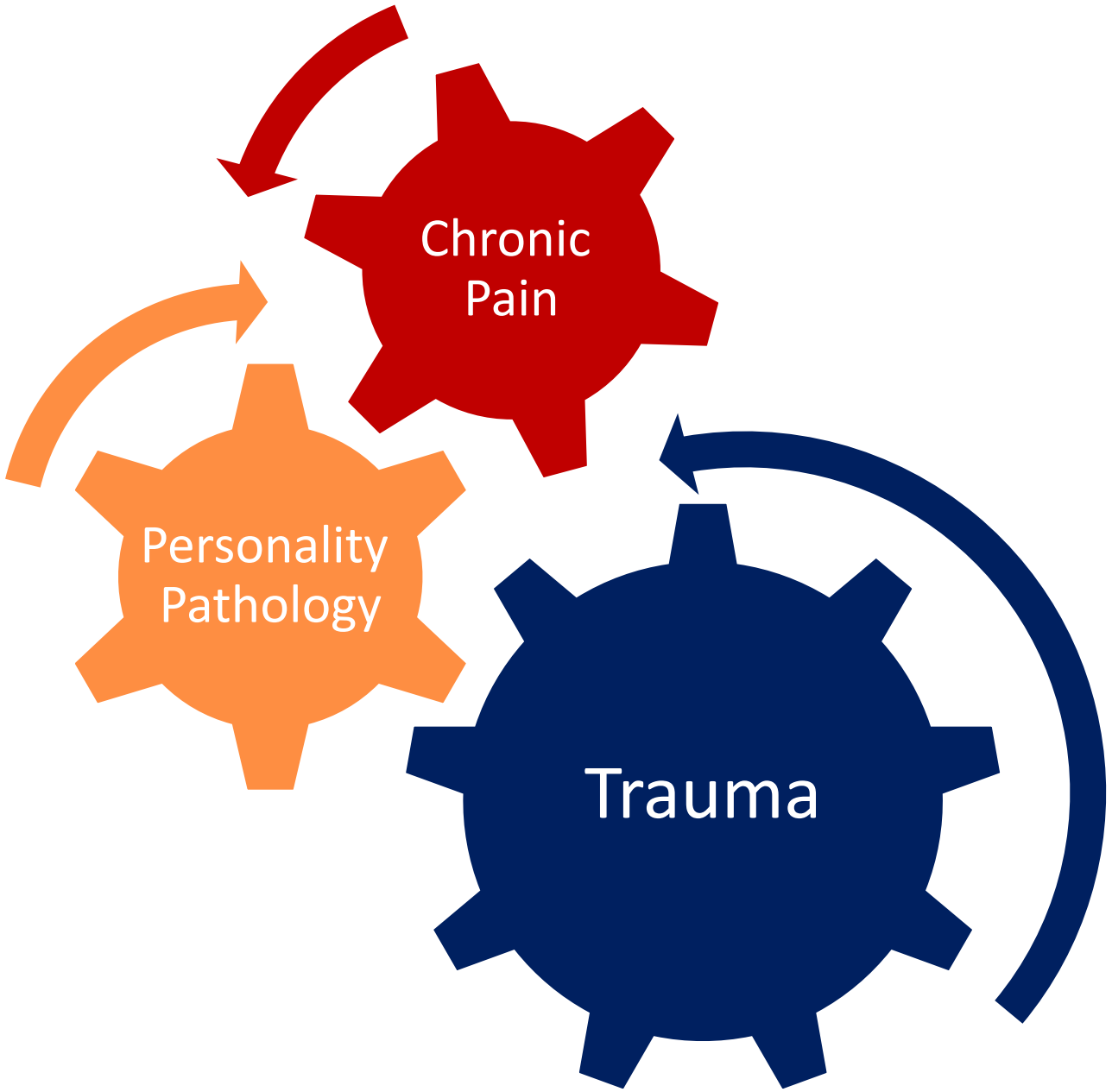
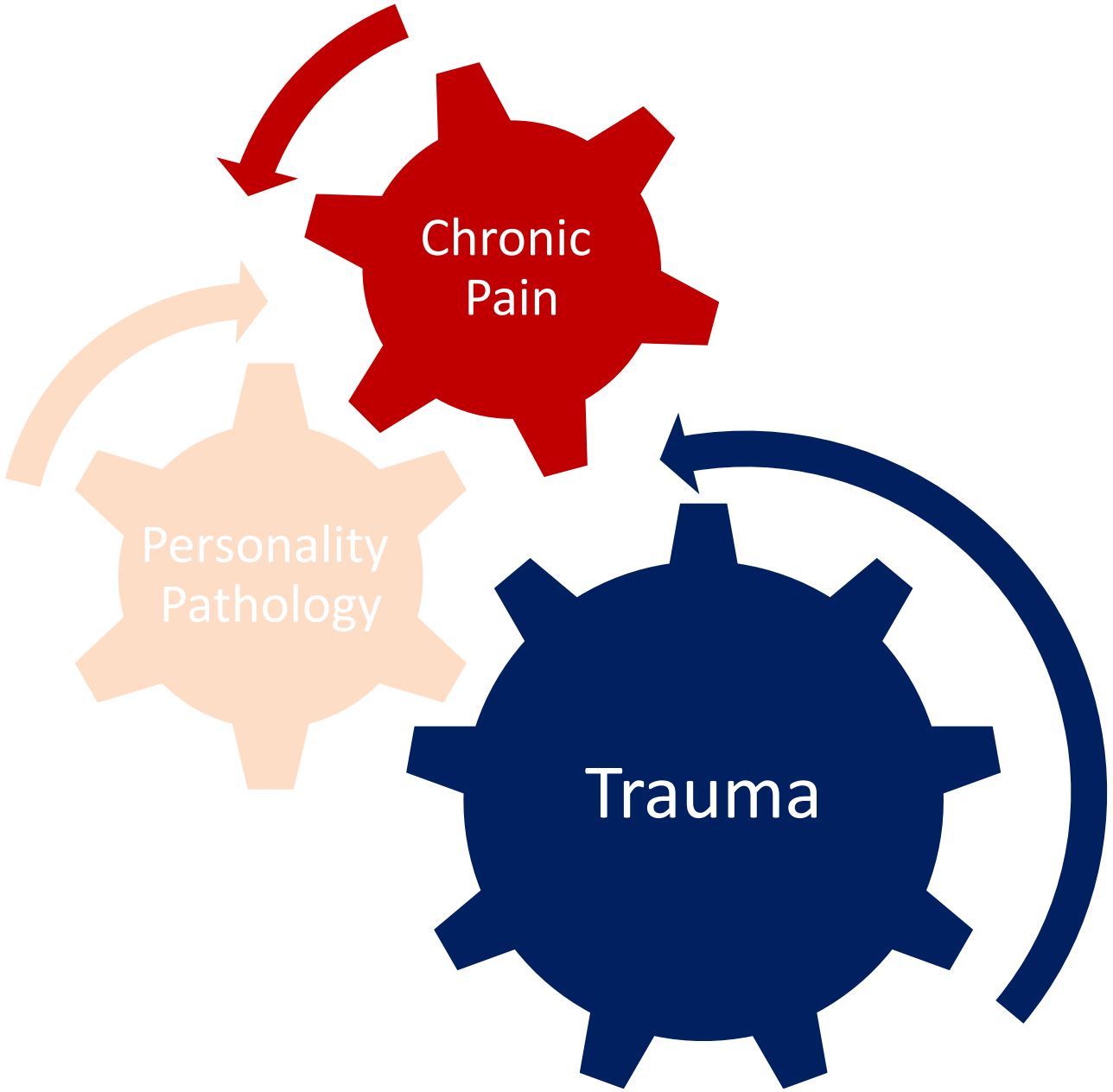

