



University of California
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Pain is a mind-body experience. Now what?

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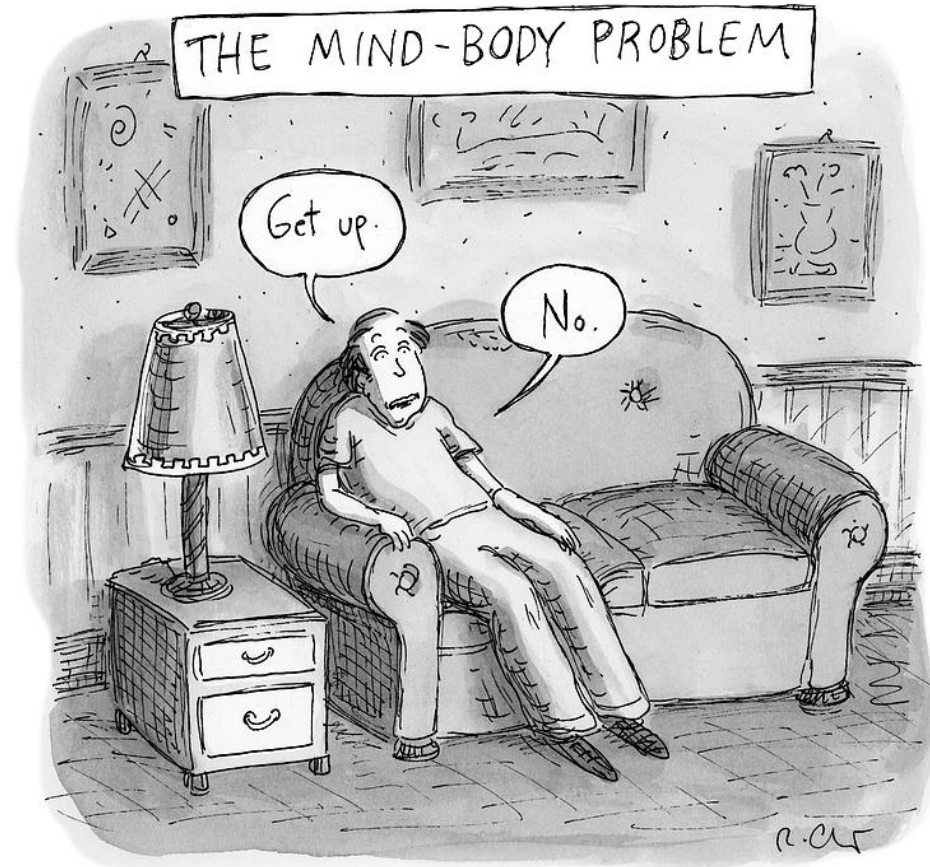
Department of Anesthesiology, Perioperative
and Pain Medicine

October 27, 2021



Overview

1. Pain as a mind-body experience (Jackson)
2. Biopsychosocial model
3. Mental health and pain: ACEs
4. Case study
NOW WHAT? (Ivan)
6. Mindfulness
7. Cognitive Behavioral Therapy (CBT)
8. Future advances in pain psychology
9. Resources



