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## Trauma and Health Outcomes: An Evidence-Based Practice Project

Kelly Breuer  
*St. Catherine University*

Christina Cink  
*St. Catherine University*

Shawna Geisler  
*St. Catherine University*

Hannah Hillstrom  
*St. Catherine University*

Cerena Ice  
*St. Catherine University*

*See next page for additional authors*

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**Author**

Kelly Breuer, Christina Cink, Shawna Geisler, Hannah Hillstrom, Cerena Ice, Olivia Kreuser, Ladislava Mazurkevich, Hallie Schommer, and Jullie D. Bass

# Trauma and Health Outcomes: An Evidence-Based Practice Project

Kelly Breuer, Christina Cink, Shawna Geisler, Hannah Hillstrom,  
Ceren Ice, Olivia Kreuser, Ladislava Mazurkevycz, & Hallie Schommer

Faculty Advisor: Julie D. Bass, PhD, OTR/L, FAOTA  
St. Catherine University

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Keywords: trauma, adverse childhood experiences, traumatic events, post-traumatic stress disorder, PTSD, health disparities, health inequities, occupational therapy, effects, health outcomes, predictive

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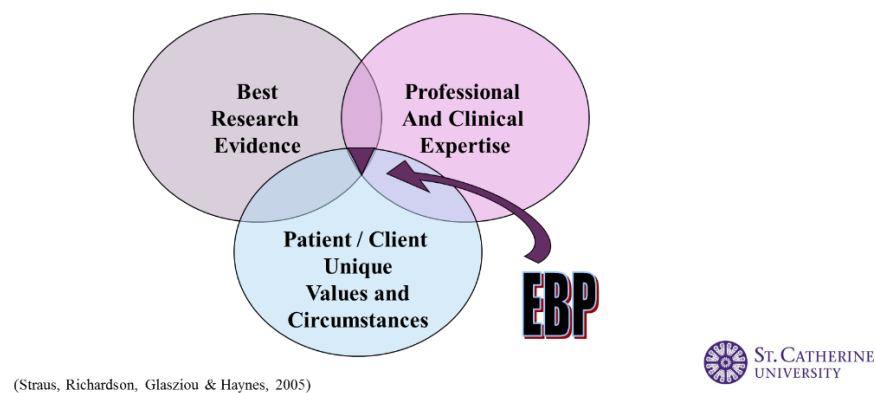
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## Introduction

### Evidence Based Practice

Evidence based practice is defined as the integration of knowledge from professional and clinical expertise, patient/client unique values and circumstances, and best research evidence (Straus, Richardson, Glasziou, & Haynes, 2005). The EBP courses in the St. Catherine University occupational therapy programs emphasizes skill building in finding, analyzing, and synthesizing research.

### A definition of Evidence-Based Practice (EBP)



### The EBP Project

Occupational therapy graduate students at St. Catherine University complete an EBP project in partial fulfillment of the requirements for a course on Evidence-Based Practice.

### The EBP Process

- Begins with a practice dilemma
- Dilemma is framed as an EBP question and PICO  
P (population/problem) I (intervention) C (comparison group) O (outcome(s) of interest)
- Background learning
- Search for the best evidence
- Initial appraisal and critical appraisal of the evidence
- Summary of themes from the evidence
- Recommendations for practice
- Next steps – implementation in practice

**Six EBP Projects: Trauma and Trauma Informed Care**

1. Descriptive and risk factors
2. Trauma and health outcomes
3. Screening and assessments
4. Perspectives and experiences
5. Interventions for individuals with a history of trauma
6. Training and programs for health professionals

**EBP Practice Dilemma: Trauma and Trauma Informed Care*****Hypothetical EBP Case Related to Trauma and Trauma Informed Care***

The overall focus on trauma and trauma informed care was chosen because of its increasing attention in the news and healthcare priorities. Recognition of trauma and provision of trauma-informed care in health, community, and education settings are important. Peter Levine, a clinical psychologist stated, “The effects of unresolved trauma can be devastating. It can affect our habits and outlook on life...It can take a toll on our family life and interpersonal relationships. It can trigger real physical pain, symptoms, and disease...” and “The paradox of trauma is that it has both the power to destroy and the power to transform and resurrect.” (Levine, n.d.)

Trauma and trauma-informed care was a particularly challenging topic for the EBP projects for several reasons. First, most of the literature is interdisciplinary and so it required looking for resources outside of occupational therapy for evidence. Second, the literature on trauma and trauma-informed care is still emerging. There are quite a few gaps in research that still need to be addressed. Third, we had to acknowledge in our class that some students may have a history of trauma. At the beginning of our class, we talked about the importance of being aware of our feelings regarding this topic and knowing when to get support. That is why we also provided a list of national and Minnesota resources related to trauma.

***Background Information on Trauma and Trauma Informed Care***

Trauma has been defined as: “results from an **event**, series of events, or set of circumstances **experienced** by an individual as physically or emotionally harmful or life-threatening with lasting adverse **effects** on the individual’s functioning and mental, physical, social, emotional, or spiritual well-being” (SAMHSA, 2014). The key attributes of trauma include:

- Event: The event is actual or a threat that may include features of physical or psychological harm, life-threatening, and/or child neglect.
- Experienced: An unique label, meaning, and disruption is identified.
- Effects: The immediate or delayed, short or long term effects can be named.

There are many different types of trauma and many populations who may be affected by trauma. Trauma is associated with (NCTSN, 2014, <https://www.nctsn.org/what-is-child-trauma/trauma-types>):

- Bullying
- Community violence
- Complex trauma
- Disasters
- Early childhood trauma
- Intimate partner violence
- Medical trauma
- Physical abuse
- Refugee trauma
- Sexual abuse
- Terrorism and violence
- Traumatic grief

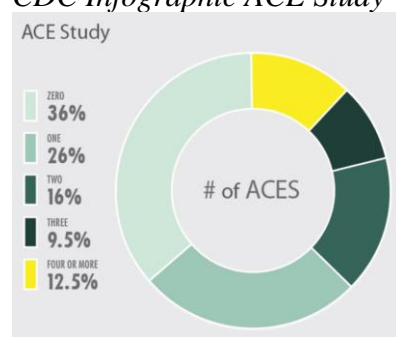
Estimates of adult exposure to trauma vary. Approximately 6 in 10 men and 5 in 10 women have had trauma and 90% of people seen in behavioral health have a history of trauma (SAMHSA, n.d., <https://www.integration.samhsa.gov/clinical-practice/trauma>).

Trauma that is associated with childhood is often labeled an adverse childhood experience (ACE). ACEs are defined as potentially traumatic events in childhood (0-17 years) that may include:

- “violence, abuse, or neglect; witnessing violence in the home; and having a family member attempt or die by suicide...”
- growing up in a household with substance misuse, mental health problems, or instability due to parental separation or incarceration of a parent, sibling, or other member of the household.” (CDC, 2019, n.p., <https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/aboutace.html>)

A history of ACEs is reportedly quite common in the adult population (see Figure 1). It is estimated that almost 2/3 of adults have had an adverse childhood experience and 2 in 10 people have had three or more ACEs (CDC, 2016).

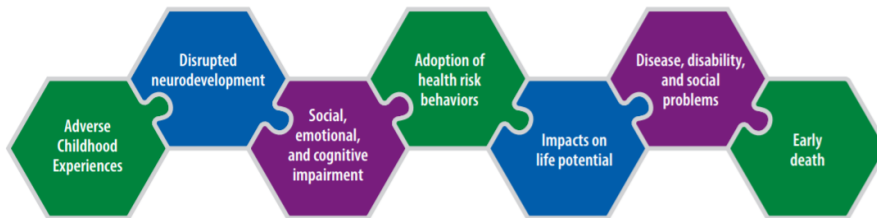
Figure 1  
*CDC Infographic ACE Study*



Note. (CDC, 2016, <https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/ace-graphics.htm>)

Trauma in childhood has a ripple effect on later life (see Figure 2). ACEs may disrupt development, contribute to other impairments, influence risky behaviors, change life potential, influence later health problems and may even be a factor in early death.

Figure 2  
*CDC Infographic Preventing ACEs*



Note. CDC, 2019, n.p., <https://www.cdc.gov/violenceprevention/pdf/preventingACES-508.pdf>)

Preventing ACEs is a major priority of public health media campaigns by the Centers for Disease Control and Prevention (CDC, 2019,

<https://www.cdc.gov/violenceprevention/pdf/preventingACES-508.pdf>). Prevention emphasizes:

- Supports for families
- Social norms
- Strong starts
- Skill building to handle everyday challenges
- Connections to caring adults and activities
- Early interventions

The EBP projects from the Fall, 2019, Evidence-Based Practice course provide a snapshot of research studies on trauma and ACEs. Ongoing research in major studies of trauma may be followed in the:

- CDC-Kaiser Permanente Adverse Childhood Experiences (ACE) Study
- Behavioral Risk Factor Surveillance System (BRFSS)
- World Health Organization: ACE International Questionnaire (ACE-IQ)

Trauma-Informed Care (TIC) has been proposed as a framework for professionals and organizations who work with individuals having a history of trauma.

A professional who implements characteristics of TIC:

- Realizes the impact of trauma
- recognizes the signs and symptoms
- responds through policies, procedures, and practices
- resists re-traumatization.

The six principles of TIC are:

- Safety
- Trustworthiness and transparency
- Peer support
- Collaboration and mutuality
- Empowerment, voice and choice
- Cultural, historical, and gender issues



The occupational therapy focus on trauma and trauma-informed care has been relatively recent for the American Occupational Therapy Association (AOTA) even though many practitioners have addressed trauma within their own work setting. The AOTA has four publications that may be of interest to occupational therapy practitioners:

- Understanding and applying trauma-informed approaches across occupational therapy settings. (Fette, 2019)
- AOTA's societal statement on stress, trauma, and posttraumatic stress disorder (Champagne, et al., 2018).
- Occupational therapy's role in mental health promotion, prevention, & intervention with children & youth childhood trauma (AOTA, 2015)
- A trauma-informed approach distinct to occupational therapy: The TIC-OT Model (AOTA, 2018)

### **Appraisals of Best Evidence, Themes, and Recommendations**

After searching and finding evidence available from library databases and alternative sources, students conducted an initial appraisal to evaluate the quality and relevance of the evidence and select the best research for further review. Then they conducted critical appraisals of the best formal reviews of primary research (e.g., systematic reviews, meta-analyses) and/or primary/original research studies. One of the steps in the CAP process is to evaluate the strength or level of the research design and the types of conclusions that are possible from each design.

#### *Initial Appraisal*

- Quality of the evidence
  - type of evidence and research design
  - investigator qualifications and journal/publication/website
  - journal/publication/website
- Relevance of the evidence

#### *Critical Appraisal*

- Appraisal of methods, results, and implications
- Classification of type of research study
  - Reviews of primary research (e.g., systematic reviews, meta-analyses)
  - Qualitative studies
  - Psychometric studies
  - Primary quantitative research studies
    - Level 1: randomized controlled trials
    - Level 2: two groups, nonrandomized/cohort and case control
    - Level 3: nonrandomized, pretest/posttest and cross-sectional
    - Level 4: single subject
    - Level 5: case report

After completing initial and critical appraisals, themes are summarized related to the EBP question and other findings that emerged from the evidence. Recommendations for practice and reflection on participating in an EBP project are identified in the conclusions.

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All EBP Projects are available at <http://sophia.stkate.edu/>.

**EBP Question**

What is the relationship between trauma (ACE or traumatic events) and child and adult performance, participation, health and disability outcomes for general and specific populations?

What additional person or environment characteristics predict positive or negative outcomes from trauma?

## Executive Summary

### Minnesota Occupational Therapy Association Continuing Education Presentation

#### Trauma & ACEs: Health & Participation Outcomes

Kelly Breuer, Christina Cink, Shawna Geisler, Hannah  
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#### EBP Question

What is the relationship between trauma (ACE or traumatic events) and child and adult performance, participation, health, and disability outcomes for general and specific populations?

What additional person or environment characteristics predict positive or negative outcomes from trauma?



#### Background Learning

- Trauma influences ability to cope with stress  
(American Occupational Therapy Association (AOTA), 2016)
- ACEs are related to changes in brain development  
(Belsky et al., 2017)
- Childhood trauma is linked to poor health outcomes  
(Doh, et al., 2016)
- resilience & adult support is associated with protective factors  
(Belsky et al., 2017; Belsky, Neesechek, Hines, & Heflin, 2014)

#### Examples of Evidence Resources

##### Governmental & Major Foundations

- SAMHSA
- U.S. Department of Health and Human Services

##### OT Specific Resources

- AOTA (i.e. AJOT, continuing education articles, etc.)
- OT Search

##### Interprofessional Journals, Databases, Organizations

- PubMed
- CINAHL

#### Examples of Search Process

##### Databases Used

- PubMed
- CINAHL

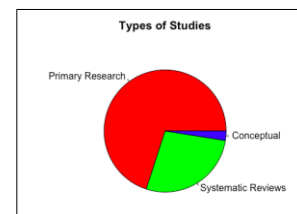
##### Most Helpful Search Strategies

- Filters to limit search results
- Use of alternative search methods

##### Most Helpful Keywords

- ACEs, traumatic events
- Effects, outcomes, impact, prediction
- Resiliency, risk factors

#### Initial Appraisal of Best Evidence



### Overview of Critical Appraisals of Best Evidence

#### Primary Research

1. Impact on Health in a Minority Sample (Shawley, Tappin, & Reynolds, 2012)
2. Resilience & Distress (Beautrais et al., 2017)
3. Mitigation of the Effects of Interpersonal Violence (Coker, Bush, Browne, & Spang, 2010)
4. Adult Support & Childhood Resilience (Bath et al., 2017)
5. ACEs & High Risk Behaviors in Adults (Campbell, Webster, & Spence, 2010)
6. Resilience & School Participation (Beautrais et al., 2017)
7. Psychological Trauma, Socioeconomic Status, & Academic Achievement (Goodman, Miller, & West, 2014)

#### Reviews of Primary Research

1. Pediatric Health Outcomes (Oh et al., 2018)

### Critical Appraisal 1 & 2

#### Impacts of Adverse Childhood Experiences on Health, Mental Health, and Substance Use in Early Adulthood: A Cohort Study of an Urban, Minority Sample in the U.S.

(Shawley et al., 2012)

- What is the relationship between ACEs and health and disability for minority populations?
- Young adults in minority populations may be at risk for poorer health outcomes in adulthood.

#### Childhood Adversities and Distress - The Role of Resilience in a Representative Sample

(Beautrais et al., 2017)

- What is the relationship between childhood trauma, resilience, and adult distress?
- The effects of trauma can last into adulthood and treatment should be focused on protective factors such as resilience and social support.

### Critical Appraisal 3 & 4

#### Can the Impact of Interpersonal Violence on Current Health-Related Quality of Life Be Mitigated?

(Coker et al., 2010)

- How does stress mediate health-related quality of life for people who have experienced trauma or ACEs?
- A reduction of stress was associated with less severe negative impacts on health-related quality of life.

#### Does Continuous Trusted Adult Support in Childhood Impart Life-Course Resilience Against Adverse Childhood Experiences - A Retrospective Study on Adult Health-Harming Behaviours and Mental Well-being

(Bath et al., 2017)

- Does support from a trusted adult predict positive outcomes for individuals who have experienced ACEs?
- A trusted adult or caregiver may reduce the adverse consequences of trauma and improve children's coping skills, and mental well-being.

### Critical Appraisal 5 & 6

#### Associations Between Adverse Childhood Experiences, High-Risk Behaviors, and Morbidity in Adulthood

(Campbell et al., 2010)

- What is the relationship between individual ACE components, high risk behaviors, and comorbidities in adulthood?
- As an individual's ACE score increases, odds of risky behavior, morbidity, and disability in adulthood also increased.

#### Adverse Childhood Experiences: Assessing the Impact on Health and School Engagement and the Mitigating Role of Resilience

(Beautrais et al., 2014)

- What person or environment characteristics predict positive outcomes from trauma?
- Resilience and access to safe environments may mitigate the influence of childhood traumatic events.