Chronic Pain
Personality Pathology
Trauma


Chronic Pain
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Trauma and chronic pain

- Trauma is a transdiagnostic risk factor (e.g., Hogg et al, 2022)
- Trauma also gives rise to and/or confers risk for a range of other deleterious outcomes, including physical pain:
  - Pain experiencing
  - Pain widespreadness
  - Chronic pain diagnoses (e.g., interstitial cystitis, fibromyalgia, back pain)
  - Central sensitization (i.e., CNS hypersensitivity)
- These associations are only partially accounted for by PTSD (McKernan et al., 2019; Nicolson et al., 2023)

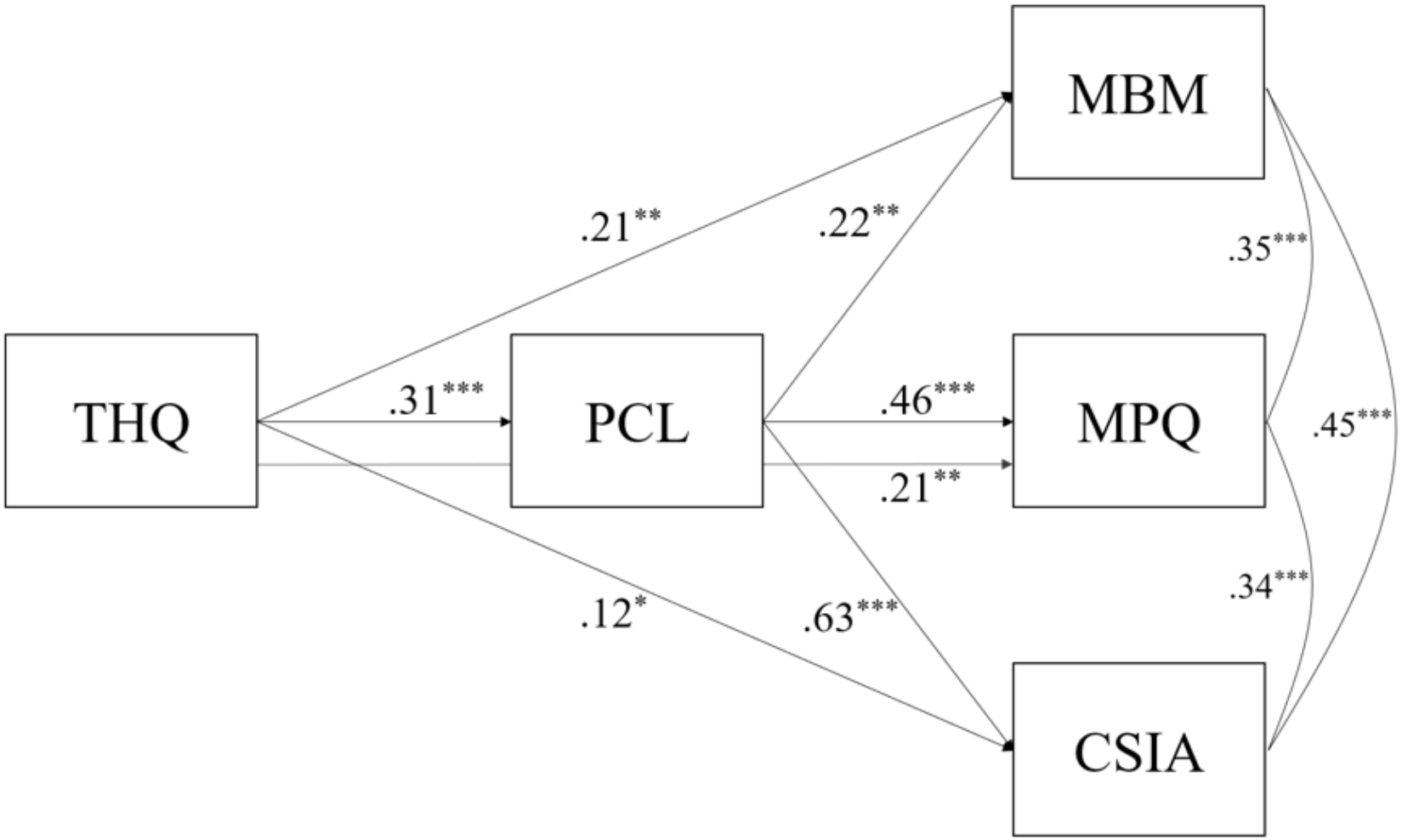
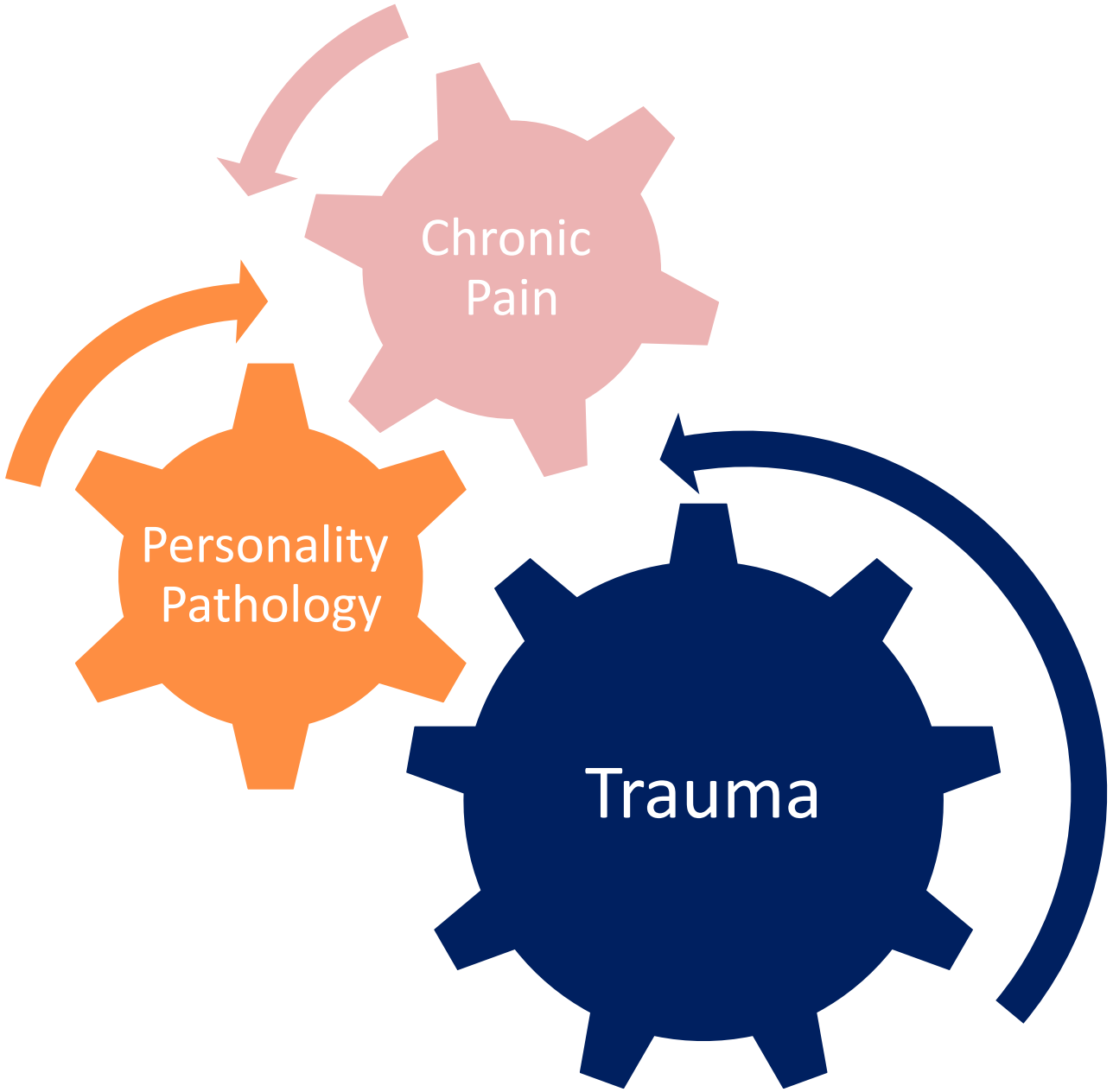