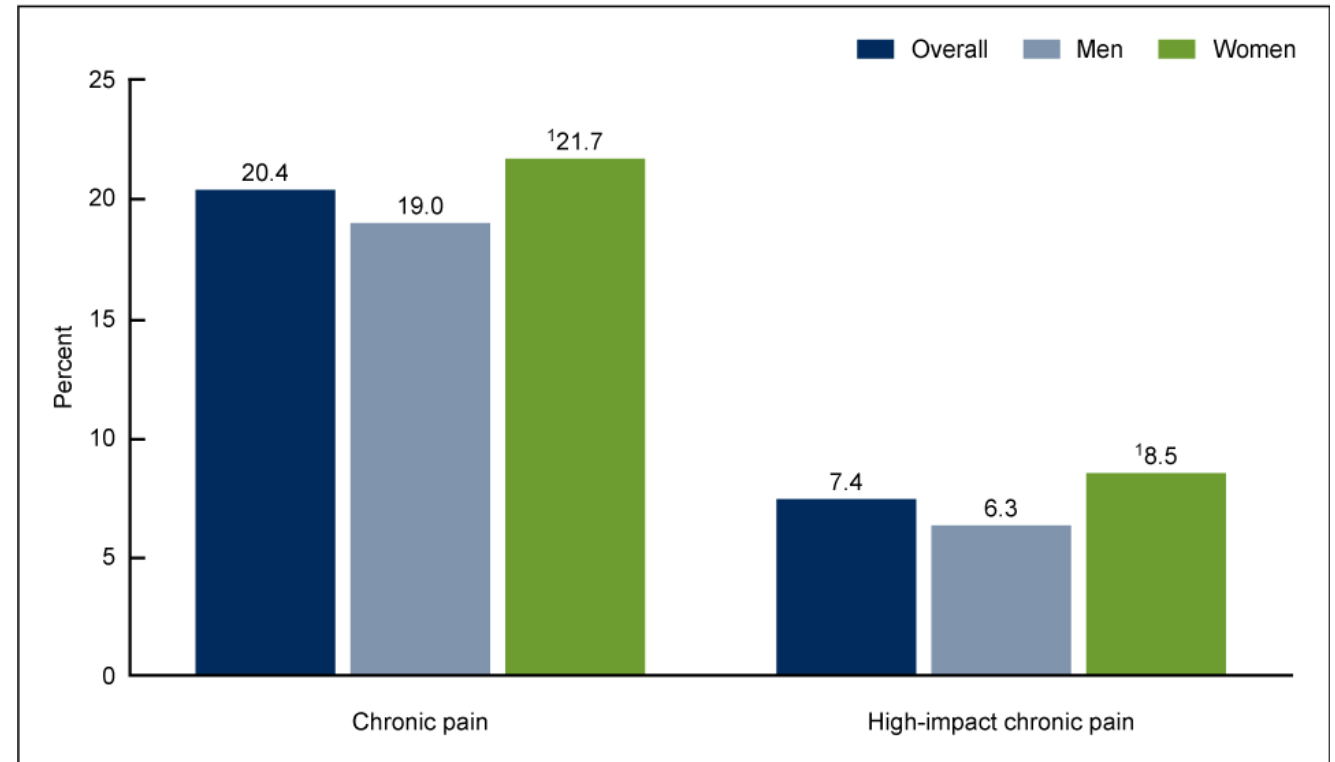
Chronic Pain Epidemiology

Prevalence:

50.2 million (20.5%) of
American adults in 2019

7.4% had chronic pain that
frequently limited life or work
activities (high-impact chronic
pain)

Figure 1. Percentage of adults aged 18 and over with chronic pain and high-impact chronic pain in the past 3 months, overall and by sex: United States, 2019



¹Significantly different from men ($p < 0.05$).

NOTES: Chronic pain is based on responses of "most days" or "every day" to the survey question, "In the past 3 months, how often did you have pain? Would you say never, some days, most days, or every day?" High-impact chronic pain is defined as adults who have chronic pain and who responded "most days" or "every day" to the survey question, "Over the past 3 months, how often did your pain limit your life or work activities? Would you say never, some days, most days, or every day?" Estimates are based on household interviews of a sample of the civilian noninstitutionalized population. Access data table for Figure 1 at: <https://www.cdc.gov/nchs/data/databriefs/db390-tables-508.pdf#1>.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.



Pain is “an **unpleasant sensory** and **emotional experience** associated with, or resembling that associated with, actual or potential tissue damage”

International Association for the Study of Pain (IASP)

Raja SN, Carr DB, Cohen M, Finnerup NB, Flor H, Gibson S, Keefe FJ, Mogil JS, Ringkamp M, Sluka KA, Song XJ, Stevens B, Sullivan MD, Tutelman PR, Ushida T, Vader K. The revised International Association for the Study of Pain definition of pain: concepts, challenges, and compromises. *Pain*. 2020 Sep 1;161(9):1976-1982. doi: 10.1097/j.pain.0000000000001939. PMID: 32694387; PMCID: PMC7680716.