### Critical Appraisal 7 & 8

#### Traumatic Stress, Socioeconomic Status, and Academic Achievement Among Primary School Students

(Goodman et al., 2012)

- What are the relationships among traumatic stress, socioeconomic status (SES), and academic performance for children?
- Traumatic stress is related to poor academic achievement in childhood. Low SES is associated with higher levels of traumatic stress.

#### Systematic Review of Pediatric Health Outcomes Associated with Childhood Adversity

(Oh et al., 2018)

- How are adversity and health related in childhood?
- Adversity is related to developmental and physiological deficits in childhood.

### Theme 1: Childhood trauma affects health outcomes & educational performance

- Delayed development (e.g. height, cognitive abilities, and menarche)

(Oh et al., 2018)

- Additional health outcomes (e.g. asthma, higher BMI, decreased telomere length, and elevated cortisol levels)

(Beautrais et al., 2014; Oh et al., 2018)

- Abnormal sleep participation

(Oh et al., 2018)

- Decreased school performance

(Beautrais et al., 2014; Goodman et al., 2012)

### Theme 2: Childhood adversity is predictive of negative health outcomes in adulthood

- ACEs & unfavorable outcomes  
(Bedi et al., 2021; Campbell et al., 2016; Kanaoka & Chandler, 2015)
- Dose-dependent relationship  
(Smith et al., 2019; Smeets et al., 2019)
- Maternal trauma & child development  
(Boggs et al., 2019)
- Biological factors influence future generations  
(Doherty et al., 2019)

### Theme 3: Trauma in adulthood is related to decreased life satisfaction and physical & mental health

- PTSD & health outcomes  
(Doherty, Kimbrell, Meyer, Gulliver, & Macmillan, 2019; Doherty & Macmillan, 2019; Edgewood et al., 2019)
- Interpersonal violence & sexual assault  
(Coker et al., 2015; Fletcher, 2010; Hill, Schneider, Bradley, Kaplan, & Angell, 2009)
- Recency of the trauma  
(Coker et al., Fletcher, 2010)
- Dose-dependent relationship  
(Coker et al., Fletcher, 2010)

### Theme 4: Protective factors such as resilience may help reduce the negative effects of trauma

- Resilience & mitigated health consequences  
(Bedi et al., 2017; Bedi et al., 2017; Crouch et al., 2019; Meng, Henry, Wang, Li, & O'Leary, 2018)
- Resilience & positive mental health  
(Bedi et al., 2017; Bedi et al., 2017; Crouch et al., 2019)
- Factors and mechanisms to help reduce the negative effects of ACEs & decrease adversity (e.g. stable environments, supportive adults, etc.)  
(Bedi et al., 2017; Bedi et al., 2017; Crouch et al., 2019; Kanaoka & Chandler, 2015)

### Recommendations for Occupational Therapy and Interprofessional Programs

- Changes in development, school performance, & sleep
- Magnitude of child/mother exposure to trauma
- Adult trauma as factor in PTSD & health
- Build resilience skills
- Current environment for healing



### Summary and Reflection

- Long-term recovery from trauma
- Why is it important?
- Our role

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- ## References (cont.)



## **Themes**

### ***Introduction***

Trauma affects people of all ages and backgrounds. After completing initial and critical appraisals of best evidence, four main themes were identified as related to the EBP question. The themes included: the effects of trauma in childhood, effects of childhood adversity on adulthood and future generations, effects of adulthood trauma on health outcomes, protective factors that mitigate negative health outcomes.

### ***Effects of Trauma in Childhood***

Findings from various studies provide strong evidence supporting the relationship between childhood trauma and potential negative health outcomes, which may lead to deficits in educational performance. A systematic review and a secondary analysis of cross-sectional survey research identified several health outcomes that were associated with childhood trauma. Changes in body functions included delays in height, cognitive abilities, and menarche (Oh et al., 2018). Additional health factors included increased risk for asthma (Oh et al., 2018), higher BMI (Bethell, Newacheck, Hawes, & Halfon, 2014; Oh et al., 2018), decreased telomere length (Shalev et al., 2013) and elevated cortisol levels (Oh et al., 2018). Elevated cortisol levels in children experiencing trauma was related to increased headaches, nausea, and sleep problems (Oh et al., 2018). Nightmares, night terrors, sleepwalking, and abnormal sleeping patterns were also common among children with increased stress due to traumatic experiences, such as bullying (Oh et al., 2018).

The health effects resulting from childhood trauma may also predict decreased school performance in children. A large cross-sectional survey study found that children who had experienced trauma were 2.67 times more likely to repeat a grade (Bethell et al., 2014). A secondary analysis of national data found that traumatic stress was related to lower economic status and was a predictor of lower educational outcomes (Goodman, Miller, & West-Olantunji, 2012). Childhood trauma has also been shown to be a predictor of low participation rates in education, employment, and training, as well as

poorer cognitive functioning in late adolescence into adulthood (Jaffee et al., 2018; Stain et al., 2014).

Bethell et al. (2014) explain that childhood trauma may have long-term effects; however, the promotion of health and well-being may decrease the probability of adverse effects and support greater occupational performance. There is strong evidence supporting the relationship between childhood adversity and negative effects in occupational performance.

### ***Relationship between Childhood Adversity and Adult Outcomes***

A growing body of research provides support for a strong relationship between childhood trauma and poor health outcomes into young adulthood and late adulthood. Adverse Childhood Experiences (ACEs) are considered to be associated with negative health consequences including developmental disruption (Kalmakis & Chandler, 2015), physical and psychological conditions, risk behaviors, and increased healthcare utilization throughout adulthood (Campbell, Walker, & Egede, 2016; Kalmakis & Chandler, 2015). In the 2011 Behavioral Risk Factor Surveillance Survey of almost 50,000 respondents, ACE scores of four or more were at higher risk for negative behavioral, clinical, mental health and disability outcomes (Campbell, Walker, & Egede, 2016). Depression and obesity were the highest reported mental and physical health problems when ACE scores were above four (Campbell, Walker, & Egede, 2016). In several studies, higher ACE scores were associated with poorer health outcomes and life satisfaction (Campbell, Walker, & Egede, 2016; Felitti et al., 2019; Mersky, Topitzes, & Reynolds, 2013). These results suggest a dose-dependent relationship between the number of adverse experiences in childhood and the severity of negative outcomes in adulthood.

A growing body of research suggests that the effects of childhood adversity could impact future generations. Briggs et al. (2014) studied the relationship between maternal trauma in childhood and developmental delays in their children. They found that there is a relationship between when caregivers experience childhood trauma, and the socio-emotional deficits in their

3-year-old children (Briggs et al., 2014). Biological indicators of stress were observable in tests measuring the sympathetic nervous system, immune system, and the hypothalamus-pituitary-adrenal axis; additionally, telomere length emerged as a measure of the biological effects of stress (Shalev et al., 2013). Telomeres are a protective buffer built into the DNA sequence that shortens with each replication; the experience of stress has shown to increase the inflammatory and immune response which increases the rate of cell replication and telomere shortening (Shalev et al., 2013). A longitudinal twin study examined telomere length in children who had experienced two or more forms of violence such as bullying victimization, witnessing domestic violence or abuse from an adult (Shalev et al., 2013). Even when sex, socioeconomic status, and biological factors such as chronic illness and BMI were controlled, telomere length eroded significantly more in the group exposed to adversity (Shalev et al., 2013). These results imply that the resulting biological stress effects could impact the DNA passed onto the offspring of survivors of childhood adversity, causing the negative outcomes to have a transgenerational effect.

### ***Traumatic Adulthood Experiences and Health Outcomes***

There are many types of trauma in adulthood, such as trauma due to combat, sexual abuse, physical assault, refugee displacement, and natural disasters. A review of literature suggests that individuals who experienced trauma in adulthood may develop problems in physical and mental health as well as decreased levels of life satisfaction (Coker, Bush, Brancato, & Sprang, 2019; DeBeer, Kimbrel, Meyer, Gulliver, & Morissette, 2014; Dekel & Monson, 2010; Edgelow, MacPherson, Arnaly, Tam-Seto, & Cramm, 2019; Fletcher, 2019; Gareth, Melliush, & Welham, 2017; Hill, Schroeder, Bradley, Kaplan, & Angel, 2009; May-Ling, Loxton, & McLaughlin, 2015; Morris Trainor, Jong, Bluemke, & Halberstadt, 2019). Due

to high prevalences and current relevance, the focus of this section will be on two types of adversities in adulthood, which are trauma related to intimate partner violence and combat-related trauma (Coker et al., 2019; Debeer et al., 2014; Dekel & Monson, 2010; Edgelow et al., 2019; Gareth et al., 2017; Hill et al., 2009).

There has been a national rising concern regarding the psychological health of service members. Post-Traumatic Stress Disorder (PTSD) may develop among veterans who were in active duty and experienced injuries or extreme traumatic events (DeBeer et al., 2014; Dekel & Monson, 2010; Edgelow et al., 2019). A growing body of evidence suggests that PTSD is associated with decreased life satisfaction and occupational performance, as well as psychological and health-related problems (DeBeer et al., 2014; Dekel & Monson, 2010; Edgelow et al., 2019; Gareth et al. 2017). PTSD developed post-war is associated with major depression, hypervigilance, sleep disturbances (Dekel & Monson, 2010; Edgelow et al., 2019), related substance abuse, and higher rates of respiratory and cardiovascular problems (Dekel & Monson, 2010). Additionally, these individuals may experience a decrease in community integration, social isolation, and family relationship problems, especially with spouses and children (Dekel & Monson, 2010). There is evidence that individuals who have PTSD symptoms combined with depression and low social support post-deployment may be inclined to suicidal ideation (DeBeer et al., 2014). Moreover, women are twice more likely to develop PTSD than men, however, this number might reflect the fact women tend to experience more sexual violence than men (Edgelow et al., 2019).

Sexual assault and interpersonal violence are traumatic experiences that affect people in both childhood and adulthood. According to a cross-section analysis of longitudinal data from the Kentucky Women's Health Registry, exposure to these types of traumatic events in adulthood

may have lasting negative impacts on the health of the individuals experiencing them (Coker et al., 2019). Women who experience interpersonal violence and sexual assault in adulthood may experience, lower quality of life, depression, increased alcohol use and impaired functioning (Coker et al., 2019; Hill et al., 2009). Young adults who experienced interpersonal violence reported a higher utilization of healthcare services (Fletcher, 2010). The literature indicates that negative health tends to be more strongly impacted when violence and trauma have occurred more recently in the lives of adults (Coker et al., 2019; Fletcher, 2010). Negative health is also more severe for individuals who have been exposed to multiple forms of adverse events, including childhood trauma (Coker et al.; Fletcher, 2010).

### ***Protective Factors that Mitigate Negative Health Outcomes***

Protective factors, such as resilience, may aid in decreasing the severity of adverse health outcomes related to childhood trauma. A review of the literature revealed an association between resilience and negative health consequences related to trauma (Bellis et al., 2017; Beutel et al., 2017; Crouch, Radcliff, Strompolis, & Srivastav, 2019; Meng, Fleury, Xiang, Li, & D'Arcy, 2018). Resilience contributed to improved mental health as an outcome in adults who experienced childhood trauma (Bellis et al., 2017; Beutel et al., 2017; Crouch et al., 2019). A systematic review of 85 studies examined the role of resilience in health outcomes, and found that protective factors were correlated with adaptability in individual, family, and societal levels; meaning protective factors such as resilience helped to decrease the effects of negative health outcomes commonly occurring after childhood trauma (Meng et al., 2018). Individuals with high levels of resilience tend to experience less severe adverse health outcomes (Beutel et al., 2017).

Several strategies were found to increase resilience and other protective factors to help mitigate the effects of adverse childhood experiences (ACEs). Child resilience, safe childhood

environments, and supportive adults may contribute to the reduction of the negative effects of ACEs (Bellis et al., 2017; Bethell et al., 2014; Crouch et al., 2019). Children who lacked several of these protective factors tended to have more ACEs (Bethell et al., 2014). Furthermore, supportive relationships with family members and other adults were found to alleviate some of the effects of ACEs (Bellis et al., 2017; Crouch et al., 2019, Hambrick et al., 2019). Bethell et al. (2014) completed a cross-sectional survey investigating how adverse childhood experiences were associated with a child's development and lifelong health. They found that mechanisms, such as resiliency, as well as access to safe and stable environments within an individual's home, school, and community, can help to intervene with the adversity experienced within childhood traumatic events (Bethell et al., 2014).

**Summary and Implications for Practice**

This project investigated the role of childhood and adulthood trauma in predicting health, performance, and participation outcomes for a variety of populations, and the personal or environmental characteristics that can mitigate negative outcomes. Poor health and occupational performance outcomes were predicted by the prevalence of trauma. However, prevalence of protective factors such as resilience may help reduce the effects of trauma. Further research into how ACEs effect trauma victims both at the time of trauma and later in adulthood, as well as into how occupational therapy practitioners and other health professionals can better serve trauma victims is crucial.

Trauma impacts people of all ages and demographics. People of lower socioeconomic status (SES) and children whose parents suffered from trauma tended to show higher levels of trauma in childhood. Traumatic experiences in adulthood or in childhood, also referred to as ACEs predicted greater physical, behavioral, and mental problems throughout the lifespan. Higher ACE scores were associated with increased negative life outcomes, including high risk behaviors, developmental disruption, and increased healthcare costs. Health care costs were higher for this population because they required ongoing care for the long-lasting physical and psychological effects of trauma. Untreated adult traumas have been linked to Post-Traumatic Stress Disorder (PTSD) and other mental health issues, including social isolation and suicide ideation. Protective factors, like the presence of a trusted adult and parental well-being, has been shown to build resilience and decrease the adverse effects of traumatic events.

Predictive studies are important for examining the relationships among variables, but cannot be used to determine causality. Most studies reviewed were based on survey and self-report methods, and thus, data may have bias and errors in recalled memories. Many samples had

underrepresentation of non-white populations. Furthermore, few studies have examined the impact of trauma on occupational performance.

The research showed a clear relationship between trauma and health outcomes. Therefore, it is likely that other life aspects are affected due to trauma as well. However, only limited information about the influence of trauma on occupation was found. Therefore, more research is needed, looking into the broader effects of trauma on various areas of occupation. Some of these areas include, for example, education and school performance, sleep, and development.

Occupational therapy research may contribute to the acquired knowledge of how trauma and ACEs disrupt everyday functioning. This includes looking into the magnitude of both child and parent exposure to trauma and its relationship with occupational performance. Adult trauma as a factor in PTSD and overall health would also be an important subject of research. Furthermore, this research could shine a light on not only how ACEs disrupt function at the time of trauma, but also could help predict later life roles and participation for victims of trauma.

Overall, there is a critical implication for occupational therapy and inter-professional practitioners. Practitioners who work with individuals who have experienced trauma may need to monitor health and occupational performance. While this may fall more into the lens of occupational therapy, inter-professional collaboration is critical for effective care. Furthermore, the monitoring of health and occupational performance is especially crucial for those who have had multiple trauma experiences.

The relationship between trauma and adverse childhood experiences and negative outcomes throughout the lifespan is supported in the current body of research. Protective factors, like resilience and the presence of a caregiver during childhood, may help to lessen adverse



effects. Future research should focus on trauma's impact on underrepresented and vulnerable populations. In addition, researchers should also utilize stronger methods to more clearly illustrate the nature of the relationship between trauma and negative outcomes. These findings, in turn, would inform the development of guidelines for occupational therapy and the use of effective therapeutic interventions to help mitigate the effects of trauma.

**Table of EBP Resources**

Table 1.