Figure 2. Posttraumatic symptoms as a partial mediator of the trauma exposure-CS outcome relationship, controlling for gender. All regression and covariance parameters are standardized.

McKernan et al., 2019


Chronic Pain
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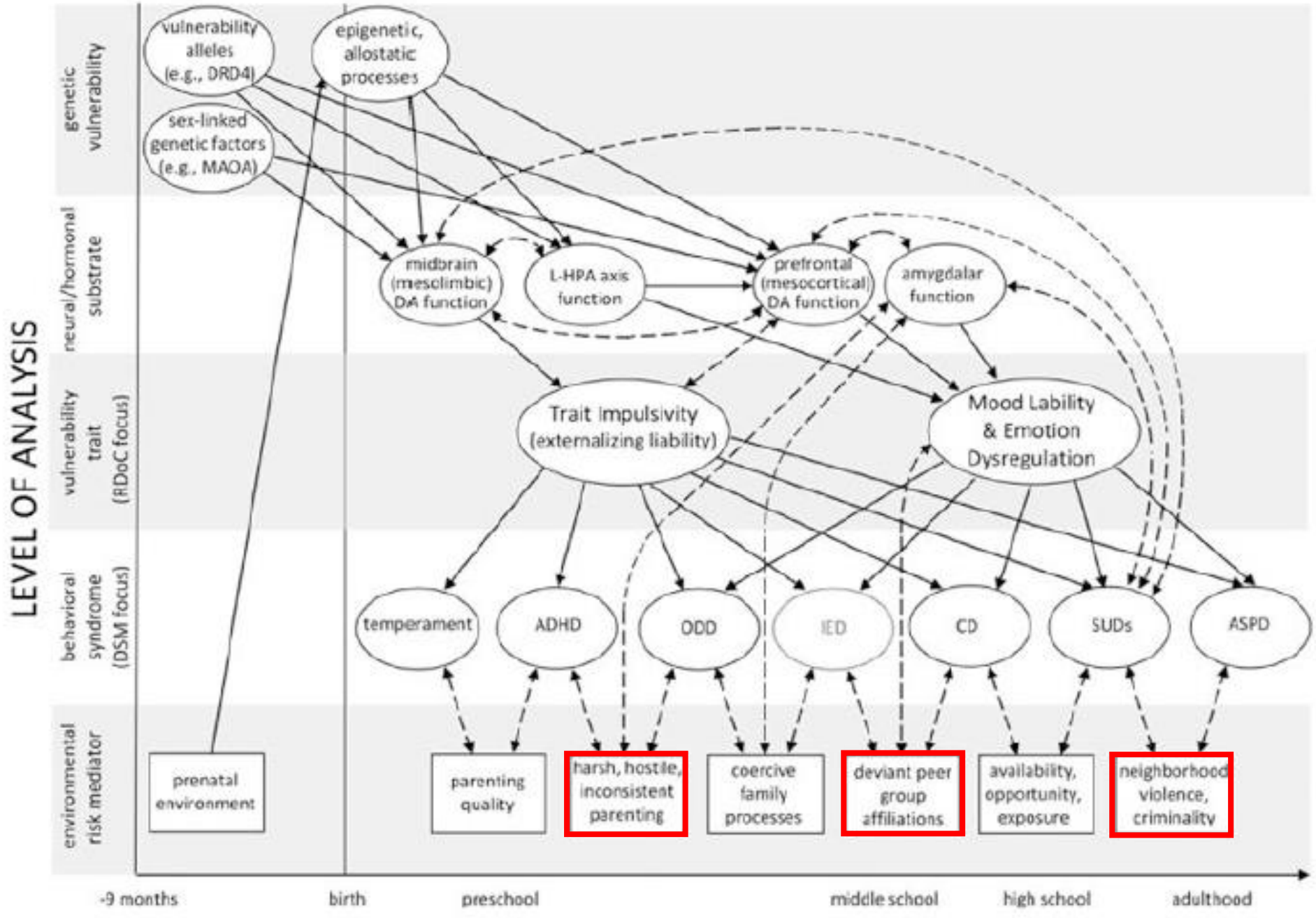
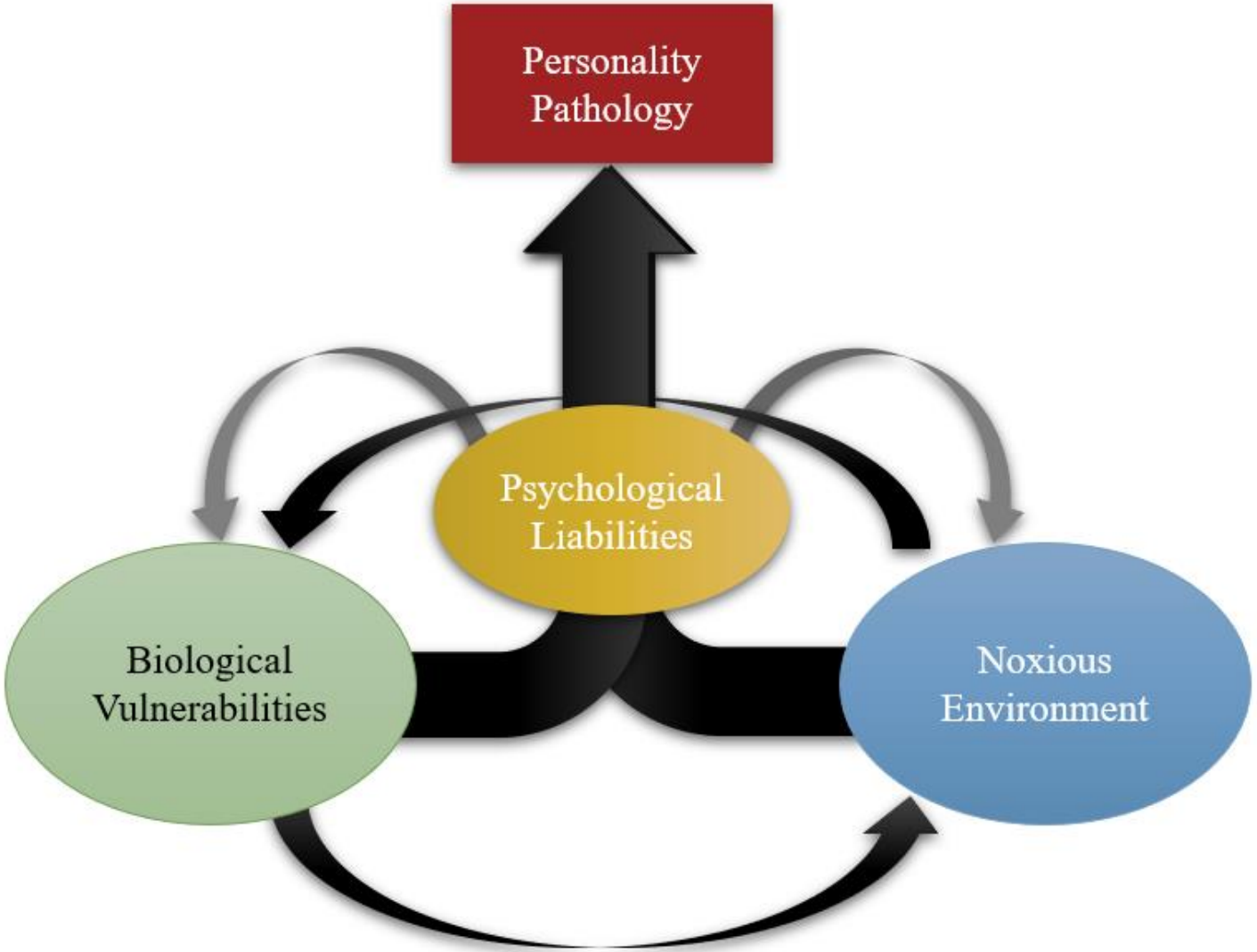
Trauma and personality disorders