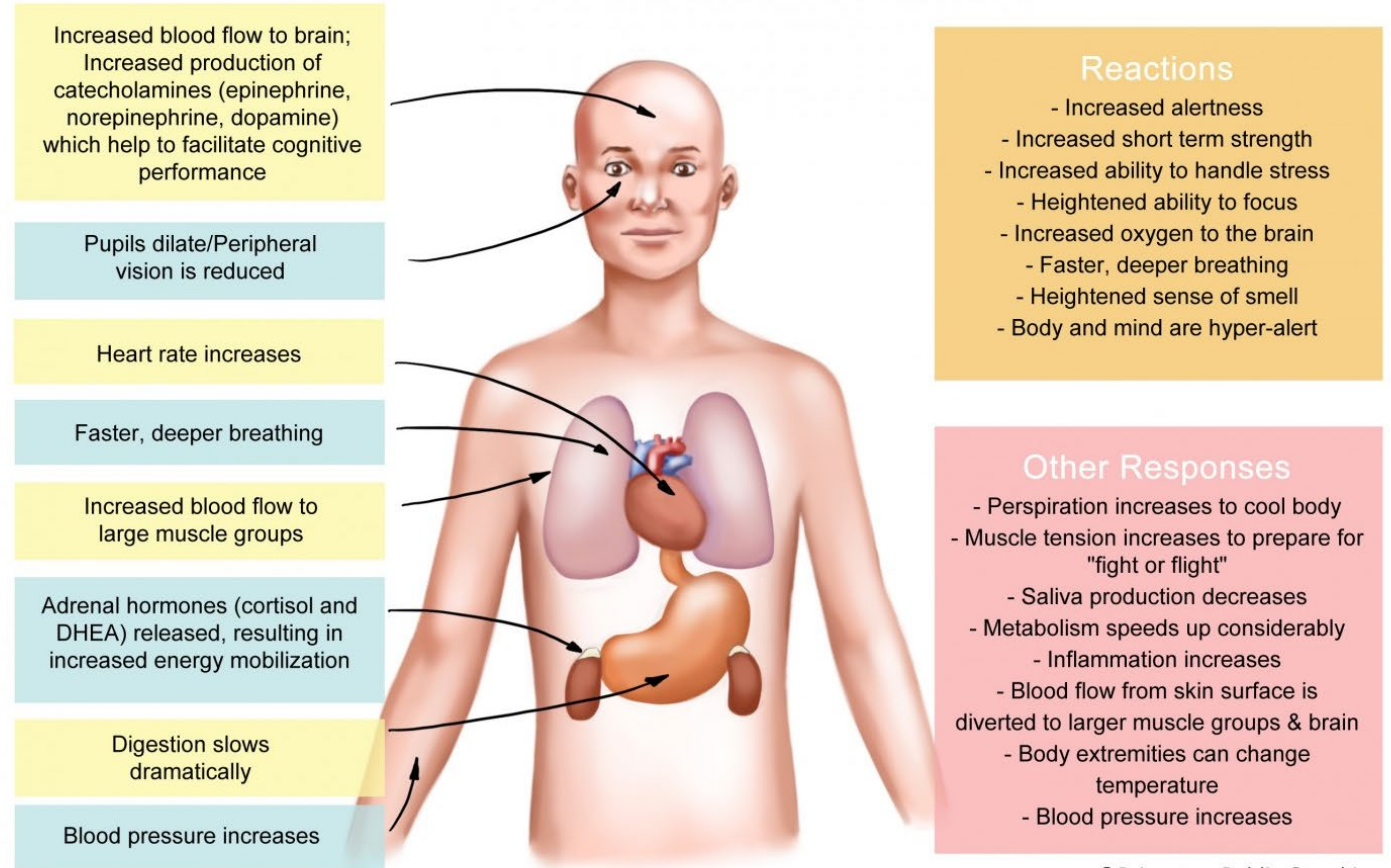






Physiological Stress Response

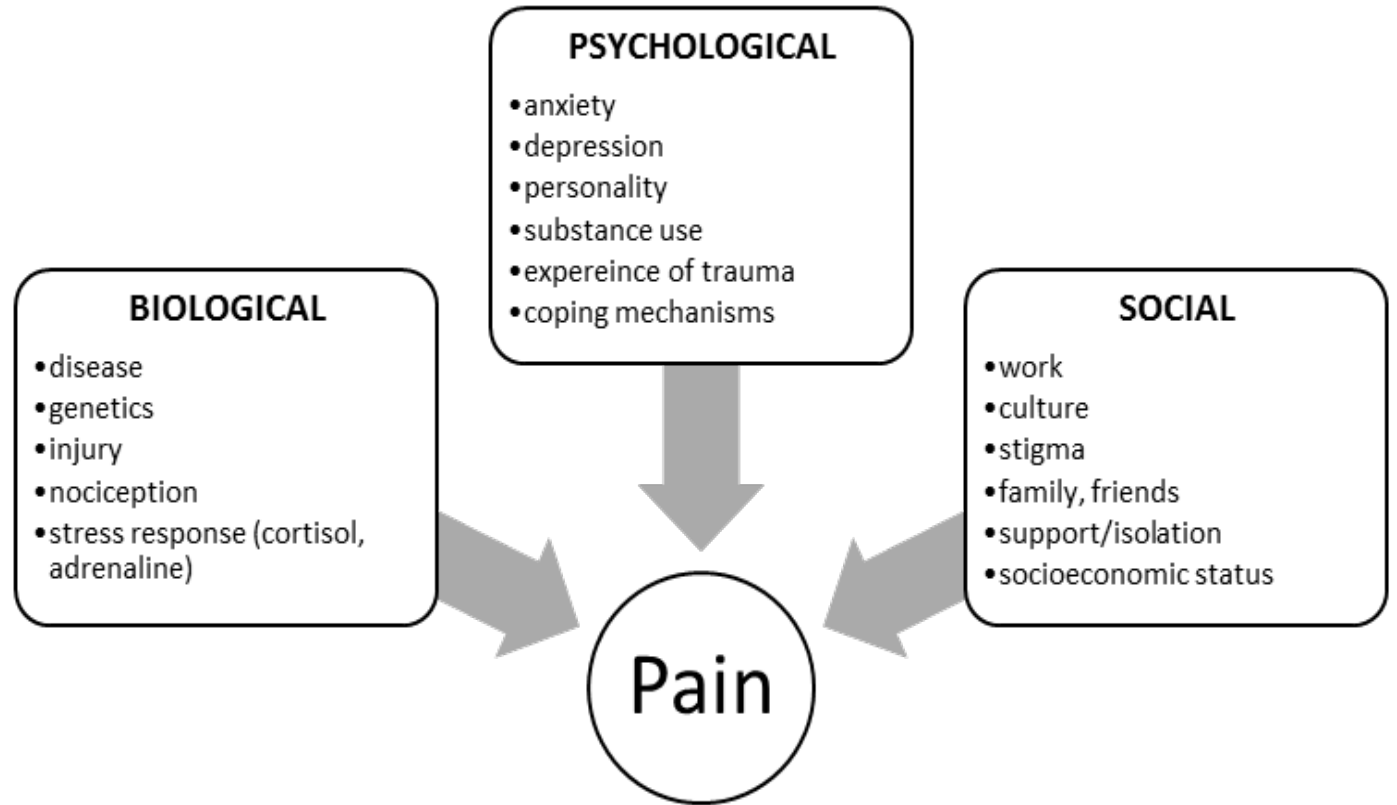
Activates the sympathetic nervous system