*Governmental and Foundation Resources that Address Trauma*

Title/Name	Brief Description	Source
Substance Abuse and Mental Health Services Administration (SAMHSA)	<p>Gives a definition of trauma as an event that affects life performance</p> <p>Describes that trauma is linked to behavioral, physical, and mental health issues</p>	<p>U.S. Department of Health and Human Services (HHS)</p> <p><a href="https://www.samhsa.gov/trauma-violence">https://www.samhsa.gov/trauma-violence</a></p>
Coping with Traumatic Events	<p>Gives an overview of what a traumatic event entails, along with the warning signs and coping strategies.</p> <p>Includes additional federal resources, hotlines, and fact sheets.</p>	<p>National Institute of Mental Health (NIMH)</p> <p><a href="https://www.nimh.nih.gov/health/topics/coping-with-traumatic-events/index.shtml">https://www.nimh.nih.gov/health/topics/coping-with-traumatic-events/index.shtml</a></p>
Adverse Childhood Experiences (ACEs)	CDC's provides information on ACEs with general information, case studies, other references, and prevention services. The CDC also has other information about Trauma-informed care.	<p>Centers for Disease Control and Prevention (CDC)</p> <p><a href="https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/index.html">https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/index.html</a></p>
March 2019: The Need for Trauma-Informed Care	<p>Describes the essentials of trauma-informed care (TIC).</p> <p>Explains how trauma affects health care needs and engagement.</p>	<p>U.S. Department of Health &amp; Human Services (HHS)</p> <p><a href="https://www.hhs.gov/ash/oah/news/e-updates/march-2019-the-need-for-trauma-informed-care/index.html">https://www.hhs.gov/ash/oah/news/e-updates/march-2019-the-need-for-trauma-informed-care/index.html</a></p>
The Importance of Understanding Trauma-Informed Care and Self-Care for Victim Service Providers	<p>Describes trauma-informed care (TIC) as something that is sensitive and responsive to victims of trauma.</p> <p>Encourages a multi-disciplinary approach to dealing with all trauma cases and includes other</p>	<p>Department of Justice Archives</p> <p><a href="https://www.justice.gov/archives/ovw/blog/importance-understanding-trauma-informed-care-and-self-care-victim-service-providers">https://www.justice.gov/archives/ovw/blog/importance-understanding-trauma-informed-care-and-self-care-victim-service-providers</a></p>

Table 2.

*Occupational Therapy Resources that Address Trauma*

Title/Name	Brief Description	Source
Comparative Effectiveness of Interventions for Children Exposed to Nonrelational Traumatic Events (2013)	This article assesses the effectiveness of interventions targeting traumatic stress among children exposed to nonrelational traumatic events.	OTseeker <a href="http://www.otseeker.com/Search/SearchBuilder.aspx">http://www.otseeker.com/Search/SearchBuilder.aspx</a> <a href="https://doi.org/10.1542/peds.2012-3846">https://doi.org/10.1542/peds.2012-3846</a>
OT's Role in Mental Health Promotion, Prevention, and Intervention with Children and Youth (2015)	This article summarizes the definition of childhood trauma and trauma-informed care (TIC), along with the roles occupational therapists play in TIC.	American Occupational Therapy Association <a href="http://www.aota.org">www.aota.org</a> <a href="https://www.aota.org/~media/Corporate/Files/Practice/Children/Childhood-Trauma-Info-Sheet-2015.pdf">https://www.aota.org/~media/Corporate/Files/Practice/Children/Childhood-Trauma-Info-Sheet-2015.pdf</a>
Trauma Symptoms of Individuals with Mental Illness at Risk for Homelessness Participating in a Life Skills Intervention (2010)	This article summarizes the effects of life skill interventions in reducing trauma symptoms in individuals with a mental illness who are at risk for homelessness.	Occupational Therapy International (EBSCOhost) <a href="http://dx.doi.org/10.1002/oti.308">http://dx.doi.org/10.1002/oti.308</a>
Strengthening Occupational Therapy Practice with Communities after Traumatic Events (2018)	This article summarizes the potential to strengthen the OT role in supporting communities to recover from collective trauma.	British Journal of Occupational Therapy (OT Search) <a href="https://doi.org/10.1177/0308022618795594">https://doi.org/10.1177/0308022618795594</a>
Independent Living Skills and Posttraumatic Stress Disorder in Women Who Are Homeless: Implications for Future Practice (1997) US National Library of Medicine National Institutes of Health	This article focuses on the occupational therapists role in assisting homeless women with PTSD in developing independent living skills.	American Journal of Occupational Therapy (AOTA) <a href="https://ajot.aota.org/Article.aspx?articleid=1865161">https://ajot.aota.org/Article.aspx?articleid=1865161</a>

Table 3.

*Interdisciplinary Journals, Databases, Professional Associations that Address Trauma*

Title/Name	Brief Description	Source
Dart Center for Journalism and Trauma	Run by the Columbia Journalism School, its mission is based in interdisciplinary education on trauma. Contains research database that includes bibliography of “scholarship on journalism and trauma.”	<a href="https://dartcenter.org/">https://dartcenter.org/</a>
Medline (EBSCOhost)	Created by the U.S. National Library of Medicine, this database has many publications related to trauma and trauma-informed care including peer-reviewed journal articles. Has resources for consumers.	<a href="https://web.b.ebscohost.com/ehost/search/advanced?vid=0&amp;sid=05757134-49cf-40ba-8c41-6602f9074344%40pdc-v-sessmgr02">https://web.b.ebscohost.com/ehost/search/advanced?vid=0&amp;sid=05757134-49cf-40ba-8c41-6602f9074344%40pdc-v-sessmgr02</a> SCU Library: has APA Journals
PsycInfo	This database provides many publications related to trauma including peer-reviewed journals, books, dissertations, and theses. The American Psychological Association sponsors this database.	<a href="https://search.proquest.com/psycinfo/advanced?accountid=26879">https://search.proquest.com/psycinfo/advanced?accountid=26879</a> SCU Library: has APA Journals
Title/Name	Brief Description	Source
Dart Center for Journalism and Trauma	Run by the Columbia Journalism School, its mission is based in interdisciplinary education on trauma. Contains research database that includes bibliography of “scholarship on journalism and trauma.”	<a href="https://dartcenter.org/">https://dartcenter.org/</a>

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### Appendix A. Initial Appraisals

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Cross-sectional survey
APA Reference	Crouch, E., Radcliff, E., Strompolis, M., & Srivastav, A. (2019). Safe, stable, and nurtured: Protective factors against poor physical and mental health outcomes following exposure to adverse childhood experiences (ACEs). <i>Journal of Child &amp; Adolescent Trauma</i> , 12(2), 165–173. doi: <a href="https://doi.org/10.1007/s40653-018-0217-9">https://doi.org/10.1007/s40653-018-0217-9</a>
Abstract	“Protective factors can build resilience and potentially moderate the long-term impact of adverse childhood experiences (ACEs). To better understand the role of protective factors, this study examines the relationship of two protective factors focused on safe, stable and nurturing relationships, ACEs, and self-reported mental and physical health outcomes among a representative adult sample from the South Carolina Behavioral Risk Factor Surveillance System. Protective factors were assessed as potential moderators of ACEs and poor self-reported physical and mental health in multivariate logistic regression analyses. Respondents exposed to four or more ACEs who grew up with an adult who made them feel safe and protected were less likely to report frequent mental distress or poor health. The use of protective factors may be an effective prevention strategy for ACEs and its associated outcomes and may serve as a mechanism to break the cycle <sup>^</sup> of childhood trauma” (p. 165).
Author	Credentials: Elizabeth Crouch Ph.D. Position and Institution: South Carolina Rural Health Research Center, Arnold School of Health, University of South Carolina, 220 Stoneridge Drive, Suite 204, Columbia, SC 29210, USA Publication History in Peer-Reviewed Journals: 172 extensive
Publication	Type of publication: Scholarly Peer Reviewed Journal Publisher: Journal of Child & Adolescent Trauma Other:
Date and Citation History	Date of publication: May 2018 Cited By: 2
Stated Purpose or Research Question	“This study used a state dataset that included both conventional and supplemental ACE questions to examine the relationship between ACEs, protective factors that addressed the presence of SSNRs, and self-reported mental and physical health outcomes among a representative sample of South Carolina adults. Based on previous research, we expected to find that individuals reporting four or more ACEs experienced less exposure to protective factors than those reporting fewer than four ACEs” (p. 166).
Author’s Conclusion	“These findings suggest that the presence of protective factors may have a role in moderating the number of ACEs a child may experience or the long-term impact of those ACEs. Because a dose-response relationship is often associated with number of ACEs and poor outcomes (Edwards et al. 2003; Felitti et al. 1998), simply reducing the number of ACEs a child experiences can be important to their long-term health and well-being” (p. 169).
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: This article focuses on the outcomes for people with have ACEs and explore mediating factors that impact outcomes for individuals and directly related to the EBP question.
Overall Quality of Article	Overall Quality of Article: Good Rationale: This article was published within the last two years in a scholarly peer reviewed journal.

	<b>Overview of Article</b>
Type of article	Overall Type: Primary Research Study Specific Type: Cross-sectional
APA Reference	Bach, S., Molina, M., Jansen, K., da Silva, R., & Souza, L. (2018). Suicide risk and childhood trauma in individuals diagnosed with posttraumatic stress disorder. <i>Trends in Psychiatry and Psychotherapy</i> , 40(3), 253-257. <a href="https://dx.doi.org/10.1590/2237-6089-2017-0101">https://dx.doi.org/10.1590/2237-6089-2017-0101</a>
Abstract	<p>“Introduction: Posttraumatic stress disorder (PTSD) develops after exposure to a potentially traumatic event. Its clinical condition may lead to the development of risk behaviors, and its early detection is a relevant aspect to be considered. The aim of this study was to assess the association between childhood trauma and suicide risk in individuals with PTSD. Method: This was a cross-sectional study conducted with individuals aged 18 to 60 years who were evaluated at a mental health research outpatient clinic. PTSD diagnosis and suicide risk identification were performed using specific modules of the Mini International Neuropsychiatric Interview (MINI-Plus). The Childhood Trauma Questionnaire (CTQ) was used to evaluate traumatic events in childhood. Results: Of the 917 individuals evaluated, 55 were diagnosed with PTSD. The suicide risk prevalence in individuals with PTSD was 63.6%. Emotional neglect and emotional abuse scores tended to be higher in the suicide risk group (<math>p&lt;0.2</math>). Conclusion: Our findings showed a higher prevalence of suicide risk in individuals with PTSD and support the hypothesis that the investigation of childhood traumatic experiences, especially emotional neglect and abuse, may help in the early detection of suicide risk in individuals with PTSD.” (p.253)</p>
Author	<p>Credentials: N/A  Position and Institution: Psychologist, Graduate Program in Health and Behavior (Department of Health and Behavior) at Universidade Católica de Pelotas, Brazil.  Publication History in Peer-Reviewed Journals: 12</p>
Publication	<p>Type of publication: Scholarly  Publisher: Trends in Psychiatry and Psychotherapy  Other: N/A</p>
Date and Citation History	<p>Date of publication: 23 August 2018  Cited By: 1</p>
Stated Purpose or Research Question	“Therefore, the aim of the present study was to assess the prevalence of suicide risk in individuals diagnosed with PTSD and the association between childhood trauma and suicide risk in these individuals.” (p.254)
Author’s Conclusion	“Our main finding, namely, the high prevalence of suicide risk in patients with PTSD, reveals that professionals should be more alert to suicide symptoms when evaluating and planning the treatment of these individuals in clinical practice. Therefore, we suggest the implementation of a formal assessment of history of trauma and suicide risk in mental health care services, as well as a formal mental health care program that includes suicide behaviors.” (p.256)
Overall Relevance to your EBP Question	<p>Overall Relevance of Article: Good  Rationale: Researches the connection of childhood trauma to depression and suicidal thoughts and PTSD in adults.</p>
Overall Quality of Article	<p>Overall Quality of Article: Moderate  Rationale: Possible difference in cultural opinion for what qualifies as PTSD and childhood trauma. Decent sample size. Author is not well established.</p>

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Cross-sectional
APA Reference	Coker, A. L., Bush, H. M., Brancato, C. J., & Sprang, G. (2019). Can the impact of interpersonal violence on current health-related quality of life be mitigated? <i>Journal of Women's Health</i> (15409996), 28(10), 1355–1367. <a href="https://doi.org/10.1089/jwh.2018.7017">https://doi.org/10.1089/jwh.2018.7017</a>
Abstract	“Background: Interpersonal violence continues to affect health long after violence has ended. This analysis investigated stress, support, and health behaviors as mediators potentially explaining persistent health impacts of violence. Methods: Using a cross-sectional analysis of 12,594 women “Wellness, Health & You” (WHY) participants, authors measured violence as intimate partner violence (IPV), sexual assaults (SA), and childhood abuse (CA) by recency (current, past as an adult, or child) and number of violence forms. Current health-related quality of life (HR-QOL) was defined using the most recent survey as physical and mental health limiting usual activities for at least 4 days in the past 30 days. Adjusted prevalence rate ratios (aPRRs) for violence and HR-QOL were obtained using multiple variable log binomial regression where each mediator was included in separate models with demographic attributes. Results: In this sample of middle-aged women, half (n = 6307) had ever experienced violence (38.3% IPV, 12.9% SA, and 24.6% CA) and 19.9% reported multiple forms. IPV, SA, and CA were each associated with poorer current HR-QOL, yet, WHY participants experiencing all three forms had a sixfold increased rate of poor mental HR-QOL (Model 1: aPRRs = 6.23 [95% confidence interval, 95% CI: 4.87–7.97]) versus no violence. Stress was the mediator associated with the greatest change in aPRRs (-34.7%; Model 2: aPRR= 4.07 [95% CI: 3.13–5.30]). When all mediators were included (Model 5: aPRR= 3.01 [95% CI: 2.29–3.96]), partial mediation was observed, evidenced by nonoverlapping CIs between Models 1 and 5. Conclusions: Of relevance for interventions are findings that current health impacts of past violence may be mitigated through reducing current stress” (p.1355).
Author	Credentials: Ph.D. Position and Institution: Center for Research on Violence Against Women, University of Kentucky, Lexington, Kentucky Publication History in Peer-Reviewed Journals: 67,900 (extensive)
Publication	Type of publication: Scholarly, peer reviewed article Publisher: Journal of women's health.
Date and Citation History	Date of publication: 2019 Cited By: Could not find (0?)
Stated Purpose or Research Question	“Two primary research questions were addressed: (1) Does violence (either recent or increasing number of violence forms) increase the rate of poorer current HR-QOL perceptions (direct mechanism in Fig. 1)? (2) Which potential mediators explain associations between violence and current HR-QOL (three indirect mechanisms in Fig. 1)?” (p. 1357).
Author's Conclusion	“Women's current and past IPV, SA, and CA experiences alone or in combination continue to be associated with poorer current mental and physical HR-QOL relative to those with no violence experience, even after adjusting for current stress, social support, and health behaviors. Finding evidence of partial mediation of the effect of violence on poorer HR-QOL by current perceived stress supports the WHO recommendation for trauma-focused CBT and related interventions among women not currently experiencing violence” (p. 1365).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: While the article focused on traumatic experiences (interpersonal violence) on quality of life, it mainly focused on traumatic experiences of adult women. The most influential mediator for the effects of IV was perceived stress. This article can answer questions about stress a mediator for outcomes of people who have experienced traumatic events but may be a bit narrow for this assignment.
Overall Quality of Article	Overall Quality of Article: Good Rationale: The author seems to be very well educated on the topic and the article was published within the last year in a reputable peer reviewed scholarly article.