- Trauma is a clear risk factor for personality disorders
- However, trauma is not a sole cause of PDs
  - Aka PDs are not “trauma disorders”
- Trauma plays a role as part of a complex transaction between **environmental**, **neurobiological**, and **psychological** contributors to personality pathology
- Childhood trauma is a particular risk factor

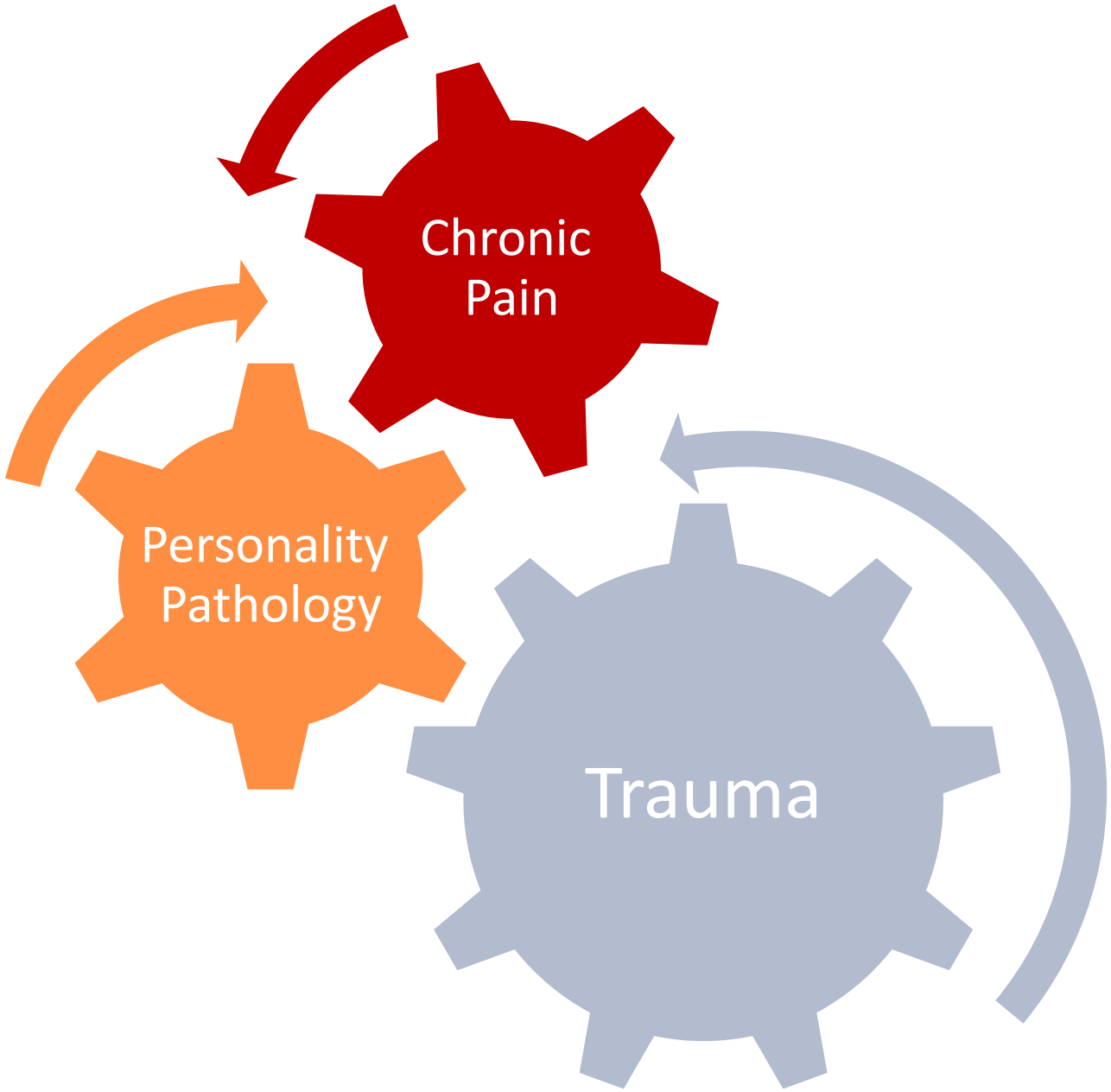


Beauchaine et al., 2009

Trauma and personality disorders



Johnson & Vanwoerden, 2021


Chronic Pain
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Personality disorders and pain

- Most research on BPD and pain
- BPD is associated with greater:
  - Pain frequency
  - Pain severity
  - Pain diagnosis
  - Central sensitization (Johnson et al., 2020)
- However, negative affect (e.g., anxiety, depression) **partially or fully mediates** this association (Stein et al., under review)
- Co-occurring pain conditions also interfere with improvements in PD