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Biopsychosocial model

Pain is multifaceted

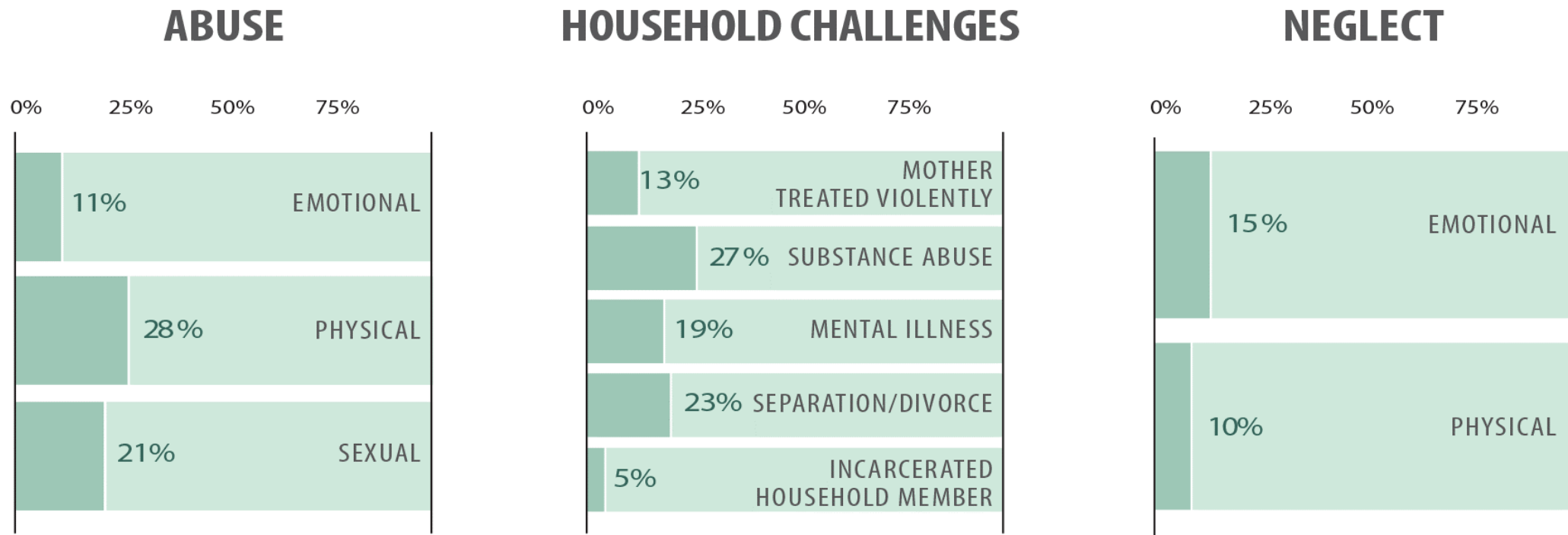


Conceptual model for developing chronic pain conditions

Beyond the fight or flight response

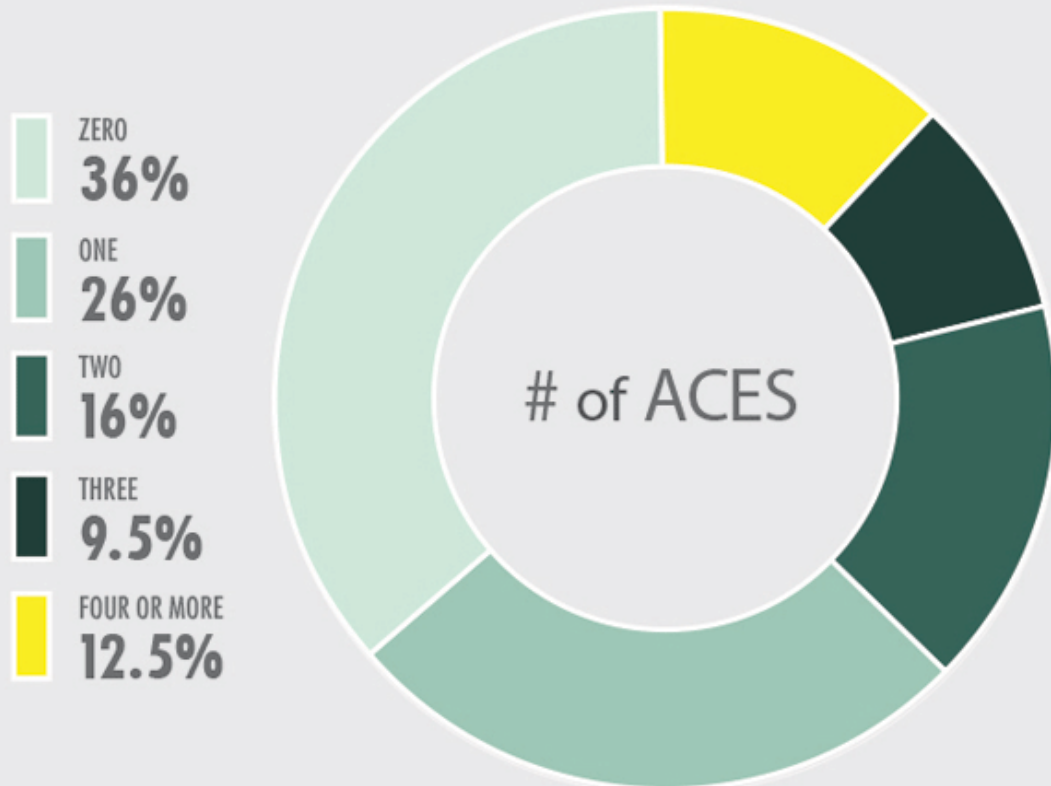
Adverse Childhood Experiences (ACEs) AKA “Toxic Stress”

Y/N to 10 categories, Score 0-10



How Common are ACEs?