	<b>Overview of Article</b>
Type of article	Overall Type: Primary Research Study Specific Type: Longitudinal, quantitative
APA Reference	Berthelot, N., Paccalet, T., Gilbert, E., Moreau, I., Mérette, C., Gingras, N., ... Maziade, M. (2015). Childhood abuse and neglect may induce deficits in cognitive precursors of psychosis in high-risk children. <i>Journal of Psychiatry &amp; Neuroscience : JPN</i> , 40(5), 336–343. doi:10.1503/jpn.140211
Abstract	<p>“Background: Millions of children are born to parents affected by major psychoses. Cognitive dysfunctions seen in patients are already detectable in these children. In parallel, childhood maltreatment increases the risk of adult psychoses through unknown mechanisms. We investigated whether high-risk offspring exposed to abuse/neglect displayed more cognitive precursors of adult psychoses in childhood and adolescence than non exposed offspring. Methods: We used a stepwise selection strategy from a 25-year follow-up of 48 densely affected kindreds including 1500 adults (405 patients with schizophrenia or bipolar disorder) to select high-risk offspring aged 6–22 years for inclusion in our study. All offspring were assessed for childhood trauma from direct interviews with the offspring, parents and relatives and from the review of lifetime medical records of parents and children and administered a neuropsychological battery including IQ and 4 of the most impaired neuropsychological domains in psychoses. Results: Our study included 66 high-risk offspring. Those who were exposed to abuse/neglect had significantly lower IQ (effect size [ES] = 0.61) than non exposed offspring and displayed poorer cognitive performance in visual episodic memory (ES = 0.67) and in executive functions of initiation (ES = 1.01). Moreover, exposed offspring presented more combinations of cognitive deficits that were associated with lower Global Assessment of Functioning scores. Limitations: Exposure to abuse/neglect was not assessed in the control group, thus the study could not test whether the effect of childhood maltreatment occurred only in a high-risk setting and not in the general population. Conclusion: In high-risk youths, maltreatment in childhood/adolescence may negatively impact cognitive domains known to be impaired in adults with psychoses, suggesting an early mediating effect in the association between abuse/neglect and adult psychoses. This finding provides a target for future developmental and preventive research.” (p.336)</p>
Author	<p>Credentials: PhD Position and Institution: University of Quebec at Trois-Rivières · Department of Nursing Sciences Publication History in Peer-Reviewed Journals: 25</p>
Publication	<p>Type of publication: Scholarly Publisher: Journal of Psychiatry &amp; Neuroscience Other: N/A</p>
Date and Citation History	<p>Date of publication: 2 June 2015 Cited By: 29</p>
Stated Purpose or Research Question	“We hypothesized that children and adolescents at high risk for major psychoses who were exposed to childhood maltreatment would have greater cognitive dysfunctions that are known to be later associated with psychoses than non exposed offspring.” (p.337)
Author’s Conclusion	“Our study suggests that child abuse and neglect would be related to adult disease through a mediating mechanism occurring in childhood.” (p.342)
Overall Relevance to your EBP Question	<p>Overall Relevance of Article: Good Rationale: The article discusses children with parents with mental health illnesses of Bipolar and Schizophrenia affecting them.</p>
Overall Quality of Article	<p>Overall Quality of Article: Good Rationale: Author is established, good sample size, longitudinal research, assesses children and young adults.</p>

	<b>Overview of Article</b>
Type of article	Overall Type: Primary Research Article Specific Type: Cross-sectional Study
APA Reference	Campbell, J., Walker, R., & Egede, L. (2016). Associations between adverse childhood experiences, high-risk behaviors, and morbidity in adulthood. <i>American Journal of Preventive Medicine</i> , 50(3), 344-352. doi: 10.1016/j.amepre.2015.07.022
Abstract	“Introduction: Adverse childhood experiences (ACEs) are associated with early mortality and morbidity. This study evaluated the association among ACEs, high-risk health behaviors, and comorbid conditions, as well as the independent effect of ACE components. Methods: Data were analyzed on 48,526 U.S. adults from five states in the 2011 Behavioral Risk Factor Surveillance System survey. Exposures included psychological, physical, and sexual forms of abuse as well as household dysfunction such as substance abuse, mental illness, violence, and incarceration. Main outcome measures included risky behaviors and morbidity measures, including binge drinking, heavy drinking, current smoking, high-risk HIV behavior, obesity, diabetes, myocardial infarction, coronary heart disease, stroke, depression, disability caused by poor health, and use of special equipment because of disability. Multiple logistic regression assessed the independent relationship between ACE score categories and risky behaviors/comorbidities in adulthood, and assessed the independent relationship between individual ACE components and risky behaviors/comorbid conditions in adulthood controlling for covariates. Results: A total of 55.4% of respondents reported at least one ACE and 13.7% reported four or more ACEs. An ACE score $\geq 4$ was associated with increased odds for binge drinking, heavy drinking, smoking, risky HIV behavior, diabetes, myocardial infarction, coronary heart disease, stroke, depression, disability caused by health, and use of special equipment because of disability. In addition, the individual components had different effects on risky behavior and comorbidities. Conclusions: In addition to having a cumulative effect, individual ACE components have differential relationships with risky behaviors, morbidity, and disability in adulthood after controlling for important confounders” (p. 344)
Author	Credentials: BS Position and Institution: Center for Health Disparities Research, Medical University of South Carolina Publication History in Peer-Reviewed Journals: Extensive: 57
Publication	Type of publication: Scholarly Peer-reviewed Journal Publisher: Elsevier Inc. Other: “The American Journal of Preventive Medicine is the official journal of the American College of Preventive Medicine and the Association for Prevention Teaching and Research. It publishes articles in the areas of prevention research, teaching, practice and policy.”
Date and Citation History	Date of publication: 21 October 2015 Cited By: 165
Stated Purpose or Research Question	“To further advance the field, this paper aimed to: 1. replicate and validate findings on the association between cumulative ACE scores and high-risk health behaviors and comorbid conditions in U.S. adults using the BRFSS 2011 data; and 2. address a gap in the literature by examining differential relationships between individual ACE components and high-risk health behaviors and comorbid conditions in adulthood” (p. 345)
Author’s Conclusion	“This study validates the results of prior studies on the adverse effect of cumulative exposure to ACEs and further advances the field by providing data on differential influences of ACE components on risky behavior, morbidity, and disability in adulthood” (p. 351)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: Study examined the relationship between frequency of ACEs and a variety of health outcomes in adulthood.
Overall Quality of Article	Overall Quality of Article: Good Rationale: Extensively cited by other research and used a large, reputable data set. Author is widely published in reputable journals.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Longitudinal Survey, two-wave prospective design”
APA Reference	Schilling, E.A., Aseltine, R.H. & Gore, S. (2007). Adverse childhood experiences and mental health in young adults: a longitudinal survey. <i>BMC Public Health</i> (7), 30. doi:10.1186/1471-2458-7-30.
Abstract	“Background: Adverse childhood experiences (ACEs) have been consistently linked to psychiatric difficulties in children and adults. However, the long-term effects of ACEs on mental health during the early adult years have been understudied. In addition, many studies are methodologically limited by use of non-representative samples, and few studies have investigated gender and racial differences. The current study relates self-reported lifetime exposure to a range of ACEs in a community sample of high school seniors to three mental health outcomes—depressive symptoms, drug abuse, and antisocial behavior—two years later during the transition to adulthood. Methods: The study has a two-wave, prospective design. A systematic probability sample of high school seniors (N = 1093) was taken from communities of diverse socioeconomic status. They were interviewed in person in 1998 and over the telephone two years later. Gender and racial differences in ACE prevalence were tested with chi-square tests. Each mental health outcome was regressed on one ACE, controlling for gender, race/ethnicity, and SES to obtain partially standardized regression coefficients. Results: Most ACEs were strongly associated with all three outcomes. The cumulative effect of ACEs was significant and of similar magnitude for all three outcomes. Except for sex abuse/assault, significant gender differences in the effects of single ACEs on depression and drug use were not observed. However, boys who experienced ACEs were more likely to engage in antisocial behavior early in young adulthood than girls who experienced similar ACEs. Where racial/ethnic differences existed, the adverse mental health impact of ACEs on Whites was consistently greater than on Blacks and Hispanics. Conclusion: Our sample of young adults from urban, socio-economically disadvantaged communities reported high rates of adverse childhood experiences. The public health impact of childhood adversity is evident in the very strong association between childhood adversity and depressive symptoms, antisocial behavior, and drug use during the early transition to adulthood. These findings, coupled with evidence that the impact of major childhood adversities persists well into adulthood, indicate the critical need for prevention and intervention strategies targeting early adverse experiences and their mental health consequences” (p. 1)
Author	Credentials: N/A Position and Institution: Institute for Public Health Research, University of Connecticut Publication History in Peer-Reviewed Journals: 29
Publication	Type of publication: Scholarly, Peer-reviewed Journal Publisher: BioMed Central Other: “As the largest open access public health journal in the world, BMC Public Health is a peer reviewed journal with a broad scope welcoming articles on...all aspects of public health. With a highly-visited website and frequent press coverage, we are part of...a research community-focused collection publishing scientifically valid studies based on community-agreed standards of questioning, methods and analysis.”
Date and Citation History	Date of publication: 7 March 2007 Cited By: 533
Stated Purpose or Research Question	“The current study relates self-reported lifetime exposure to a range of ACEs in a community sample of high school seniors to three mental health outcomes—depressive symptoms, drug abuse, and antisocial behavior—two years later during the transition to adulthood” (p. 1)
Author’s Conclusion	“Our results clearly demonstrate that a large percentage of young people from at-risk communities enter adulthood with serious adversity in their pasts...The public health impact of such high levels of exposure to childhood adversities is evident in their strong and pervasive effects on mental health in early adulthood” (p. 7)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: Study examines personal and environmental factors contributing to negative outcomes after experiencing ACEs, also addresses mental health and behavioral effects for specific populations
Overall Quality of Article	Overall Quality of Article: Good Rationale: Many variables taken into account and efforts taken to control for confounding variables. Purposefully recruited individuals from diverse backgrounds. Extensively cited in related literature.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: prospective cohort study
APA Reference	May-Ling, J. L., Loxton, D., & McLaughlin, D. (2015). Trauma exposure and the subsequent risk of coronary heart disease among mid-aged women. <i>Journal of Behavioral Medicine</i> , 38(1), 57+. doi: 10.1007/s10865-014-9577-2
Abstract	“The objective of the current study was to examine whether exposure to trauma in the form of a history of physical, mental, emotional or sexual abuse or violence predicted new onset of coronary heart disease (CHD) in women. In addition, this study aimed to examine the mediation effects of psychological, lifestyle and health related factors in the abuse-CHD relationship. Data from 6 surveys over 15 years, from the Australian Longitudinal Study on Women’s Health, a large prospective cohort study, were used. Participants from the 1946–1951 cohort who did not self-report heart disease at surveys 1 (1996) and 2 (1998) and who had provided information on other variables were included (n = 9,276). After adjusting for age, women who reported trauma exposure at baseline were 1.54 times more likely (95 % confidence interval 1.29–1.83) to report new onset of CHD than those who did not report trauma exposure. The association between trauma and CHD was largely explained by psychological factors, suggesting a direct pathway between exposure to trauma and risk of CHD” (p. 57).
Author	Credentials: June Lee May-Ling, N/A Position and Institution: School of Population Health of Queensland Publication History in Peer-Reviewed Journals: 1
Publication	Type of publication: Scholarly, peer-reviewed Journal Publisher: Springer US Other: “Journal focusing on behavioral science. Coverage includes effects of psychological stress on physical functioning, sociocultural influences on health and illness, adherence to medical regimens and health maintenance behavior (e.g. exercise, nutrition), the study of appetitive disorders (alcoholism, smoking and obesity) that pose physical risk, behavioral factors in the prevention and treatment of HIV/AIDS, pain, self-regulation therapies and biofeedback for somatic disorders.” Has been publishing since 2010
Date and Citation History	Date of publication: 13 June 2014 Cited By: 10
Stated Purpose or Research Question	“The objective of the current study was to examine whether exposure to trauma in the form of a history of physical, mental, emotional or sexual abuse or violence predicted new onset of coronary heart disease (CHD) in women. In addition, this study aimed to examine the mediation effects of psychological, lifestyle and health related factors in the abuse-CHD relationship” (p. 57)
Author’s Conclusion	“The findings of this paper suggest that exposure to trauma may result in the development of depression or depression and anxiety, which directly affects the subsequent incidence of CHD” (p. 61)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: Study examines the health effects and disability outcomes of trauma throughout the lifespan in specific populations, addresses person and environmental characteristics that relate to negative outcomes from trauma.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: The sample came from a large government prospective data set, the lead author is not widely published, many factors are examined and the authors discuss possible confounding variables.



	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Interview and cross-sectional design
APA Reference	Stain, H. J., Brønnick, K., Hegelstad, W. T. V., Joa, I., Johannessen, J. O., Langeveld, J., Johannes, M. L., Larsen, T. K. (2014). Impact of interpersonal trauma on the social functioning of adults with first-episode psychosis. <i>Schizophrenia Bulletin</i> , 40(6), 1491-1498. doi:10.1093/schbul/sbt166
Abstract	“Background: Social functioning is an important treatment outcome for psychosis, and yet, we know little about its relationship to trauma despite high rates of trauma in people with psychosis. Childhood trauma is likely to disrupt the acquisition of interpersonal relatedness skills including the desire for affiliation and thus lead to impaired social functioning in adulthood. Aims: We hypothesized that childhood trauma would be a predictor of poor social functioning for adults with psychosis and that further trauma in adulthood would moderate this relationship. Method: A first-episode psychosis sample aged 15–65 years (N = 233) completed measures of social functioning (Lehman’s Quality of Life Interview and Strauss Carpenter Functioning Scale) and trauma (Brief Betrayal Trauma Survey), as well as clinical assessments. Results: Childhood trauma (any type) was associated with poorer premorbid functioning and was experienced by 61% of our sample. There were no associations with clinical symptoms. Interpersonal trauma in childhood was a significant predictor of social functioning satisfaction in adulthood, but this was not the case for interpersonal trauma in adulthood. However, 45% of adults who reported childhood interpersonal trauma also experienced adulthood interpersonal trauma. Conclusion: Our results emphasize the importance of early relationship experience such as interpersonal trauma, on the social functioning of adults with psychosis. We recommend extending our research by examining the impact of interpersonal childhood trauma on occupational functioning in psychosis” (p. 1491).
Author	Credentials: PhD, Professor Position and Institution: School of Medicine, Pharmacy & Health, Wolfson Research Institute, Durham University Publication History in Peer-Reviewed Journals: Moderate
Publication	Type of publication: Peer reviewed journal Publisher: Oxford University Press (United Kingdom) Other: NA
Date and Citation History	Date of publication: Nov 2014 Cited By: 53
Stated Purpose or Research Question	“We hypothesized that childhood trauma would be a predictor of poor social functioning for adults with psychosis and that further trauma in adulthood would moderate this relationship” (p. 1492).
Author’s Conclusion	“Our study demonstrated the possible impact of interpersonal childhood trauma on the social functioning of adults in a first episode of psychosis. This is a major concern for service delivery, given the importance of social relationships to quality of life for adults with psychosis <sup>2</sup> and to engagement in services as a result of attachment styles <sup>4</sup> ” (p. 1497).
Overall Relevance to your EBP Question	Overall Relevance of Article :Good Rationale: The research examined the impact of interpersonal childhood trauma on social functioning in adulthood.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: The sample size was not very large, the author is moderately established, and the researchers used a cross-sectional design when a longitudinal design would have been more applicable for this research.