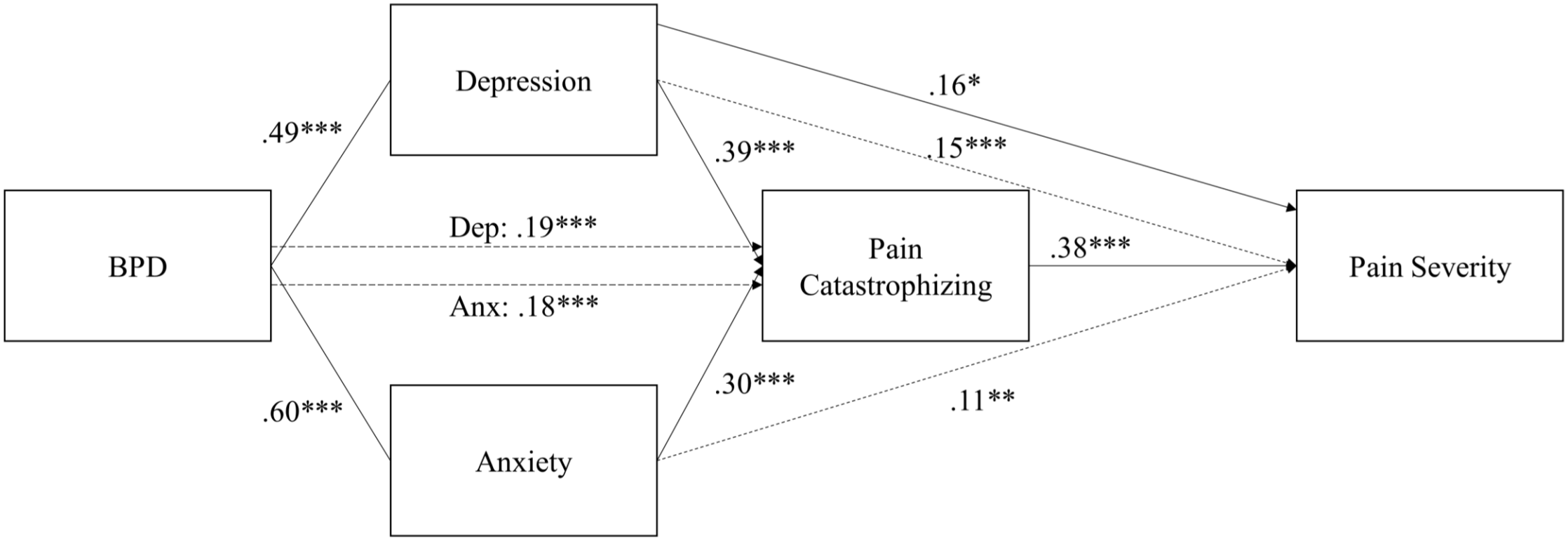
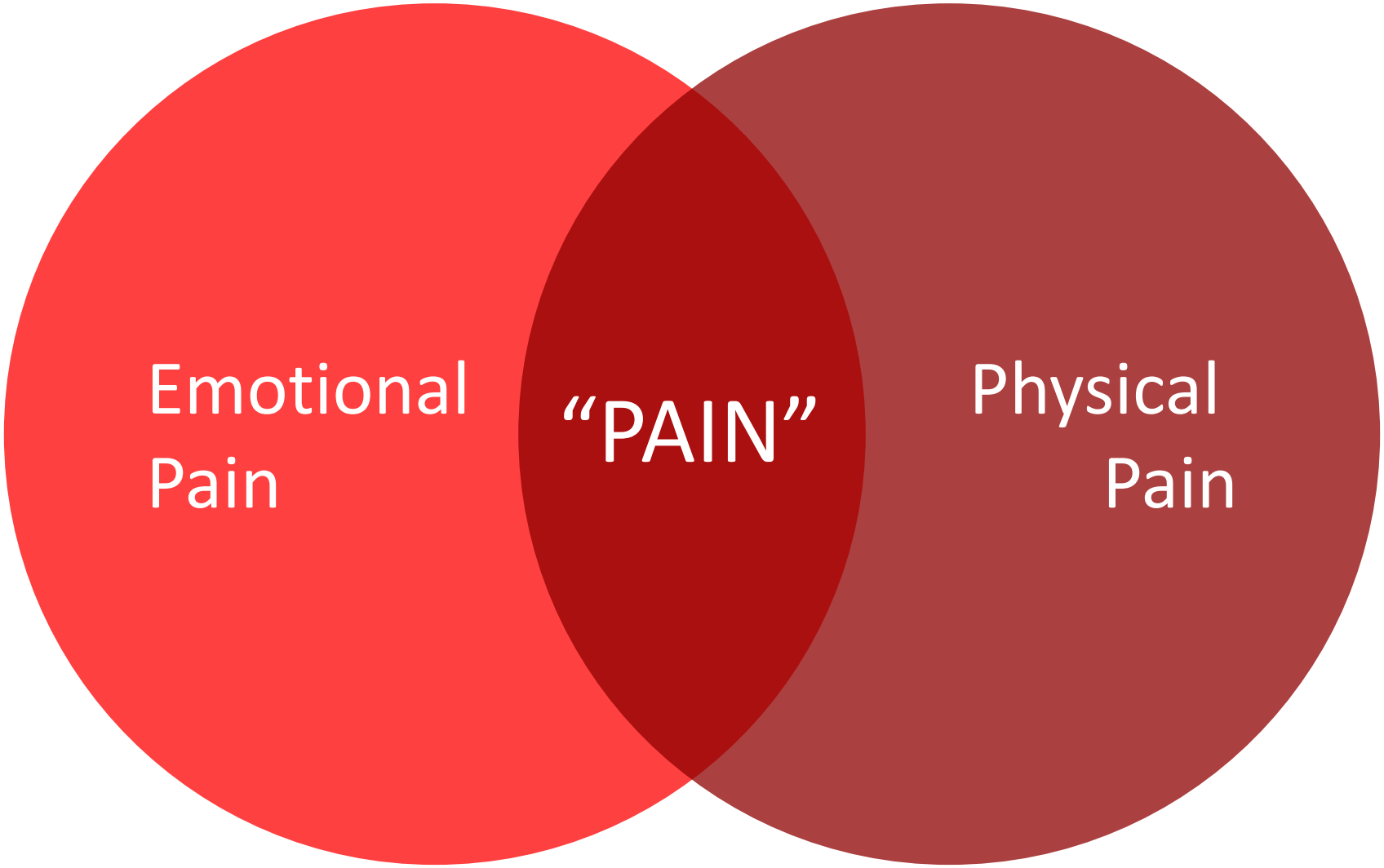


Figure 2. Mediation path analysis replicating prior findings of the BPD→negative affect→pain catastrophizing→pain severity pathway. Solid lines indicate direct effects and dashed lines indicated indirect effects. Non-significant paths are not shown. Age and gender are controlled for but are not shown. * $p < .05$, ** $p < .01$, *** $p < .001$.