ACE Study

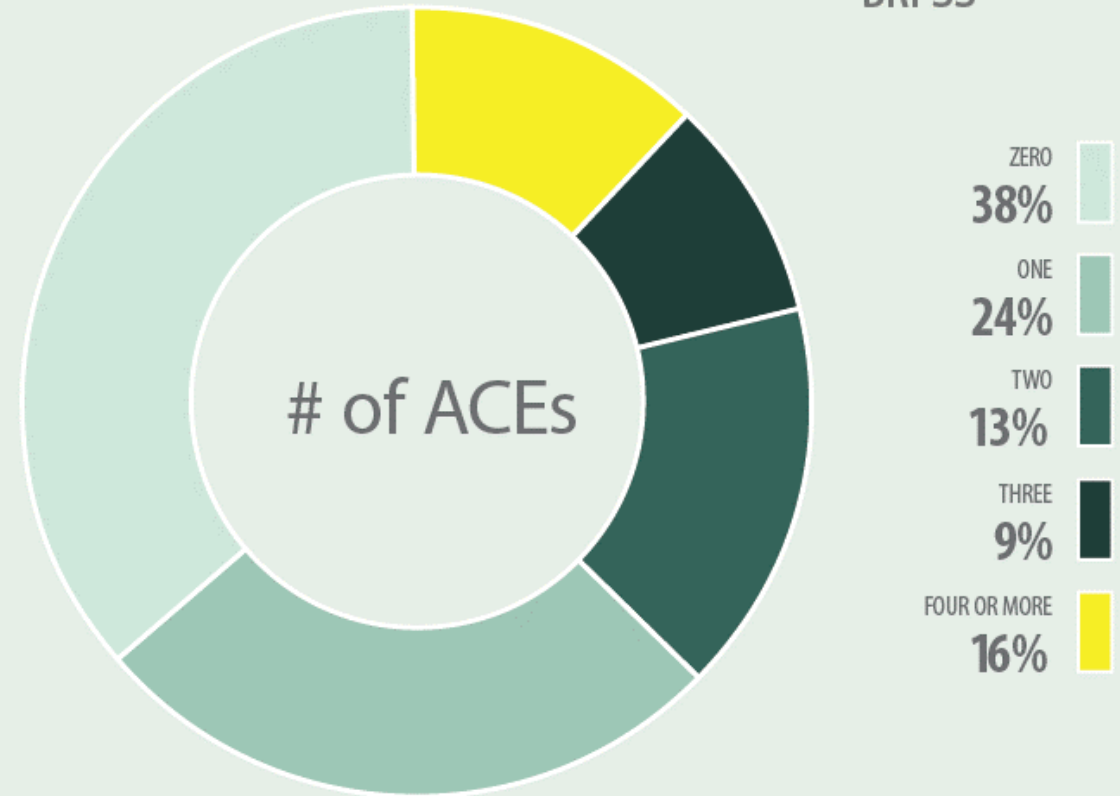


KP 1995-1997, n=17,337

How Common are ACEs?