	<b>Overview of Article</b>
Type of article	Overall Type: Primary Research Study Specific Type: Longitudinal study
APA Reference	Goodman, R. D., Miller, M. D., & West-Olatunji, C. (2012). Traumatic stress, socioeconomic status, and academic achievement among primary school students. <i>Psychological Trauma: Theory, Research, Practice, and Policy</i> , 4(3), 252-259. doi:10.1037/a0024912
Abstract	“Students from lower socioeconomic status (SES) families continue to underachieve within the educational setting; however, little research has examined how psychological trauma may be related to this problem. Using a sample of 5th-grade students from the nationally representative Early Childhood Longitudinal Study, Kindergarten Class of 1998 –99 database, we used regression analyses to determine whether traumatic stress and SES influenced achievement. Results showed that low SES and traumatic stress predicted lower educational outcomes. This study has implications for counselors and educators because trauma is often overlooked or misunderstood in children” (p. 252).
Author	Credentials: PhD, LPC Position and Institution: Counseling and Development Program, College of Education and Human Development, George Mason University Publication History in Peer-Reviewed Journals: Extensive
Publication	Type of publication: Peer reviewed journal Publisher: Educational Publishing Foundation (US) Other: NA
Date and Citation History	Date of publication: May 2012 Cited By: 81
Stated Purpose or Research Question	“The purpose of this study was to explore whether SES and traumatic stress predict academic achievement for fifth-grade students” (p. 252).
Author’s Conclusion	“The results of this study indicate that traumatic stress appears to be a significant factor in academic achievement, broadening the discussion about the need for counseling interventions in schools and alternative perspectives on the deficit-oriented view of low achievement among marginalized students” (p. 256).
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: The article discusses psychological trauma and how it relates to academic performance.
Overall Quality of Article	Overall Quality of Article: Good Rationale: The sample size was large, the author is well established, and the data was collected within the last fifteen years.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Prospective Study
APA Reference	Van Damme, L., Colins, O., De Maeyer, J., Vermeiren, R., & Vanderplasschen, W. (2015). Girls' quality of life prior to detention in relation to psychiatric disorders, trauma exposure and socioeconomic status. <i>Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care &amp; Rehabilitation</i> , 24(6), 1419-1429. doi:10.1007/s11136-014-0878-2
Abstract	<p>“Purpose Practice and research on detained girls has mainly been problem oriented, overlooking these minors' own perspective on and satisfaction with life. The aim of this study was to examine how girls evaluate multiple domains of quality of life (QoL) and how each domain is affected by psychiatric (co)morbidity, trauma, and socio- economic status (SES). Methods An abbreviated version of the World Health Organization (WHO) QoL Instrument was used to assess the girls' (N = 121; Mage = 16.28) QoL prior to detention. This self-report questionnaire consists of two benchmark items referring to their overall QoL and health, and 24 remaining items measuring their QoL regarding four domains (physical health, psychological health, social relationships, and environment). The Diagnostic Interview Schedule for Children-IV was used to assess the past-year prevalence of psychiatric disorders and life-time trauma exposure. Results Detained girls perceived their QoL almost as good as the 12- to 20-year-olds from the WHO's international field trial on all but one domain (i.e., psychological health). They were most satisfied with their social relationships and least satisfied with their psychological health. Psychiatric disorders, trauma, and low SES were distinctively and negatively related to various domains of QoL. The girls' psychological health was most adversely affected by psychosocial and socioeconomic problems, while these variables had an almost negligible impact on their satisfaction with their social relationships. Conclusions The particularity of each domain of QoL supports a multidimensional conceptualization of QoL. Regarding treatment, psychological health appears as a domain of major concern, while social relationships might serve as a source of resilience” (p. 1419).</p>
Author	<p>Credentials: PhD, Postdoctoral Researcher, Member of the International Forensic Screening and Assessment Network for Adolescents Position and Institution: Department of Special Education, Ghent University Publication History in Peer-Reviewed Journals: Moderate</p>
Publication	<p>Type of publication: Peer reviewed journal Publisher: Springer Other: NA</p>
Date and Citation History	<p>Date of publication: Jun 2015 Cited By: 14</p>
Stated Purpose or Research Question	<p>“The present study aims to inform researchers and clinicians about girls' own perspective on and satisfaction with their life at the moment they enter the youth detention center. The first objective is to examine how they evaluate multiple domains of QoL (i.e., physical health, psychological health, social relationships, and environment) the last 2 weeks prior to detention. Second, given the high prevalence of psychiatric disorders, trauma exposure, and a low SES among detained girls [4, 7] and given prior empirical and theoretical support for the negative impact of these problems on adolescents' QoL [18, 21, 22, 28, 32, 34], this study also aims to test the hypothesis that detained girls' perceived QoL is negatively affected by past-year psychiatric (co)morbidity, life-time trauma, and low socioeconomic status” (p. 1421).</p>
Author's Conclusion	<p>“Social relationships emerged as a potential source of resilience. It can be speculated that social well-being is a potential buffer against negative experiences or conditions, such as traumatic events or a low SES. Therefore, treatment should support youngsters to build, strengthen, and extend constructive instead of destructive, social contacts” (p. 1426).</p>
Overall Relevance to your EBP Question	<p>Overall Relevance of Article: Moderate Rationale: The study examined how detained girl's perceived their quality of life prior to detainment in multiple domains, and how each domain is affected by psychiatric (co)morbidity, trauma, and socioeconomic status (SES).</p>
Overall Quality of Article	<p>Overall Quality of Article: Moderate Rationale: The author is well established, the publication occurred within the last five years, and was published by a reputable publisher, but the sample size was not very large.</p>

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Quasi experimental, Longitudinal design
APA Reference	Briggs, R. D., Silver, E. J., Krug, L. M., Mason, Z. S., Schrag, R. D. A., Chinitz, S., & Racine, A. D. (2014). Healthy steps as a moderator: The impact of maternal trauma on child social-emotional development. <i>Clinical Practice in Pediatric Psychology</i> , 2(2), 166-175. doi:10.1037/cpp0000060.
Abstract	“Child social-emotional development is foundational for future success, and depends on the presence of caregiver–child relationships characterized by positive “serve and return” interactions, during which caregiver responses are reliable, consistent, and empathic. Caregivers with childhood trauma may be limited in their ability to provide this type of interaction, and child social-emotional development may be at risk. We describe a Healthy Steps (HS) program and the moderating effect of this program on the relationship between reported caregiver childhood trauma and child social-emotional development. In a quasi- experimental, longitudinal design, we determined the relationship between maternal report of childhood trauma and child social-emotional development on the Ages and Stages Questionnaires: Social Emotional (ASQ:SE) at 36 months, adjusting for covariates, and tested for a moderating effect of participation in HS on this relationship. One hundred twenty four children were assessed at 36 months. Children of mothers with childhood trauma had higher (worse) ASQ:SE mean scores than children of mothers without childhood trauma (75.9 vs. 35.9; p .0001). Differences in adjusted mean ASQ:SE scores between children of mothers with and without childhood trauma were more apparent in the comparison group (90.4 vs. 28.3) than in HS (44.5 vs. 28.2; p .001). Caregiver experiences of childhood trauma are related to deficits in social emotional development in their 3-year-old children. HS, with a focus on caregiver trauma and child social-emotional development, may serve as a moderator of this association” (p. 166).
Author	Credentials: PsyD Position and Institution: Children’s Hospital at Montefiore, Department of Pediatrics Publication History in Peer-Reviewed Journals: Limited
Publication	Type of publication: Peer-reviewed journal Publisher: Educational Publishing Foundation (US) Other: NA
Date and Citation History	Date of publication: Jun 2014 Cited By: 33
Stated Purpose or Research Question	“In particular, we hypothesize that caregivers’ childhood experiences of trauma would predict difficulties in their children’s social-emotional development. Our second hypothesis, therefore, is that parent-focused interventions are a way to address this strategic objective” (p. 167).
Author’s Conclusion	“In this preliminary quasi-experimental, longitudinal follow-up design, our results demonstrated that caregiver experiences of childhood trauma were related to at-risk social-emotional development in their 3-year-old children, and that a modified, targeted HS intervention may serve as a moderator of this association, as shown by the greatly attenuated relationship of those two measures among HS families” (p. 172).
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: The article describes the moderating effect that a Healthy Steps (HS) program had on the relationship between reported caregiver childhood trauma and their child’s social-emotional development.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: The design was quasi-experimental looking at two separate pediatric practices, the author is not well established. The study did have a large sample size.

	<b>Overview of Article</b>
Type of article	Overall Type: Primary Research Study Specific Type: Quantitative, survey research.
APA Reference	Austin, A., Herrick, H., Proescholdbell, S., & Simmons, J. (2016). Disability and exposure to high levels of adverse childhood experiences: Effect on health and risk behavior. <i>North Carolina Medical Journal</i> , 77(1), 30-36. doi: 10.18043/ncm.77.1.30
Abstract	<p>“BACKGROUND: Health disparities among persons with disabilities have been previously documented. However, there is little research specific to adverse childhood experiences (ACEs) in this population and how ACE exposure affects health outcomes in adulthood. METHODS: Data from the 2012 North Carolina Behavioral Risk Factor Surveillance System (BRFSS) survey were analyzed to compare the prevalence of ACEs between adults with and without disabilities and high ACE exposure (3–8 ACEs). Adjusted risk ratios of health risks and perceived poor health by disability status were calculated using predicted marginals. RESULTS: A higher percentage of persons with disabilities (36.5%) than those without disabilities (19.6%) reported high ACE exposure. Among those with high ACE exposure, persons with disabilities were more likely to report several ACE categories, particularly childhood sexual abuse. In adjusted analyses, persons with disabilities had an increased risk of smoking (relative risk [RR] = 1.29; 95% CI, 1.10–1.51), poor physical health (RR = 4.34; 95% CI, 3.08–6.11), poor mental health (RR = 4.69; 95% CI, 3.19–6.87), and doctor-diagnosed depression (RR = 2.16; 95% CI, 1.82–2.56) compared to persons without disabilities. LIMITATIONS: The definition of disability derived from the BRFSS survey does not allow for those with disabilities to be categorized according to physical disabilities versus mental or emotional disabilities. In addition, we were unable to determine the timing of ACE exposure in relation to disability onset. CONCLUSIONS: A better understanding of the life course associations between ACEs and disability and the impact of exposure to multiple types of childhood adversity on disability and health is needed to inform research and services specific to this vulnerable population.” (p. 30)</p>
Author	<p>Credentials: MPH CDC/CSSTE Position and Institution: Applied epidemiology fellow, Injury and Violence Prevention Branch, Chronic Disease and Injury Section, Division of Public Health, North Carolina Department of Health and Human Services, Raleigh, North Carolina. Publication History in Peer-Reviewed Journals: 48</p>
Publication	<p>Type of publication: Scholarly Publisher: North Carolina Medical Journal</p>
Date and Citation History	<p>Date of publication: 13 January 2016 Cited By: 19</p>
Stated Purpose or Research Question	“The purpose of the present study was to compare outcomes among persons with and without disabilities and exposure to multiple ACEs.” (p.31)
Author’s Conclusion	“Overall, the findings from this study demonstrate that persons with disabilities report high ACE exposure at a higher prevalence than persons without disabilities. In addition, among those with high ACE exposure, persons with disabilities were found to be at an increased risk for certain health risks and perceived poor health, compared to persons without disabilities.” (p.35)
Overall Relevance to your EBP Question	<p>Overall Relevance of Article: Good Rationale: Researches effects of trauma on adult. They discuss illness and disease prevalence with those with a higher ACE score.</p>
Overall Quality of Article	<p>Overall Quality of Article: Good. Rationale: Large sample, current data collection, addressed gap in research for subject.</p>

	Overview of Article
Type of article	Overall Type: Primary Research Study, Qualitative Specific Type: Qualitative
APA Reference	Woods-Jaeger, B. A., Cho, B., Sexton, C. C., Slagel, L., & Goggin, K. (2018). Promoting resilience: Breaking the intergenerational cycle of adverse childhood experiences. <i>Health Education &amp; Behavior</i> , 45(5), 772–780. doi: <a href="https://doi.org/10.1177/1090198117752785">https://doi.org/10.1177/1090198117752785</a>
Abstract	“Adverse childhood experiences (ACEs), including trauma exposure, parent mental health problems, and family dysfunction, put children at risk for disrupted brain development and increased risk for later health problems and mortality. These negative effects may be prevented by resilience promoting environments that include protective caregiving relationships. We sought to understand (1) parents’ experiences of ACEs, (2) the perceived impact on parenting, (3) protective factors that buffer ACEs potential negative impact, and (4) supports and services that can reduce the number and severity of ACEs and promote resilience among children exposed to early adversity. We conducted in-depth qualitative interviews with 11 low-income, urban parents of young children who had experienced ACEs. Interviews were analyzed for emergent themes and shared with parents from the community to ensure relevance and proper interpretation. Themes from these interviews describe the potential intergenerational cycle of ACEs and key factors that can break that cycle, including parent aspirations to make children’s lives better and parent nurturance and support. Parents’ suggestions for intervention are also presented. Our findings illuminate protective factors and family strengths that are important to build upon when developing and implementing interventions to promote resilience among parents and children exposed to early adversity. This study benefits from highly ecologically valid data obtained from low–socioeconomic status, racial/ethnic minority parents through one-on-one in-depth interviews and interpreted with the aid of community stakeholders through a community-based participatory research approach” (p. 772).
Author	Credentials: Briana A. Woods-Jaeger, Ph.D. Position and Institution: Children’s Mercy Hospital, Kansas City, MO, USA University of Missouri Kansas City School of Medicine, Kansas City, MO, USA Publication History in Peer-Reviewed Journals: 18 (moderate)
Publication	Type of publication: Scholarly Peer Reviewed Journal Publisher: Health Education & Behavior Other:
Date and Citation History	Date of publication: February, 2018 Cited By: 13
Stated Purpose or Research Question	“The present study used a community-based participatory research (CBPR) approach to actively engage low-income, urban parents affected by ACEs in qualitative research with the aims to better understand (1) parents’ experiences of ACEs, the perceived impact of these experiences on parenting, and protective factors that buffer ACEs potential negative impact and (2) parent recommended supports and services to reduce the number and severity of ACEs and promote resilience among children exposed to early adversity” (p. 773).
Author’s Conclusion	“Our qualitative findings among low-income, predominantly Black parents with significant early life trauma and adversity histories deepen understanding of multigenerational trauma by shedding light on the lived, intergenerational experience of ACEs. Data presented here not only describe the burden of ACEs that manifests in an intergenerational cycle but also highlight the parenting practices and familial strengths that can be mobilized to break the cycle. Resilience promoting factors that emerged from these in-depth interviews include: open-communication, expressions of love, and close family relationships” (p. 778).
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: This article is relevant to the EBP question because it focused on intergenerational trauma as a risk factor for ACEs and resilience factors that can help mediate negative impacts.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: This article has been published in a scholarly peer reviewed journal within the last two years. However, this study only focused on 11 low income parents and may provide a very narrow narrative about the impact of ACEs.