Stein et al., under review

Personality disorders and pain

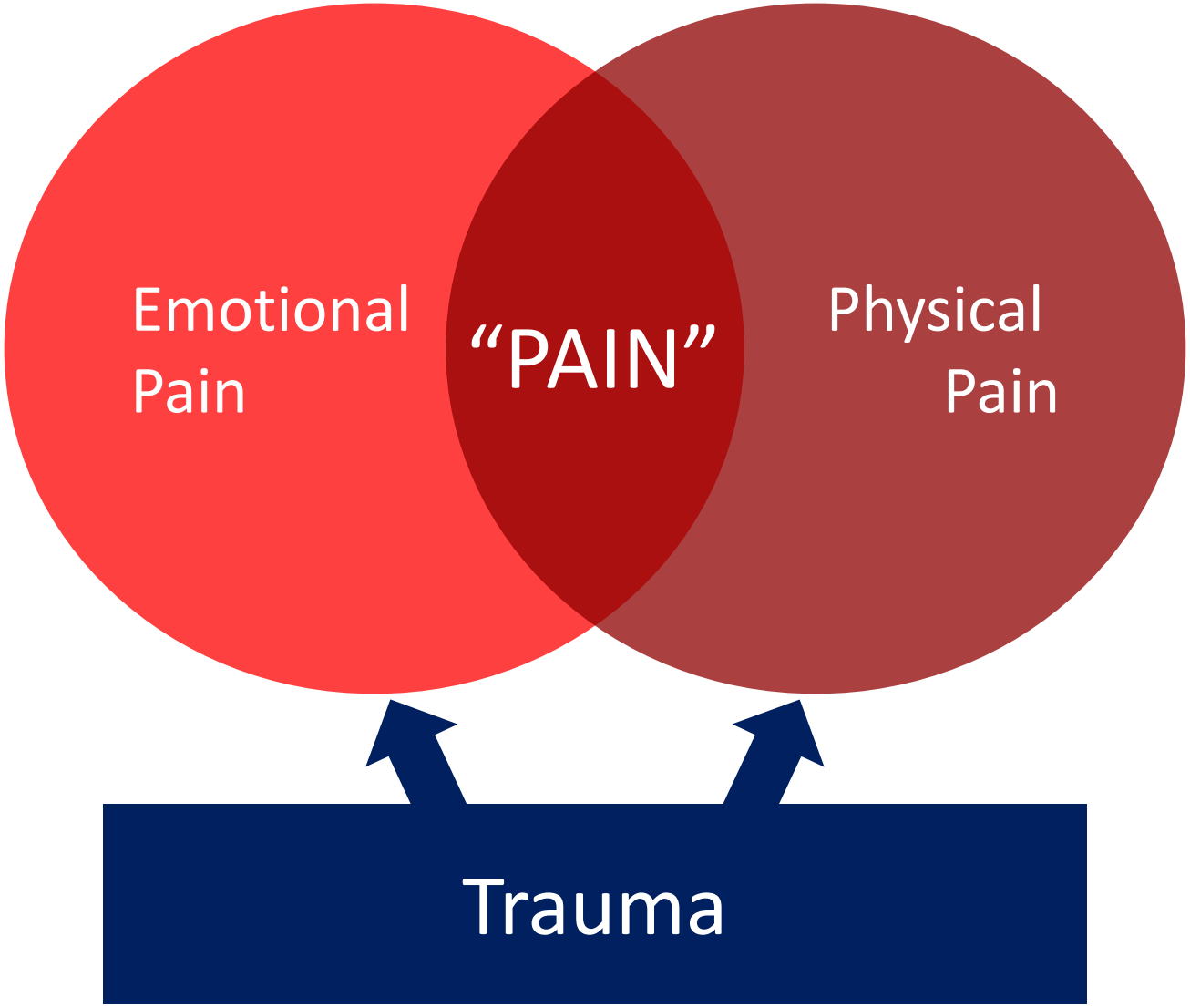


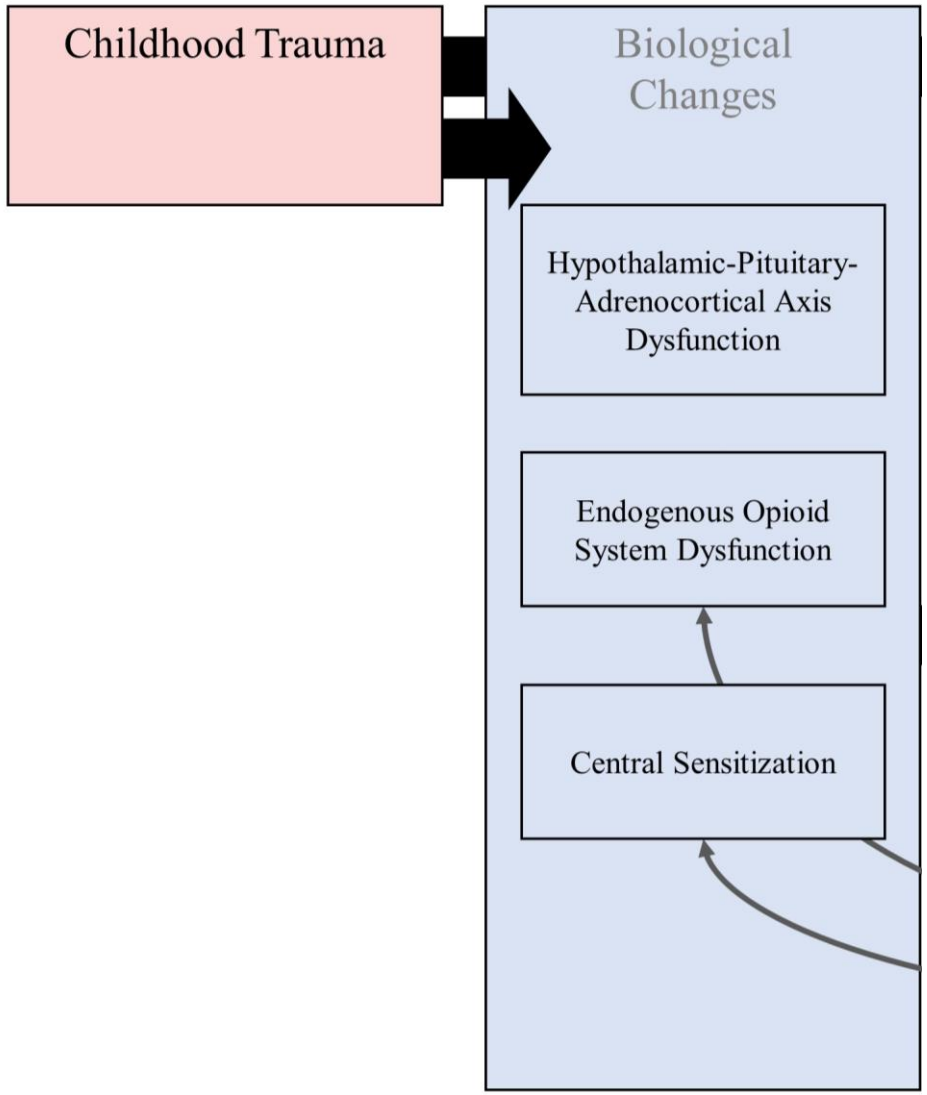
Personality disorders and pain

- Physical and emotional pain share neuroanatomical correlates in BPD:
  - Amygdala
  - ACC
  - Insula
  - OFC/DLPFC
- Conversely NSSI (*acute* physical pain) may serve to downregulate neurobiological mechanisms (e.g., amygdala activation) involved in psychological pain