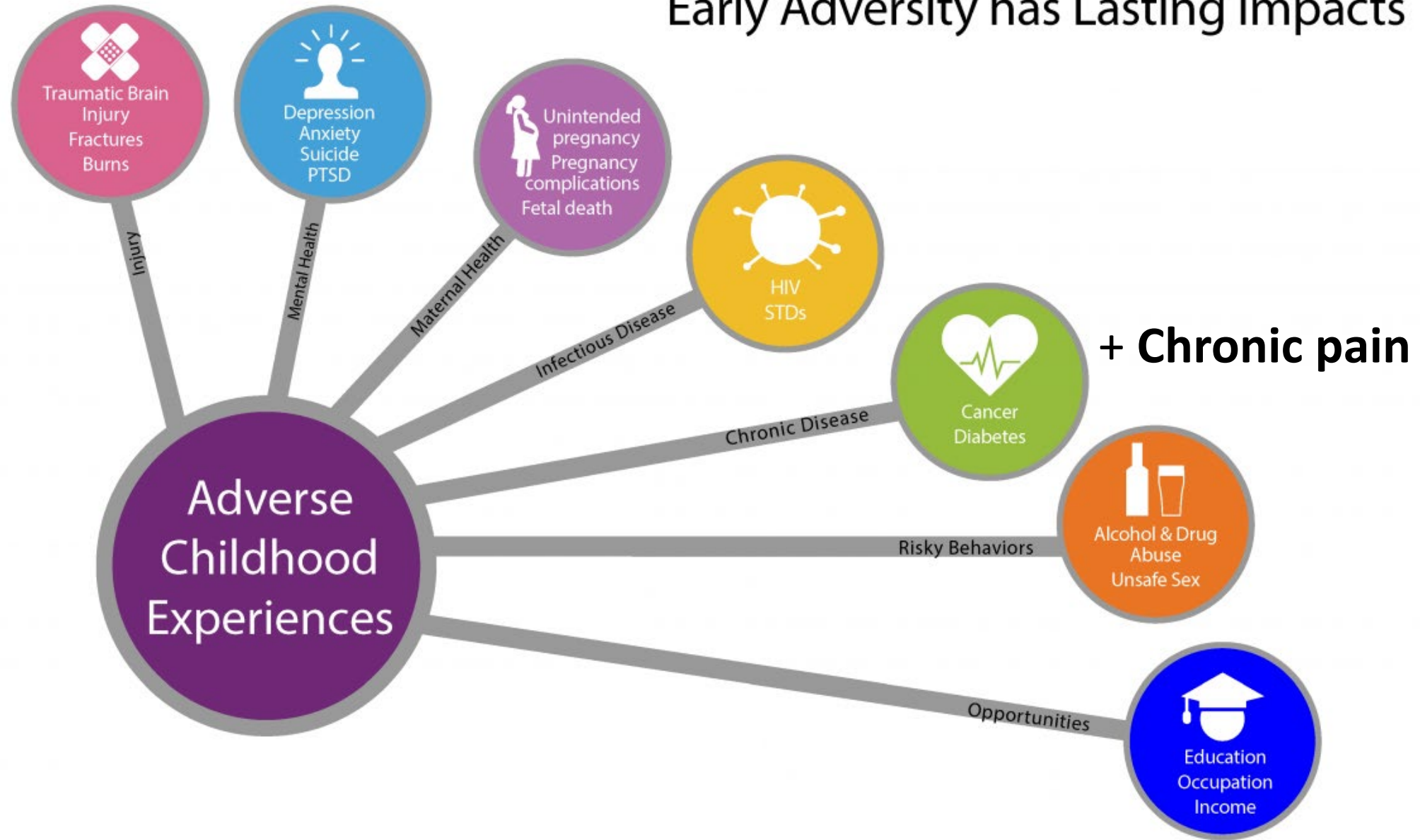
ACE Score Prevalence for Participants
Completing the ACE Module from the 2011-2014 BRFSS

BRFSS



National phone n=214,157

Early Adversity has Lasting Impacts



ACEs increase risk of chronic pain

- In young women, ACEs associated with **migraine**, esp. chronic migraine. Also associated with inflammatory factors (C-reactive protein, interleukin-6, and tissue necrosis factor-alpha). Tietjen, Gretchen E., et al. "Adverse childhood experiences are associated with migraine and vascular biomarkers." *Headache: The Journal of Head and Face Pain* 52.6 (2012): 920-929.
- 80% of **chronic pain youth** ≥ 1 ACE in their lifetime. ACEs exposure assoc. with anxiety, depression, and fear of pain, ≥ 3 ACEs associated with greatest impairment in functioning. Nelson, S., et al. (2018). The incidence of adverse childhood experiences (ACEs) and their association with pain-related and psychosocial impairment in youth with chronic pain. *The Clinical journal of pain*, 34(5), 402-408.
- ACEs strongly associated with chronic **pelvic pain** and more diffuse and functional pain. Schrepf, A, et al. "Adverse childhood experiences and symptoms of urologic chronic pelvic pain syndrome: a multidisciplinary approach to the study of chronic pelvic pain research network study." *Annals of Behavioral Medicine* 52.10 (2018): 865-877.

Case Example

Case example: “Eva”