	<b>Overview of Article</b>
Type of article	Overall Type: Primary Research Study Specific Type: Survey Research
APA Reference	Anda, R. F., Fleisher, V. I., Felitti, V. J., Edwards, V. J., Whitfield, C. L., Dube, S. R., & Williamson, D. F. (2004). Childhood abuse, household dysfunction, and indicators of impaired adult worker performance. <i>The Permanente Journal</i> , 8(1), 30–38. doi:10.7812/tpp/03-089
Abstract	“Objective: We examined the relation between eight types of adverse childhood experience (ACE) and three indicators of impaired worker performance (serious job problems, financial problems, and absenteeism). Methods: We analyzed data collected for the Adverse Childhood Experiences Study from 9633 currently employed adult members of the Kaiser Foundation Health Plan in San Diego. Results: Strong graded relations were found between the ACE Score (total number of ACE categories experienced) and each measure of impaired worker performance ( $p < .001$ ). We found strong evidence that the relation between ACE Score and worker performance was mediated by interpersonal relationship problems, emotional distress, somatic symptoms, and substance abuse. Conclusions: The long-term effects of adverse childhood experiences on the workforce impose major human and economic costs that are preventable. These costs merit attention from the business community in conjunction with specialists in occupational medicine and public health.” (p.30)
Author	Credentials: MD, MS Position and Institution: National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, GA Publication History in Peer-Reviewed Journals: 114
Publication	Type of publication: Scholarly Publisher: The Permanente Journal
Date and Citation History	Date of publication: Winter 2014 Cited By: 154
Stated Purpose or Research Question	“In this article, we analyze the ways in which adverse childhood experiences affect several indicators of job performance during adult life. Specifically, we tested the hypothesis that childhood abuse and household dysfunction exert negative long-term effects on three broad-based indicators of worker performance: serious job problems, serious financial problems, and absenteeism. We then assessed how interpersonal relationship problems, emotional distress, somatic symptoms, and substance abuse may act as mediating variables in the relation between adverse childhood experiences and indicators of occupational performance.” (p. 30)
Author’s Conclusion	“Our findings suggest that employers and HMOs have both the need and the opportunity to work together against the long-term effects of childhood abuse and household dysfunction. Exposure to such adverse circumstances is likely to lead to massive financial expenditures for health care as well as to economic losses attributable to poor work performance.” (p.37)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: Analyzes the effects of ACEs from childhood feeding into adulthood. Specifically addressing occupation of work and interpersonal relationships.
Overall Quality of Article	Overall Quality of Article: Good Rationale: Author is well established, large sample size, somewhat of a longitudinal study.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Epidemiological cohort study
APA Reference	Llabre, M. M., Schneiderman, N., Gallo, L. C., Arguelles, W., Daviglius, M. L., & Gonzalez, F. (2017). Childhood trauma and adult risk factors and disease in Hispanics/Latinos in the US: Results from the Hispanic community health study/study of Latinos (HCHS/SOL) sociocultural ancillary study. <i>Psychosomatic Medicine</i> , 79(2), 172. doi:10.1097/PSY.0000000000000394
Abstract	“Objectives: Adverse childhood experiences (ACEs) are implicated in diseases of adulthood. We report the prevalence of ACEs in Hispanics/Latinos in the US and their association with major risk factors and diseases in adulthood. Methods: Data from the Sociocultural Ancillary Study of the Hispanic Community Health Study/Study of Latinos (HCHS/SOL) were used. HCHS/SOL is an epidemiological study conducted in four urban communities in the US: Bronx, Chicago, Miami and San Diego. The analytic sample comprised 5117 participants, ages 18 to 74 at baseline. Linear and logistic models, adjusted for sociodemographic factors, were used to examine associations of ACEs and risk factors (depressive symptoms, obesity, smoking, and alcohol use) and chronic disease (coronary heart disease, stroke, diabetes, asthma, COPD, and cancer); the latter also adjusted for risk factors. Results: Most participants (77.2%) experienced at least one ACE, and 28.7% experienced four or more. ACEs were common among all ancestry groups, with variability among them. Prevalence of 4 or more ACEs was higher among women than men (31.2% and 25.8%, respectively). ACEs were associated with depressive symptoms, body mass index, smoking alcohol use, cancer, coronary heart disease, and chronic obstructive pulmonary disease, but not asthma, diabetes, or stroke. Associations were not moderated by social support. Conclusions: ACEs are prevalent among US Hispanics/Latinos and are involved in disease in adulthood. The apparent higher prevalence of ACEs in US Hispanics/Latinos did not correspond with stronger associations with disease. Further studies are needed to identify factors that may moderate the associations of ACE with adult disease.” (p.1)
Author	Credentials: Ph.D. Position and Institution: Corresponding author, Department of Psychology, University of Miami Publication History in Peer-Reviewed Journals: extensive (285 results)
Publication	Type of publication: scholarly peer-reviewed journal Publisher: American Psychosomatic society Other: Official organ of the American Psychosomatic Society
Date and Citation History	Date of publication: 2017 Cited By: 13
Stated Purpose or Research Question	“report the prevalence of ACEs in Hispanics/Latinos in the US and their association with major risk factors and diseases in adulthood.” (p.1)
Author’s Conclusion	“As expected, ACEs were associated with depressive symptoms, BMI, smoking, alcohol use, CHD, COPD, and cancer, but unexpectedly were not associated with asthma, stroke or diabetes...This pattern of findings is consistent with the Hispanic Paradox, the notion that the disadvantage experienced by Hispanics/Latinos relative to non-Hispanic whites in the US, does not necessarily lead to increased morbidity and mortality.” (p.8)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Relevance Rationale: This study supports the relationship between trauma and health outcomes in adults. It focuses on a specific population (Hispanic community) and it could be a good complementary research to add on more general trauma related studies.
Overall Quality of Article	Overall Quality of Article: Good quality Rationale: The author has extensive publications and seems to have a good reputation. This study has a large sample from four large cities in the US. Publication within last 2 years.



	Overview of Article
Type of article	Overall Type: Primary Research Study (longitudinal) Specific Type: Longitudinal Twin Study
APA Reference	Jaffee, S. R., Ambler, A., Merrick, M., Goldman-Mellor, S., Odgers, C. L., Fisher, H. L., Danese, A., & Arseneault, L. (2018). Childhood maltreatment predicts poor economic and educational outcomes in the transition to adulthood. <i>American Journal of Public Health, 108</i> (9), 1142-1147. doi: <a href="http://dx.doi.org/10.2105/AJPH.2018.304587">http://dx.doi.org/10.2105/AJPH.2018.304587</a>
Abstract	“Objectives: To test whether childhood maltreatment was a predictor of (1) having low educational qualifications and (2) not being in education, employment, or training among young adults in the United Kingdom today. Methods: Participants were from the Environmental Risk (E-Risk) Longitudinal Twin Study, a nationally representative UK cohort of 2232 twins born in 1994 to 1995. Mothers reported on child maltreatment when participants were aged 5, 7, 10, and 12 years. Participants were interviewed about their vocational status at age 18 years. Results: The unadjusted odds of having low educational qualifications or of not being in education, employment, or training at age 18 years were more than 2 times greater for young people with a childhood history of maltreatment versus those without. These associations were reduced after adjustments for individual and family characteristics. Youths who reported having a supportive adult in their lives had better education outcomes than did youths who had less support. Conclusions: Closer collaboration between the child welfare and education systems is warranted to improve vocational outcomes for maltreated youths.” (p.1142)
Author	Credentials: Ph.D. Position and Institution: Department of Psychology, University of Pennsylvania Publication History in Peer-Reviewed Journals: 148 (moderate)
Publication	Type of publication: scholarly peer-reviewed journal Publisher: American Public Health Association Other: Official journal of the American Public Health Association
Date and Citation History	Date of publication: 2018 Google Scholar Cited By: 12
Stated Purpose or Research Question	“To test whether childhood maltreatment was a predictor of (1) having low educational qualifications and (2) not being in education, employment, or training among young adults in the United Kingdom today.” (p. 1142)
Author’s Conclusion	“Young adults with a childhood history of maltreatment differed from those without a history of maltreatment on education and not associated with NEET [Not Being in Education, Employment, or Training], all other associations were significant. The odds of having poor educational qualifications were more than 2 times greater for youths with a history of maltreatment versus those without.” (p. 1144)
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Relevance Rationale: This study is related to predictive research exploring the relationship between trauma and adult performance and participation, however the trauma was only related to intentional harm by an adult.
Overall Quality of Article	Overall Quality of Article: Good quality Rationale: This longitudinal study used a high sample of participants and used statistical covariates to increase the accuracy of the results. It was published within the last 2 years from a reputable journal.

	Overview of Article
Type of article	Overall Type: Primary research study Specific Type: Observational study
APA Reference	Hambrick, E. P., Brawner, T. W., Perry, B. D., Brandt, K., Hofmeister, C., & Collins, J. O. (2019). Beyond the ACE score: Examining relationships between timing of developmental adversity, relational health and developmental outcomes in children. <i>Archives of Psychiatric Nursing</i> , 33(3), 238–247. <a href="https://doi.org/10.1016/j.apnu.2018.11.001">https://doi.org/10.1016/j.apnu.2018.11.001</a>
Abstract	“Background: The association between developmental adversity and children's functioning is complex, particularly given the multifaceted nature of adverse experiences. The association between the timing of experience and outcomes is under-appreciated. We examine how the timing of both adverse (including potentially traumatic) events and relational poverty are associated with developmental outcomes. Method: Clinicians using the Neurosequential Model of Therapeutics (NMT), an approach to clinical problem solving, reported on the timing of children's developmental experiences, their degree of current relational health, and current functioning in key brain-mediated domains (N = 3523 6- to 13-year-old children). A regularized hierarchical model produced stable and generalizable estimates regarding associations between the timing of experiences across four developmental periods: Perinatal (0–2 mos), Infancy (2–12 mos), Early Childhood (13 mos to 4 years), and Childhood (4 to 11 years) and current functioning. Results: Perinatal developmental experiences were more strongly associated with compromised current functioning than such experiences occurring during other periods. Perinatal relational poverty was a stronger predictor than perinatal adversity. During subsequent developmental periods, the influence of relational poverty diminished, while the influence of adversity remained strong throughout early childhood. Current relational health, however, was the strongest predictor of functioning. Conclusion: Findings expand the understanding of the association between the timing of adversity and relationally impoverished experiences and children's functioning. Although early life experiences are significantly impactful, relationally enriched environments may buffer these effects.” (p.238)
Author	Credentials: n/a Position and Institution: The Child Trauma Academy, University of Missouri Publication History in Peer-Reviewed Journals: 101 (moderate)
Publication	Type of publication: scholarly peer-reviewed journal Publisher: Elsevier Other: Elsevier is a global information analytics business that helps institutions and professionals progress science, advance healthcare and improve performance.
Date and Citation History	Date of publication: 2019 Cited By: 8
Stated Purpose or Research Question	“Examine how the timing of both adverse (including potentially traumatic) events and relational poverty are associated with developmental outcomes.” (p.238)
Author's Conclusion	“Findings indicate that the impact of highly traumatic and relationally impoverished experiences, particularly when occurring during the first few months of life, can be enduring. Conversely, relationally rich contexts at any point in a child's life may serve as a buffer.” (p. 245)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good relevance Rationale: This study is directly related to trauma and predictive outcomes for the general population. It explores the idea that the timing of adversity makes a difference for the individuals' health.
Overall Quality of Article	Overall Quality of Article: Good quality Rationale: The large sample size increases the validity of this study. The author seems to have lots of publications related to this theme. Reputable publisher and publication within last year.

	Overview of Article
Type of article	Overall Type: Primary research study Specific Cross-sectional, face-to-face household surveys, a retrospective study.
APA Reference	Bellis, M. A., Hardcastle, K., Ford, K., Hughes, K., Ashton, K., Quigg, Z., & Butler, N. (2017). Does continuous trusted adult support in childhood impart life-course resilience against adverse childhood experiences-a retrospective study on adult health-harming behaviours and mental well-being. <i>BMC Psychiatry</i> , 17(1), 110. doi:10.1186/s12888-017-1260-z
Abstract	“Background: Adverse childhood experiences (ACEs) including child abuse and household problems (e.g. domestic violence) increase risks of poor health and mental well-being in adulthood. Factors such as having access to a trusted adult as a child may impart resilience against developing such negative outcomes. How much childhood adversity is mitigated by such resilience is poorly quantified. Here we test if access to a trusted adult in childhood is associated with reduced impacts of ACEs on adoption of health-harming behaviours and lower mental well-being in adults. Methods: Cross-sectional, face-to-face household surveys (aged 18–69 years, February-September 2015) examining ACEs suffered, always available adult (AAA) support from someone you trust in childhood and current diet, smoking, alcohol consumption and mental well-being were undertaken in four UK regions. Sampling used stratified random probability methods (n = 7,047). Analyses used chi squared, binary and multinomial logistic regression. Results: Adult prevalence of poor diet, daily smoking and heavier alcohol consumption increased with ACE count and decreased with AAA support in childhood. Prevalence of having any two such behaviours increased from 1.8% (0 ACEs, AAA support, most affluent quintile of residence) to 21.5% ( $\geq 4$ ACEs, lacking AAA support, most deprived quintile). However, the increase was reduced to 7.1% with AAA support ( $\geq 4$ ACEs, most deprived quintile). Lower mental well-being was 3.27 (95% CIs, 2.16–4.96) times more likely with $\geq 4$ ACEs and AAA support from someone you trust in childhood (vs. 0 ACE, with AAA support) increasing to 8.32 (95% CIs, 6.53–10.61) times more likely with $\geq 4$ ACEs but without AAA support in childhood. Multiple health-harming behaviours combined with lower mental well-being rose dramatically with ACE count and lack of AAA support in childhood (adjusted odds ratio 32.01, 95% CIs 18.31–55.98, $\geq 4$ ACEs, without AAA support vs. 0 ACEs, with AAA support). Conclusions: Adverse childhood experiences negatively impact mental and physical health across the life-course. Such impacts may be substantively mitigated by always having support from an adult you trust in childhood. Developing resilience in children as well as reducing childhood adversity are critical if low mental well-being, health-harming behaviours and their combined contribution to non-communicable disease are to be reduced. Keywords: Resilience, ACEs, Non-communicable disease, Mental well-being, Deprivation, Parenting, Smoking, Alcohol, Diet” (p.1)
Author	Credentials: n/a Position and Institution: Directorate of Policy, Research and International Development, College of Health and Behavioural Sciences, Bangor University Publication History in Peer-Reviewed Journals: 783 (extensive)
Publication	Type of publication: open access, scholarly peer-reviewed journal Publisher: BioMed Central Other: n/a
Date and Citation History	Date of publication: 2017 Google Scholar Cited By: 58
Stated Purpose or Research Question	“test if access to a trusted adult in childhood is associated with reduced impacts of ACEs on adoption of health-harming behaviours and lower mental well-being in adults”. (p. 1)
Author’s Conclusion	“Individuals exposed to ACEs develop poorer executive control over impulses, lower tolerance for stress and difficulties with trust and socialising... Results here suggest having continuous access to a trusted adult in childhood may dramatically reduce the impacts of childhood adversity on mental well-being and adoption of HHBs [health-harming behaviours] and that these relationships are apparent across all socio- economic strata” (p.10)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Relevance Rationale: This study is directly related to the predictive outcomes between ACEs and adult health and performance. It also highlights a positive environmental characteristic that works as a protective factor.
Overall Quality of Article	Overall Quality of Article: Good Quality Rationale: Established main author who have extensive publications. This study has been cited dozens of times and is from a reputable publisher. Publication within last 2 years.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: questionnaire; survey research
APA Reference	Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, ... Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. <i>American Journal of Preventive Medicine</i> , 14(4), 245-258. doi: <a href="http://dx.doi.org/10.1016/S0749-3797(98)00017-8">http://dx.doi.org/10.1016/S0749-3797(98)00017-8</a>
Abstract	“8,506 adults (aged 19–92 yrs) completed a questionnaire about adverse childhood experiences (ACEs). Seven categories of ACEs were studied: psychological, physical, or sexual abuse; violence against mother; or living with household members who were substance abusers, mentally ill or suicidal, or ever imprisoned. The number of categories of ACEs was then compared to measures of adult risk behavior, health status, and disease. Results show that more than half of the Ss reported at least 1, and 25% reported more than 2 categories of ACEs. There was a graded relationship between the number of categories of ACEs and each of the adult health risk behaviors and diseases that were studied. The 7 categories of ACEs were strongly interrelated and Ss with multiple categories of ACEs were likely to have multiple health risk factors later in life.” (p. 245)
Author	Credentials: Vincent J. Felitti, MD, FACPA Position and Institution: Kaiser Permanente, Department of Preventive Medicine Publication History in Peer-Reviewed Journals: extensive
Publication	Type of publication: scholarly peer-reviewed journal Publisher: American Journal of Preventive Medicine Other: Original ACE study
Date and Citation History	Date of publication: May 1998 Cited By: 9776
Stated Purpose or Research Question	“...describe the long-term relationship of childhood experiences to important medical and public health problems”. (p. 246)
Author’s Conclusion	“We found a strong dose response relationship between the breadth of exposure to abuse or household dysfunction during childhood and multiple risk factors for several of the leading causes of death in adults”. (p. 251)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: This article directly studies ACE’s in both a retrospective and prospective fashion. It is the original ACE study, so it gives a very specific definition and straightforward correlational results of ACE’s and adverse outcomes.
Overall Quality of Article	Overall Quality of Article: Good Rationale: As the original ACE article, it is widely cited and also widely critiqued. This article has withstood criticism and has shown reliability through many replications. Its only downfall may be its age, being published in 1998.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Retrospective Cohort Study
APA Reference	Mersky, J. P., Topitzes, J., & Reynolds, A. J. (2013). Impacts of adverse childhood experiences on health, mental health, and substance use in early adulthood: A cohort study of an urban, minority sample in the U.S. <i>Child Abuse &amp; Neglect</i> , 37(11), 917-925. doi:10.1016/j.chiabu.2013.07.011
Abstract	“Research has shown that adverse childhood experiences (ACEs) increase the risk of poor health-related outcomes in later life. Less is known about the consequences of ACEs in early adulthood or among diverse samples. Therefore, we investigated the impacts of differential exposure to ACEs on an urban, minority sample of young adults. Health, mental health, and substance use outcomes were examined alone and in aggregate. Potential moderating effects of sex were also explored. Data were derived from the Chicago Longitudinal Study, a panel investigation of individuals who were born in 1979 or 1980. Main-effect analyses were conducted with multivariate logistic and OLS regression. Sex differences were explored with stratified analysis, followed by tests of interaction effects with the full sample. Results confirmed that there was a robust association between ACEs and poor outcomes in early adulthood. Greater levels of adversity were associated with poorer self-rated health and life satisfaction, as well as more frequent depressive symptoms, anxiety, tobacco use, alcohol use, and marijuana use. Cumulative adversity also was associated with cumulative effects across domains. For instance, compared to individuals without an ACE, individuals exposed to multiple ACEs were more likely to have three or more poor outcomes (OR range = 2.75–10.15) and four or more poor outcomes (OR range = 3.93–15.18). No significant differences between males and females were detected. Given that the consequences of ACEs in early adulthood may lead to later morbidity and mortality, increased investment in programs and policies that prevent ACEs and ameliorate their impacts is warranted.” (p. 917)
Author	Credentials: J.P. Mersky, Professor Position and Institution: Jane Adams College of Social Work Publication History in Peer-Reviewed Journals: moderate
Publication	Type of publication: Scholarly, peer-reviewed journal Publisher: Child Abuse & Neglect Other: published in 2013. H-index of 15
Date and Citation History	Date of publication: November, 2013 Cited By: 275
Stated Purpose or Research Question	“...we examine the connection between ACEs and indicators of health, mental health, and substance use. Second, in addition to examining each outcome independently, we analyze outcomes in aggregate to estimate the impact of cumulative adversity on cumulative functioning across domains. Third, we test whether the effects of ACEs on health are moderated by sex.” (paragraph 6)
Author’s Conclusion	“Taken together, results confirmed that increased exposure to ACEs was associated with an increased likelihood of poor health, mental health, and substance use outcomes in early adulthood. The hypothesized dose-response relationship between cumulative adversity and cumulative consequences across domains also was supported. The estimated effects of ACEs did not differ between males and females.” (paragraph 23)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: Our EBP question directly relates to ACE’s prediction of adverse life outcomes. This article provides a loose replication of the original ACE study, also included in these tables, and supports that ACE’s have a direct relation to poor health, mental health, and substance use after childhood.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: The article is recent within 10 years and is a primary research article. It is a quasi-experiment, and therefore not a RCT, which lowers its reliability a bit.