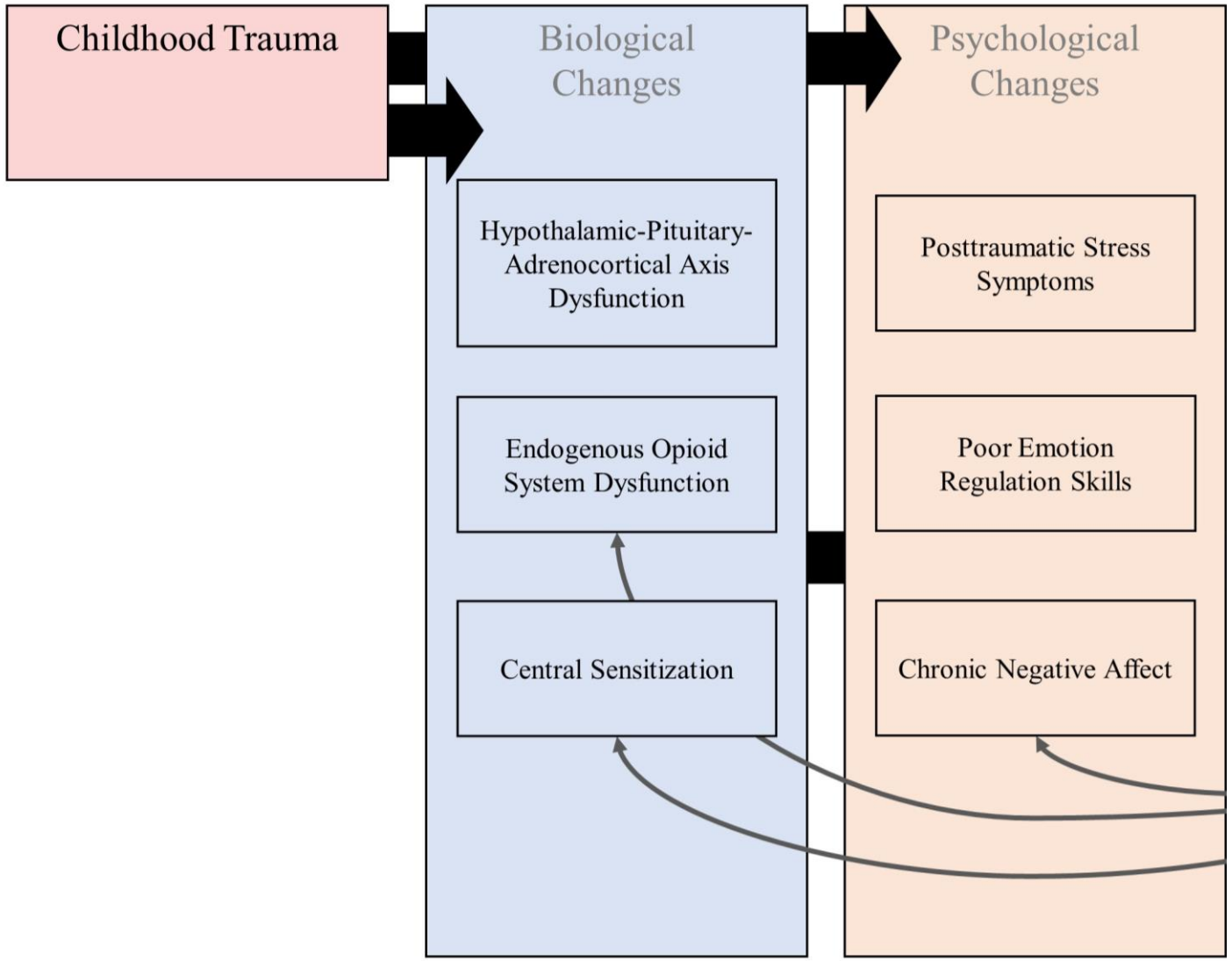
Ducasse et al., 2014

Personality disorders and pain

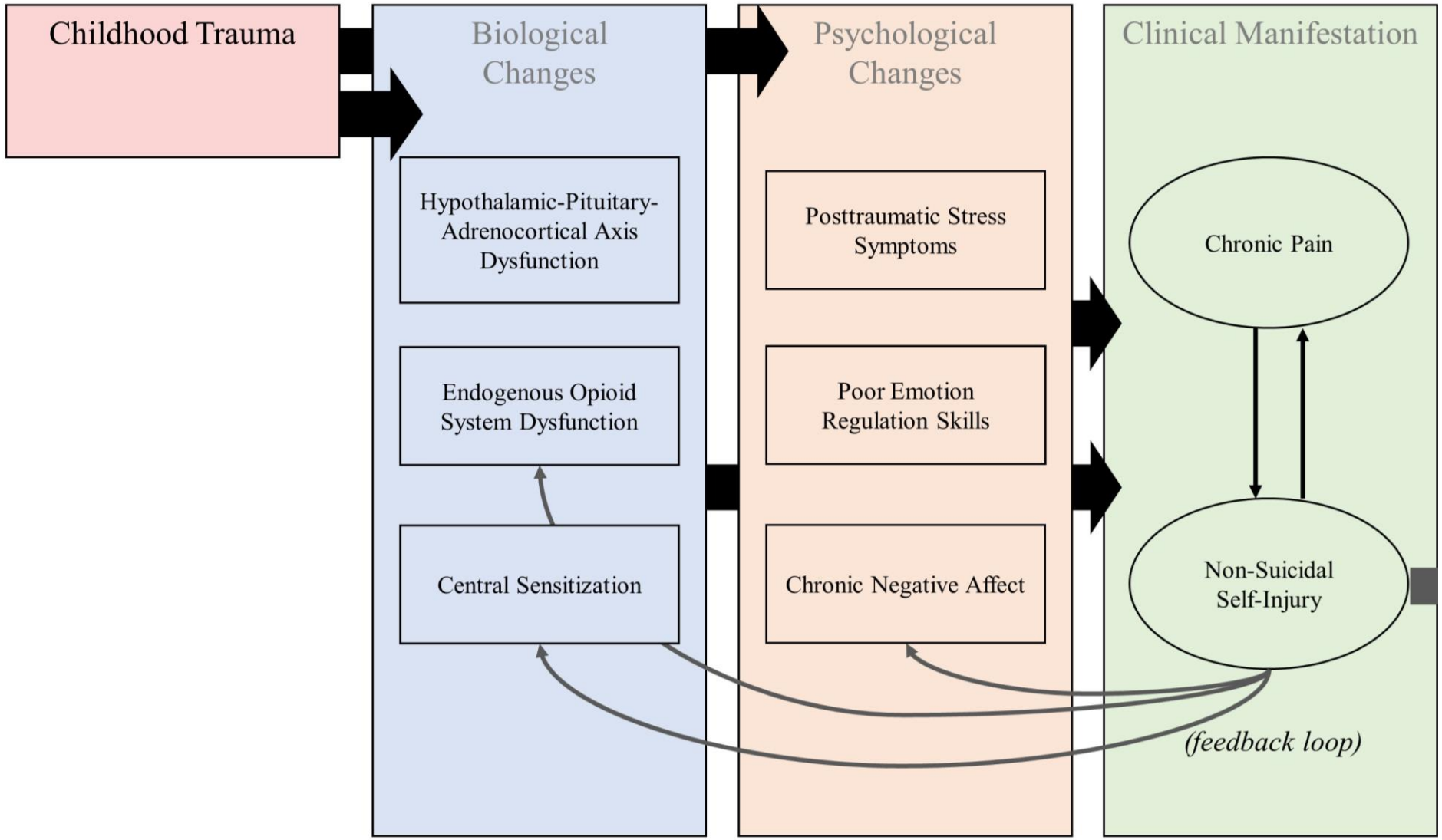




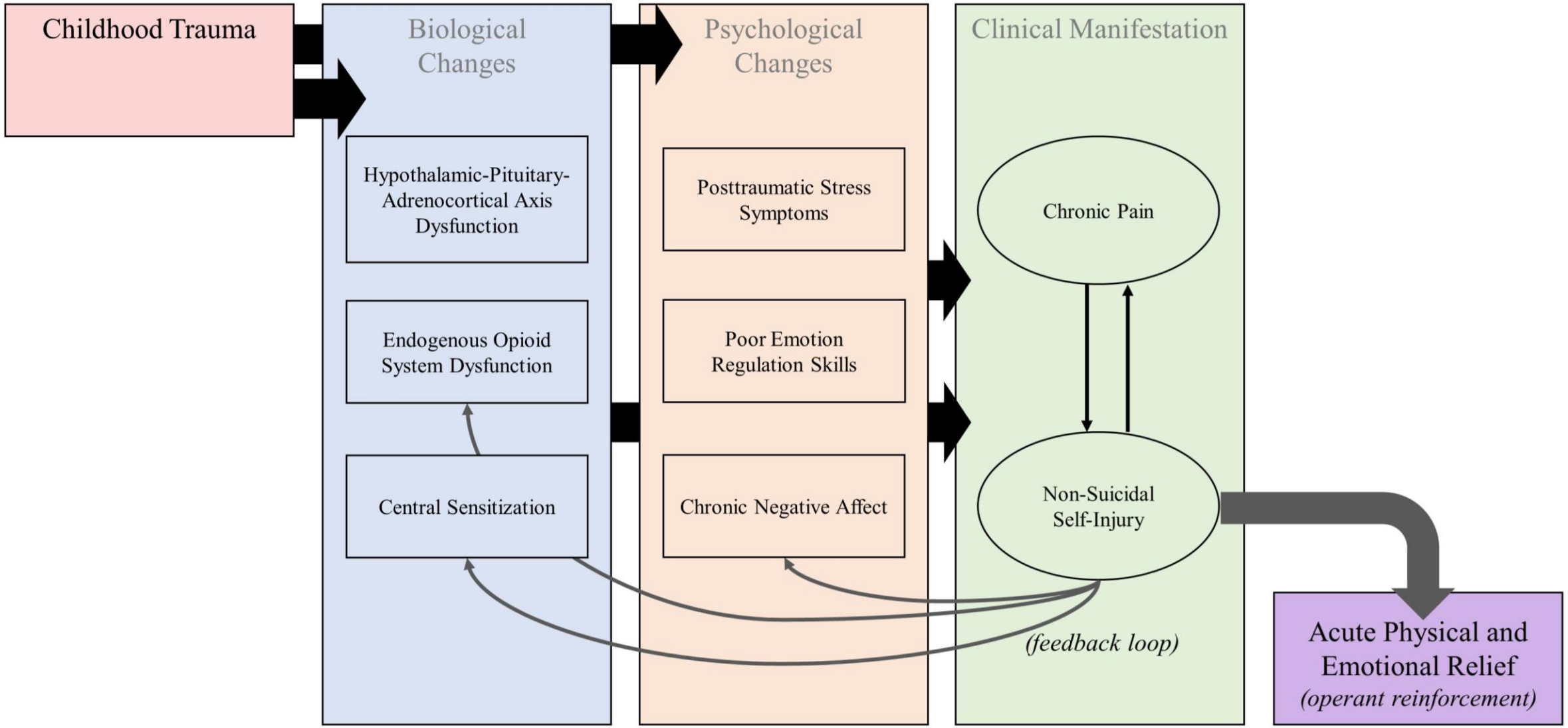
Johnson et al., 2022



Johnson et al., 2022



Johnson et al., 2022



Johnson et al., 2022

Trauma, PD, and pain

1. Childhood (in particular) trauma **confers risk** for both chronic pain and personality disorder in three ways:
   - Disrupted neurobiological processing of emotional and psychological pain (e.g., disrupted EO function)
   - Increased chronic negative affect
   - Decreased skillful capacity for emotion regulation
2. Childhood trauma **reduces barriers** to maladaptive coping strategies (e.g., NSSI), such as:
   - Reduced positive self-esteem
   - Reduced social support

Trauma, PD, and pain

3. Behaviors associated with personality disorder (and sometimes trauma) **promote acute, rapid relief** from both emotional and physical pain, including:
   - NSSI
   - Anger expression
   - Dissociation
   - Avoidance
4. Chronic maladaptive coping **increases long-term emotional and physical pain,** through:
   - Reduced social engagement/support
   - Increased suffering from chronic pain
   - Chronic depression, shame, guilt, anxiety

Trauma, PD, and pain

5. Short-term (over long-term) **relief increases likelihood of maladaptive coping**, through operant reinforcement.

Trauma, PD, and pain

In sum, trauma (particularly repeated, early trauma) initiates a vicious cycle between chronic pain and personality disorder symptoms, likely mediated by negative affect

Clinical implications

1. In trauma survivors, **assess for both chronic pain and personality disorder**
   - *Pain:* McGill Pain Questionnaire, Central Sensitization Inventory