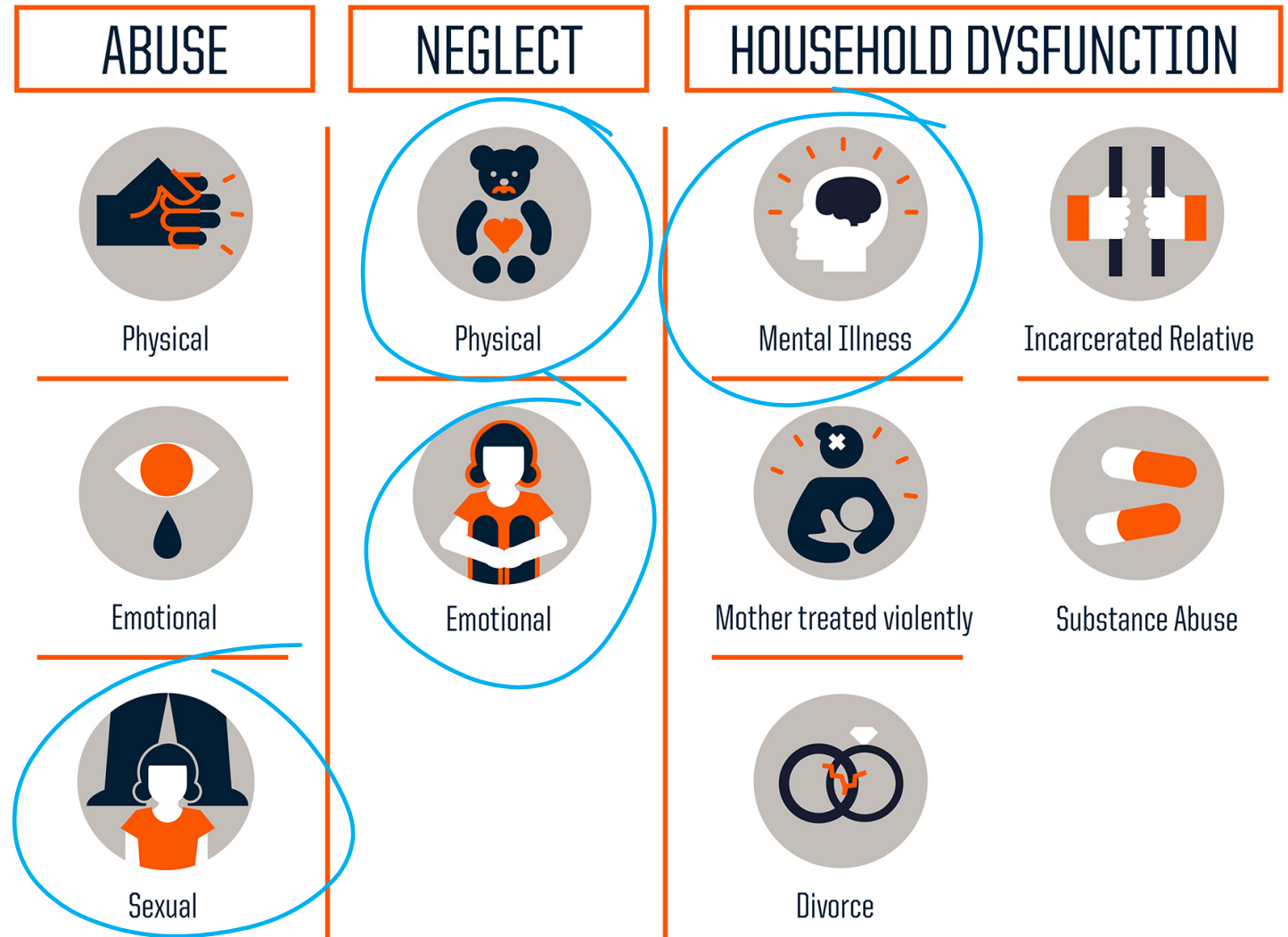
Presents to PMC Pain Psychology, referred to PMC by PCP for pelvic pain and HA

- 41yo Latina female with chronic pelvic pain (endometriosis, interstitial cystitis), type 2 diabetes, chronic migraine, chronic fatigue syndrome
Also carries d/o fibromyalgia
- Depression, PTSD. h/o smoking, cannabis
- Pelvic pain and migraine began in her teens and have worsened over time, widespread pain and fatigue began in her mid-20s
- Has tried multiple medical interventions
- In last few months, increased pain, panic attacks
- Interested in coping skills

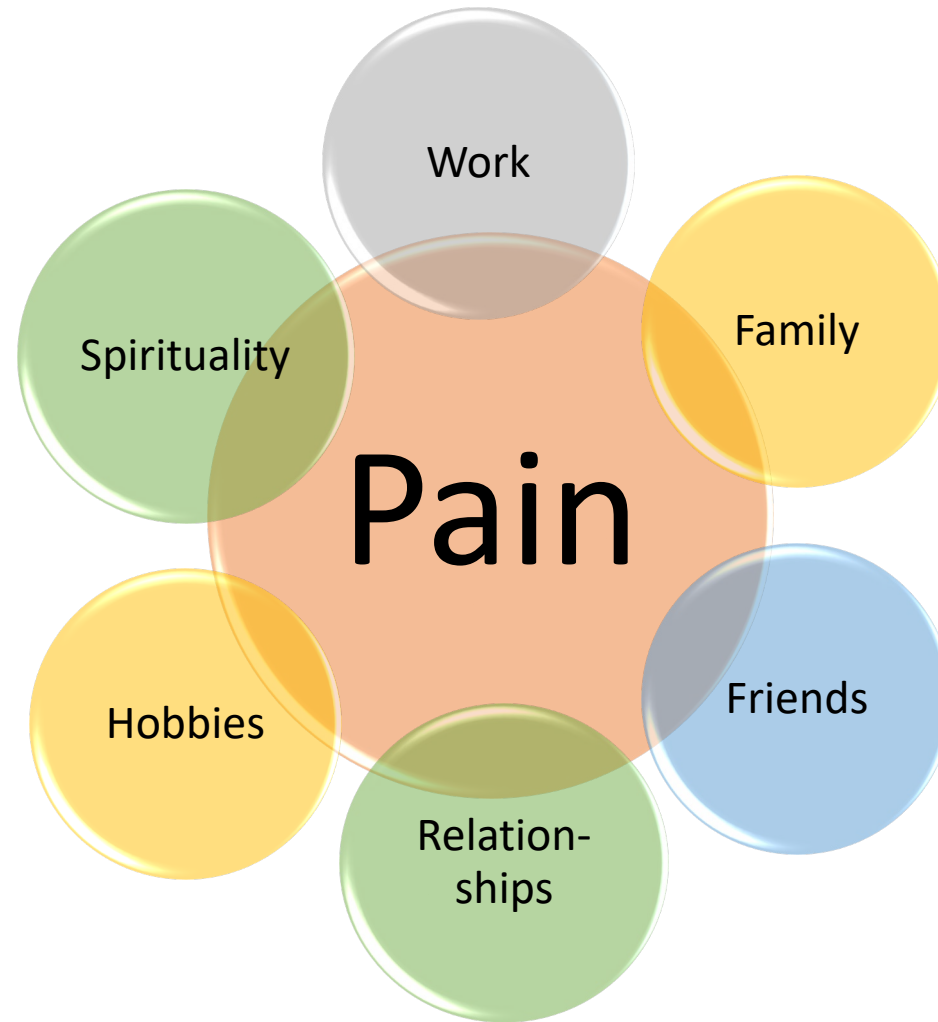
Assessment of Trauma History (ACEs)