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Retrospective observational study, survey method
APA Reference	Beutel, M. E., Tibubos, A. N., Klein, E. M., Schmutzer, G., Reiner, I., Kocalevent, R. D., Brähler, E. (2017). Childhood adversities and distress – The role of resilience in a representative sample. <i>Public Library of Science</i> , 12(3), 1-14. doi: 10.1371/journal.pone.0173826
Abstract	“While adverse childhood experiences have been shown to contribute to adverse health outcomes in adulthood, specifically distress and somatic symptoms, few studies have examined their joint effects with resilient coping style on adult adjustment. Hence, we aim to determine the association between resilient coping and distress in participants with and without reported childhood adversities. A representative German community sample (N = 2508) between 14–92 years (1334 women; 1174 men) was examined by the short form of the Childhood Trauma Questionnaire, the Brief Resilience Coping Scale, standardized scales of distress and somatoform symptoms. Childhood adversity was associated with reduced adjustment, social support and resilience. It was also strongly associated with increased distress and somatoform complaints. Resilient coping was not only associated with lower distress, it also buffered the effects of childhood adversity on distress. Our study corroborates the buffering effect of resilience in a representative German sample. High trait resilient subjects show less distress and somatoform symptoms despite reported childhood adversities in comparison to those with low resilient coping abilities.” (p. 1)
Author	Credentials: Manfred E. Beutel Position and Institution: Department of Psychosomatic Medicine and Psychotherapy, University Medical Center of the Johannes Gutenberg University Mainz, Mainz, Germany Publication History in Peer-Reviewed Journals: Extensive
Publication	Type of publication: Scholarly, peer-reviewed Publisher: PLOS One
Date and Citation History	Date of publication: March 15, 2017 Cited By: 35
Stated Purpose or Research Question	“How are childhood adversities associated to adjustment, social support and resilience? What are the effects of childhood adversities and resilience on distress and somatic symptoms?” (p.3)
Author’s Conclusion	“As postulated in our first hypothesis, adverse childhood experiences is linked to heightened vulnerability, such as low resilient coping ability, in terms of helplessness and low self-efficacy.” (p. 8) “Overall, the underlying study also confirms our second assumption that childhood adversity is associated with distress, comprising symptoms of depression and anxiety, as well as somatic symptoms throughout the lifespan.” (p. 9)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: The article directly analyzes the impact that the role of resilience and the impact on childhood adversities and distress. These are predictive factors that are analyzed in this study directly correspond with the EBP practice.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: This article was strong because it had large sample sizes (n=2508 in total). It also did a good job of addressing the limitations within the study. However, this study was in questionnaire and retrospective reports, so there is probable memory bias and self-report bias.

	<b>Overview of Article</b>
Type of article	Overall Type: Primary Research Study Specific Type: latent class analysis; survey research
APA Reference	Merians, A. N., Baker, M. R., Frazier, P., & Lust, K. (2019). Outcomes related to adverse childhood experiences in college students: Comparing latent class analysis and cumulative risk. <i>Child Abuse &amp; Neglect</i> , 87, 51-64. doi:https://doi.org/10.1016/j.chiabu.2018.07.020
Abstract	<p>“The aims of this study were to identify latent classes of adverse childhood experiences (ACEs) in a large sample of college students ( N = 8997), investigate the relations between ACEs classes and life functioning, and compare results using latent class analysis to analyses using cumulative risk scores. Nine types of ACEs were assessed (three types of child abuse and six types of household dysfunction). Outcomes were self-report measures of mental health, physical health, alcohol consequences, and academic performance. Latent class analysis (LCA) results indicated that four classes fit the data best across random halves of the sample and were labeled High ACEs, Moderate Risk of Non-Violent Household Dysfunction, Emotional and Physical Child Abuse, and Low ACEs. Comparing across latent classes, the largest differences in outcomes were between the High ACEs and Low ACEs classes. There were no differences in outcomes between the Moderate Risk of Non-Violent Household Dysfunction and Emotional and Physical Child Abuse classes. The largest between-class differences were found for mental health and the smallest differences were found for academic performance. Comparing results using LCA latent classes and cumulative ACEs scores, the differences between the High and Low ACEs latent classes were similar to the differences between those with zero ACEs and those with 5 or more ACEs. Both approaches also accounted for roughly equivalent amounts of variance in all outcomes. Thus, latent class and cumulative risk analyses provided similar results with regard to predicting outcomes of interest among college students.”</p> <p>(p. 51)</p>
Author	<p>Credentials: Addie N. Merians Position and Institution: Department of Psychology, University of Minnesota Twin Cities Publication History in Peer-Reviewed Journals: limited</p>
Publication	<p>Type of publication: scholarly peer-reviewed journal Publisher: Child Abuse &amp; Neglect Other: H-index of 2, but published in 2019 so very recent</p>
Date and Citation History	<p>Date of publication: January 2019 Cited By: 9</p>
Stated Purpose or Research Question	<p>“Our hypotheses and research questions were as follows: (1) Based on previous LCA studies, we expected to find classes with low and high ACEs; all other class identification was exploratory; (2) based on research on the relations between ACEs and life functioning, we expected that the low ACEs class would show better functioning in multiple domains than the high ACEs class. Specific clusters of ACEs may confer specific risk but without a priori knowledge of the specific classes, comparisons among classes other than the low and high ACEs classes were exploratory; and (3) we expected that the LCA and cumulative risk approaches would explain similar amounts of variance in outcomes”. (p. 54)</p>
Author’s Conclusion	<p>“There were no differences in outcomes between the Moderate Risk of Non-Violent Household Dysfunction and Emotional and Physical Child Abuse classes. The largest between-class differences were found for mental health and the smallest differences were found for academic performance.”...”Thus, latent class and cumulative risk analyses provided similar results with regard to predicting outcomes of interest among college students.” (p. 52)</p>
Overall Relevance to your EBP Question	<p>Overall Relevance of Article: Moderate Rationale: The article relates to ACE’s and a specific population: college students. This will be helpful in the determination of how ACE’s affect specific populations. A large part of the article addresses latent class analysis (LCA), which is not relevant to the EBP question.</p>
Overall Quality of Article	<p>Overall Quality of Article: Good Rationale: The study shows rigorous methods in statistical analysis. It has only been cited 9 times in peer-reviewed journals, however that could solely be due to this article’s recent publication date of January 2019.</p>

	Overview of Article
Type of article	Overall Type: Primary Research Article Specific Type: Cross-sectional survey
APA Reference	Fuller-Thomson, E. & Lewis, D. A. (2015). The relationship between early adversities and attention-deficit/hyperactivity disorder. <i>Child Abuse and Neglect</i> , 47(1), 94-101. doi:10.1016/j.chiabu.2015.03.005.
Abstract	“This study examined whether retrospectively reported childhood physical abuse, childhood sexual abuse and/or exposure to parental domestic violence were associated with self-report of a health-professional diagnosis of attention-deficit/hyperactivity disorder (ADHD) among adults. We analyzed nationally representative data from the 2012 Canadian Community Health Survey-Mental Health using gender-specific bivariate and logistic regression analyses (n = 10,496 men; n = 12,877 women). For both men and women, childhood physical abuse was associated with significantly higher odds of reporting ADHD (men odds ratio [OR] = 1.66, p < .001; women OR = 1.95, p < .001). For both genders, childhood sexual abuse was also significantly related to higher odds of ADHD (men OR = 2.57, p < .001; women OR = 2.55, p < .001); however, exposure to parental domestic violence was only associated with elevated odds of ADHD among women (men OR = 0.89, p = .60; women OR = 1.54, p = .03). The results demonstrate a link between childhood physical and sexual abuse and ADHD for both men and women. Future prospective studies are required to further understand this interesting relationship.” (p. 94)
Author	Credentials: Esme Fuller-Thomson Position and Institution: Faculty of Social Work, University of Toronto Publication History in Peer-Reviewed Journals: extensive
Publication	Type of publication: Scholarly, Peer-reviewed Publisher: Child Abuse & Neglect
Date and Citation History	Date of publication: September 2015 Cited By: 46
Stated Purpose or Research Question	“The goal of our current study is to use a population-based survey of Canadian adults to investigate the gender-specific association between three adverse childhood experiences—physical abuse, sexual abuse, and witnessing domestic violence—and ADHD.” (p. 95)
Author’s Conclusion	“For both men and women in this large, population-based study of Canadian adults, childhood sexual abuse and physical abuse were strongly associated with higher odds of reporting a diagnosis of ADHD. For women, but not for men, exposure to parental domestic violence was also associated with elevated odds of ADHD.” (p. 99)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: This article is directly related to the EBP question. It looks at the predictive effect of childhood trauma on the long-term diagnosis of ADHD. It also considered differences in men and women, which supports the portion of the EBP question that addresses general and specific populations.
Overall Quality of Article	Overall Quality of Article: Strong Rationale: Although this study design is strongly associated with the type of predicted study we need, there are several limitations. These include self-report on ADHD diagnosis, retrospective recall on ACEs measurement, and any genetic components to ADHD. Although it is difficult to gather data that isn’t self-report on ACEs measurements, genetic factors could have likely been factored in on the ADHD diagnosis.



	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Cross-sectional survey
APA Reference	Rosinski, A., Weiss, R. A., & Clatch, L. (2018). Childhood adverse events and adult physical and mental health: A national study. <i>Psi Chi Journal of Psychological Research</i> , 23(1), 40-50. doi:10.24839/2325-7342.JN23.1.40
Abstract	“Prior research has established the negative effects of childhood adverse events on adult health. Despite this, few researchers have accounted for the impact of potentially confounding factors, including adulthood adverse events. The current study used data obtained from a uniquely generalizable sample (N = 34,653) to investigate the predictive effects of reported experience of any childhood adverse event, count of childhood adverse event types, and severity of childhood adverse events on quality of adult physical and mental health. A hierarchical linear regression analysis indicated that, for adult physical health, there was a significant main effect for experience of adulthood adverse events ( $\Delta R^2 = .01$ , $p < .001$ ) and a significant interaction effect between adulthood adverse events and all three predictor variables ( $\Delta R^2 = .01$ , $p < .001$ ). A hierarchical linear regression analysis indicated that, for adult mental health, there was a significant main effect for experience of adulthood adverse events ( $\Delta R^2 = .02$ , $p < .001$ ) and a significant interaction effect between adulthood adverse events and all three predictor variables ( $\Delta R^2 = .03$ , $p < .001$ ). Although the models were significant, they explained little variance, suggesting a youthful resilience against the long-term effects of childhood adverse events. These findings support the multifaceted relationship between childhood adverse events and adult health. Treatment providers may increase efficacy by focusing on preventative care for childhood clients who have experienced adverse events.” (p. 40)
Author	Credentials: Amanda Rosinski Position and Institution: Student, John Jay College of Criminal Justice of The City University of New York Publication History in Peer-Reviewed Journals: limited
Publication	Type of publication: Scholarly peer-reviewed journal Publisher: Psi-Chi Journal of Psychological Research Other: Psi-Chi is typically a student journal. International honor society
Date and Citation History	Date of publication: Spring 2018 Cited By: 0
Stated Purpose or Research Question	“The current study used data obtained from a uniquely generalizable sample (N = 34,653) to investigate the predictive effects of reported experience of any childhood adverse event, count of childhood adverse event types, and severity of childhood adverse events on quality of adult physical and mental health” (p. 40)
Author’s Conclusion	“In this study, consistent with the previous research, reported experience of childhood adverse events was significantly associated with poorer adult physical and mental health.” (p. 48)
Overall Relevance to your EBP Question	Overall Relevance of Article: good Rationale: This study directly relates to the predictive nature of our question. It studies, using a large, generalizable sample, the predictability ACE’s have in determining adverse physical and mental health outcomes.
Overall Quality of Article	Overall Quality of Article: Poor Rationale: There are two reasons I gave this article a poor rating. The first is that it has not been cited in any other scholarly journals. The second is Psi-Chi is a journal for students to get published. From what I can tell from my initial appraisal, this seems to be a well done study, but for the reasons mentioned above, we must be wary if using it later on.