   - *PD*: SCID-5 PD Screening Questionnaire, IPDE Screening Questionnaire, IPC 3-items (Pilkonis et al., 2019)
     - "I am too sensitive to rejection" / "It is hard for me to take instructions from people who have authority over me" / "I argue with other people too much"
2. Conversely, **assess for (childhood) trauma history and PTSD** among chronic pain/PD patients
   - *Trauma:* THQ, CTQ, ACES
   - *PTSD/CPTSD:* PCL-5, ITQ

Clinical implications

3. I**ncorporate into case formulation** transactional, reciprocal relations among trauma, pain, and/or PD, e.g.:
   - How do my patient's PD symptoms (e.g., suicidality, aggression) serve to produce acute relief from pain?
   - How does a history of trauma contribute to increased likelihood/reduced barriers to these behaviors and/or experiences?
4. Consider **specialized or adjunctive treatment** for co-occurring trauma, PD, and/or chronic pain
   - Emotional Awareness and Expression Therapy (emotion regulation & pain)
   - Trauma-Focused Dialectical Behavior Therapy (emotion regulation & trauma)
   - Eye Movement Desensitization and Reprocessing (trauma and pain)

Clinical implications

5. Be cautious of **counterproductive impacts of psychoactive medications** (e.g., abuse of pain medications prescribed for chronic pain to regulate negative emotions)

Thank you!

- The Treatment and Assessment of Personality Pathology (TAPP) Lab (tapplab.org)
- Lindsey McKernan, Ph.D. (mckernanlab.com)
- Stephen Bruehl, Ph.D.
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- The Centre for Developmental and Complex Trauma
- The British Psychological Society
- All of you!

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