ACE score = 4

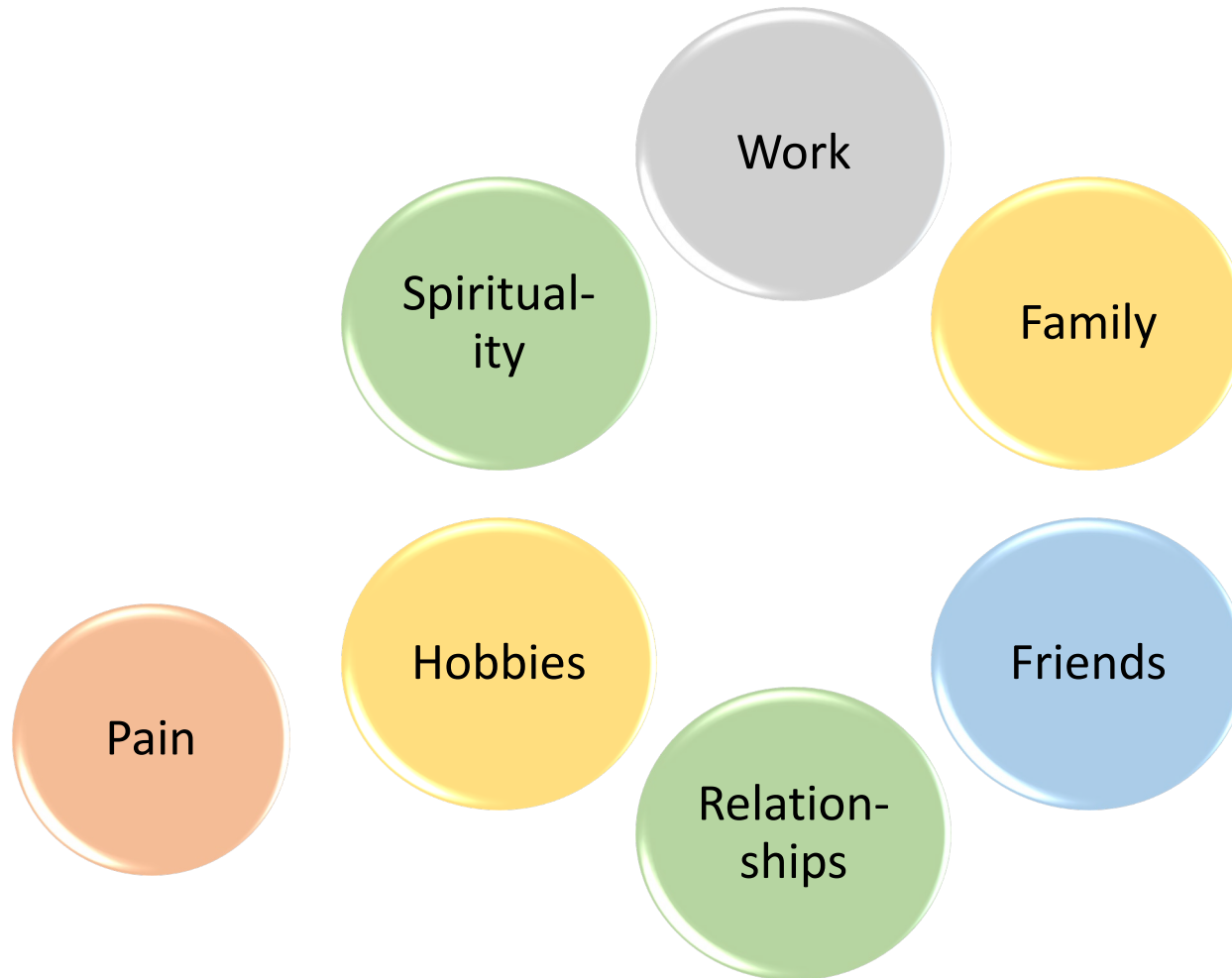
- Childhood and adult sexual assault
- Low resource, food insecurity
- Emotional neglect
- Mom bipolar disorder and addiction



Chronic pain can become center of life/identity



Pain Psychology: Goal is to reframe pain and regain important aspects of self





Questions or comments?

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