	Overview of Article
Type of article	Overall Type: Primary Research Article Specific Type: Retrospective review of medical chart documentation
APA Reference	Burke, N.J., Hellman, J.L., Scott, B.G., Weems, C.F., & Carrion, V.G. (2011). The impact of adverse childhood experiences on an urban pediatric population. <i>Child Abuse &amp; Neglect</i> , 35(6), 408-413. doi: <a href="https://doi.org/10.1016/j.chiabu.2011.02.006">https://doi.org/10.1016/j.chiabu.2011.02.006</a>
Abstract	<p>“Objective: The goal of this study was to investigate the adverse childhood experiences (ACEs) in youth in a low-income, urban community.</p> <p>Study design: Data from a retrospective chart review of 701 subjects from the Bayview Child Health Center in San Francisco are presented. Medical chart documentation of ACEs as defined in previous studies were coded and each ACE criterion endorsed by a traumatic event received a score of 1 (range = 0–9). This study reports on the prevalence of various ACE categories in this population, as well as the association between ACE score and two pediatric problems: learning/behavior problems and body mass index (BMI) <math>\geq 85\%</math> (i.e., overweight or obese).</p> <p>Results: The majority of subjects (67.2%, N = 471) had experienced 1 or more categories of adverse childhood experiences (ACE <math>\geq 1</math>) and 12.0% (N = 84) had experienced 4 or more ACEs (ACE <math>\geq 4</math>). Increased ACE scores correlated with increased risk of learning/behavior problems and obesity.</p> <p>Conclusions: There was a significant prevalence of endorsed ACE categories in this urban population. Exposure to 4 or greater ACE categories was associated with increased risk for learning/behavior problems, as well as obesity.</p> <p>Practice implications: Results from this study demonstrate the need both for screening of ACEs among youth in urban areas and for developing effective primary prevention and intervention models.” (p. 408)</p>
Author	<p>Credentials: Nadine J. Burke</p> <p>Position and Institution: Department of Pediatrics, California Pacific Medical Center, Bayview Child Health Center, San Francisco, CA, USA</p> <p>Publication History in Peer-Reviewed Journals: Moderate</p>
Publication	<p>Type of publication: Scholarly, Peer-Reviewed</p> <p>Publisher: Child Abuse &amp; Neglect</p>
Date and Citation History	<p>Date of publication: June 2011</p> <p>Cited By: 318</p>
Stated Purpose or Research Question	“The goal of this study was to investigate the adverse childhood experiences (ACEs) in youth in a low-income, urban community.” (p. 408)
Author’s Conclusion	“There was a significant prevalence of endorsed ACE categories in this urban population. Exposure to 4 or greater ACE categories was associated with increased risk for learning/behavior problems, as well as obesity.” (p. 408)
Overall Relevance to your EBP Question	<p>Overall Relevance of Article: Good</p> <p>Rationale: This article was strongly related to the EBP question. It looked at long term effects of childhood trauma. The researchers focused on a sample within a low-income, urban community, which addresses a specific population.</p>
Overall Quality of Article	<p>Overall Quality of Article: Moderate</p> <p>Rationale: This study, although relatively well designed, had room for improvement. The ACE study was received through self-report, however the history of ACEs was obtained through a caregiver. There is also room for bias or confounding variables due to the method of retrieving information through medical chart documentation.</p>

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Survey research
APA Reference	Bethell, C. D., Newacheck, P., Hawes, E., Halfon, N. (2014). Adverse childhood experiences: Assessing the impact on health and school engagement and the mitigating role of resilience. <i>Health Affairs</i> , 33(12), 2106-2115. doi:10.1377/hlthaff.2014.0914.
Abstract	“The ongoing longitudinal Adverse Childhood Experiences Study of adults has found significant associations between chronic conditions; quality of life and life expectancy in adulthood; and the trauma and stress associated with adverse childhood experiences, including physical or emotional abuse or neglect, deprivation, or exposure to violence. Less is known about the population-based epidemiology of adverse childhood experiences among US children. Using the 2011-12 National Survey of Children's Health, we assessed the prevalence of adverse childhood experiences and associations between them and factors affecting children's development and lifelong health. After we adjusted for confounding factors, we found lower rates of school engagement and higher rates of chronic disease among children with adverse childhood experiences. Our findings suggest that building resilience-defined in the survey as "staying calm and in control when faced with a challenge," for children ages 6-17-can ameliorate the negative impact of adverse childhood experiences. We found higher rates of school engagement among children with adverse childhood experiences who demonstrated resilience, as well as higher rates of resilience among children with such experiences who received care in a family-centered medical home. We recommend a coordinated effort to fill knowledge gaps and translate existing knowledge about adverse childhood experiences and resilience into national, state, and local policies, with a focus on addressing childhood trauma in health systems as they evolve during ongoing reform”. (p. 2106)
Author	Credentials: PhD Position and Institution: Director of the Child and Adolescent Health Measurement Initiative (CAHMI) and a professor of population, family, and reproductive health at the Johns Hopkins Bloomberg School of Public Health, in Baltimore, Maryland. Publication History in Peer-Reviewed Journals: Extensive
Publication	Type of publication: Scholarly peer-reviewed journals Publisher: Health Affairs Other: Health Affairs focuses on the serious exploration of domestic and global health policy.
Date and Citation History	Date of publication: December 2014 Cited By: 302
Stated Purpose or Research Question	“We hypothesized that children who had adverse childhood experiences would have worse health outcomes and more school problems, compared to children who did not have such experiences. We also hypothesized that learning and exhibiting resilience, as well as having access to a high-quality medical home, might mitigate these outcomes.” (p. 2107)
Author's Conclusion	“As the nation continues to seek to improve its health care system and population health, paying special attention to children with or at risk of adverse childhood experiences may yield both immediate and long-term benefits. These include the promotion of health and well-being and the reduced impact and severity of chronic conditions in children and in the adults they will become.” (p. 2114)
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: This article relates to our EBP question because it concludes that children who experience ACEs show lower rates of school engagement and higher rates of chronic disease. ACEs are predictors of long-term effects in one's life; however, strong resilience skills can be a protective factor.
Overall Quality of Article	Overall Quality of Article: Good Rationale: This article's overall quality was good. It was cited over 300 times and the author contributed to many other studies. One limitation is that it was cross-sectional versus longitudinal, which would be beneficial to see the effects overtime.

	<b>Overview of Article</b>
Type of article	Overall Type: Primary Research Study Specific Type: Cross-sectional study
APA Reference	Atwoli, L., Platt, J. M., Basu, A., Williams, D. R., Stein, D. J., & Koenen, K. C. (2016). Associations between lifetime potentially traumatic events and chronic physical conditions in the South African stress and health survey: A cross-sectional study. <i>BMC Psychiatry</i> , 16(1), 214. doi:10.1186/s12888-016-0929-z
Abstract	<p>“BACKGROUND: This study examined the association between the type, and cumulative number of lifetime potentially traumatic events (PTEs), and chronic physical conditions, in a South African sample. PTE exposures have been associated with an increased risk for a wide range of chronic physical conditions, but it is unclear whether psychiatric disorders mediate this association. Given the established differences in trauma occurrence, and the epidemiology of posttraumatic stress disorder (PTSD) in South Africa relative to other countries, examining associations between PTEs and chronic physical conditions, particularly while accounting for psychiatric comorbidity is important.</p> <p>METHODS: Data were drawn from the South African Stress and Health Study, a cross-sectional population-representative study of psychological and physical health of South African adults. Twenty-seven PTEs, based on the World Health Organization Composite International Diagnostic Interview Version 3.0, DSM-IV PTSD module were grouped into seven PTE types (war events, physical violence, sexual violence, accidents, unexpected death of a loved one, network events, and witnessing PTEs). Five clusters of physical conditions (cardiovascular, arthritis, respiratory, chronic pain, and other health conditions) were examined. Logistic regressions assessed the odds of reporting a physical condition in relation to type and cumulative number of PTEs. Cochran-Armitage test for trend was used to examine dose-response effect of cumulative PTEs on physical conditions.</p> <p>RESULTS: After adjusting for sociodemographic variables and psychiatric disorders, respondents with any PTE had increased odds of all assessed physical conditions, ranging between 1.48 (95 % CI: 1.06-2.07) for arthritis and 2.07 (95 % CI: 1.57-2.73) for respiratory conditions, compared to those without PTE exposure. Sexual violence, physical violence, unexpected death of a loved one, and network PTEs significantly increased the odds of all or nearly all the physical conditions assessed. There was a dose-response relationship between number of PTEs and increased odds of all physical conditions.</p> <p>CONCLUSIONS: Results from this study, the first in an African general population, are consistent with other population-based studies; PTEs confer a broad-spectrum risk for chronic physical conditions, independent of psychiatric disorders. These risks increase with each cumulative PTE exposure. Clinically, comprehensive evaluations for risk of mental and physical health morbidities should be considered among PTE survivors.” (p. 1)</p>
Author	<p>Credentials: Psychiatrist</p> <p>Position and Institution: Department of Mental Health, Moi University School of Medicine and Department of Psychiatry and Mental Health, University of Cape Town</p> <p>Publication History in Peer-Reviewed Journals: Extensive</p>
Publication	<p>Type of publication: Scholarly peer-reviewed journal</p> <p>Publisher: BMC Psychiatry</p> <p>Other: peer-reviewed journals about psychiatric disorders</p>
Date and Citation History	<p>Date of publication: July 2016</p> <p>Cited By: 10</p>
Stated Purpose or Research Question	“This study aims to provide evidence to guide interventions designed to address PTE sequelae and chronic physical conditions, particularly in South Africa. Therefore, this study also seeks to highlight areas of future inquiry to understand the impact of PTEs in South Africa” (p.2)
Author’s Conclusion	“This study adds to an increasing body of research suggesting that PTE exposure is not only a risk factor for mental disorders, but also for physical health conditions. Our findings also show that associations between PTEs and physical health conditions are not fully mediated by psychiatric disorders including common PTE sequelae (eg, PTSD).” (p. 9)
Overall Relevance to your EBP Question	<p>Overall Relevance of Article: Moderate</p> <p>Rationale: This study concludes that PTE exposure is a risk factor for mental disorders and physical health conditions, particularly in the South African population. Our EBP questions is interested in finding out the relationship between trauma and health in specific populations; however, more research studies would need to be considered focused on South African population to instill more confidence in the findings.</p>
Overall Quality of Article	<p>Overall Quality of Article: Moderate</p> <p>Rationale: The study relied on retrospective self-reports of PTE exposure and physical conditions, which may have been underreported.</p>

	Overview of Article
Type of article	Overall Type: Primary Research Study Specific Type: Observation, survey
APA Reference	Garami, J., Valikhani, A., Parkes, D., Haber, P., Mahlber, J., Misiak, B., ... Moustafa, A. A. (2019). Examining perceived stress, childhood trauma and interpersonal trauma in individuals with drug addiction. <i>Psychological Reports</i> 122(2), 433-450. doi: 10.1177/0033294118764918
Abstract	<p>“The investigation of psychosocial factors in relation to opiate addiction is limited and typically uses binary measures to assess how incidences of childhood trauma correlate with addiction. There has also been a lack of enquiry into how experiences of noninterpersonal versus interpersonal trauma may impact drug use addiction. In this regard, the current study utilized a novel measurement of interpersonal versus noninterpersonal lifetime trauma and a scale assessing severity of childhood trauma to examine how these factors may impact patients with opioid addiction. The interaction between these factors and current perceived stress was also examined. Thirty-six opioid-dependent individuals (recruited from the Drug Health Services and Opioid Treatment Program at the Royal Prince Alfred Hospital in Sydney, Australia) and 33 healthy controls completed the Childhood Maltreatment Questionnaire, Lifetime Trauma Survey, and Perceived Levels of Stress Scale. The patient group reported significantly greater childhood trauma severity, more incidences of lifetime trauma, and higher perceived stress than controls. Logistic regression analyses indicated that the severity of childhood trauma was more strongly associated with addiction status than perceived stress. A greater number of lifetime trauma incidence was the best predictor of addiction. Contrary to expectations, noninterpersonal lifetime trauma was a better predictor of addiction status than was interpersonal lifetime trauma. Results suggest that lifetime trauma and childhood trauma may play an important factor in opioid addiction over what can be accounted for by stress.” (p. 433-434)</p>
Author	<p>Credentials: PhD Position and Institution: School of Social Sciences and Psychology, Western Sydney University, Milperra, New South Wales, Australia Publication History in Peer-Reviewed Journals: Moderate</p>
Publication	<p>Type of publication: Scholarly, Peer-reviewed Publisher: Psychological Reports Other: Impact factor of 1.023</p>
Date and Citation History	<p>Date of publication: March 23, 2018 Cited By: 8</p>
Stated Purpose or Research Question	<p>“...the current study utilized a novel measurement of interpersonal versus noninterpersonal lifetime trauma and a scale assessing severity of childhood trauma to examine how these factors may impact patients with opioid addiction. The interaction between these factors and current perceived stress was also examined.” (p. 433-434).</p>
Author’s Conclusion	<p>“Contrary to expectations, non interpersonal lifetime trauma was a better predictor of addiction status than was interpersonal lifetime trauma. Results suggest that lifetime trauma and childhood trauma may play an important factor in opioid addiction over what can be accounted for by stress.” (p. 434)</p>
Overall Relevance to your EBP Question	<p>Overall Relevance of Article: Moderate Rationale: Although the article is related to the EBP question, the predicted outcome of substance abuse may be too specific. It is great information to have that life trauma could be correlated with substance abuse, but I do not think that it would be directly associated with our EBP question.</p>
Overall Quality of Article	<p>Overall Quality of Article: Moderate Rationale: This study was conducted with a small sample size, which may not represent the population. It also took into the number of traumas an individual endured, but not the severity of that trauma.</p>

	<b>Overview of Article</b>
Type of article	Overall Type: Review of Research Study Specific Type: Longitudinal birth cohort
APA Reference	Morris Trainor, Z., Jong, J., Bluemke, M., & Halberstadt, J. (2019). Death salience moderates the effect of trauma on religiosity. <i>Psychological Trauma: Theory, Research, Practice, and Policy</i> , 11(6), 639-646. doi:10.1037/tra0000430.
Abstract	“Objective: Previous research has shown contradictory evidence for the relationship between religiosity and trauma; exposure to traumatic life events has been associated with both increases and decreases in religiosity over time. On the basis of a long theoretical tradition of linking death and religious belief and recent empirical evidence that thoughts of death may increase religiosity, we tested whether one determinant of trauma’s influence on religion is the degree to which it makes death salient. Method: Using longitudinal data from the Dunedin Multidisciplinary Health and Development Study, a unique population-representative birth cohort, we tested whether the relationship between trauma and religiosity depends on whether the trauma involves death. Participants reported their private, ceremonial, and public religious behaviors at ages 26 and 32 and, at age 32, whether they had experienced any of 23 traumatic life events since age 26. Results: Experiencing the death of a loved one (but not an equally traumatic event not involving death) predicted a future increase in private religious behavior (e.g., prayer) among those already practicing such behaviors, and an increase in the importance of religious ceremonies among those with relatively little prior interest in them. On the other hand, experiencing a death-unrelated trauma predicted a future reduction in public displays of religiosity among those previously so inclined. Conclusion: The study represents a significant step in understanding religious responses to trauma and emphasizes the importance of considering not only the nature of a trauma, but also the dimensions and practices of a victim’s religiosity prior to it” (p. 2).
Author	Credentials: NA Position and Institution: Department of Psychology, University of Otago Publication History in Peer-Reviewed Journals: Brief
Publication	Type of publication: Peer-reviewed journal Publisher: American Psychological Association Other: Division 56 Trauma Psychology American Psychological Association
Date and Citation History	Date of publication: Sep 2019 Cited By: 0
Stated Purpose or Research Question	“We hypothesized that changes in religiosity would depend on the extent to which participants experienced death-related, but not death-unrelated traumas” (p. 2).
Author’s Conclusion	“An entire birth cohort for a large and representative western city reported religious behavior before and after suffering life’s natural misfortunes. How those misfortunes affected their religiosity six years later depended not only on whether they involved death (as we initially hypothesized), but also on the participants’ religiosity prior to the trauma, and the aspect of religiosity being measured” (p. 7).
Overall Relevance to your EBP Question	Overall Relevance of Article: Good Rationale: The article assessed the relationship between one’s religiosity, whether it increases or decreases, due to exposure of traumatic events.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: The data for the research study was obtained from a longitudinal study of a birth cohort and the sample size was large. The author is not well established and the type of research was a review not a primary study.

	Overview of Article
Type of article	Overall Type: Review of Research Specific Type: Review of the Science
APA Reference	Bryan, R. H. (2019). Getting to why: Adverse childhood experiences' impact on adult health. <i>Journal for Nurse Practitioners</i> , 15(2), 153. doi: <a href="https://doi.org/10.1016/j.nurpra.2018.09.012">https://doi.org/10.1016/j.nurpra.2018.09.012</a>
Abstract	“Exposure to adverse childhood experiences (ACEs) contributes to 7 of the 10 leading causes of death in the United States as well as health risk behaviors, including substance abuse, physical inactivity, and high-risk sex behaviors. ACEs are traumatic childhood events that effect biopsychosocial health across the lifespan. It is vital for health care providers to view individuals from a trauma-informed perspective to guide best practice, but few are aware of ACEs, particularly those who treat adults. A review of the science of ACEs research, feasibility of screening for ACEs, and effective responses to trauma-impacted patients is presented in this report” (p. 153).
Author	Credentials: Rebecca Hilgen Bryan, DNP, AGNP Position and Institution: Adjunct professor at Rutgers University School of Nursing Affiliated with Urban Promise Ministries, Camden, NJ Publication History in Peer-Reviewed Journals: 3 (limited)
Publication	Type of publication: Scholarly Peer Reviewed Journal Publisher: The Journal for Nurse Practitioners - JNP
Date and Citation History	Date of publication: 2018 Cited By: 1
Stated Purpose or Research Question	“Despite the research available, health care provider (HCP) knowledge about ACEs is lacking, and screening for ACEs in adult patients in the primary care setting is uncommon. <sup>9</sup> It is time for HCP to shift to trauma-informed care so that individuals are asked, “What happened to you?” instead of “What’s wrong with you?” <sup>10</sup> (p476), because when you understand the trauma, you understand the behavior” (p. 154).
Author’s Conclusion	“HCPs can practice trauma-informed, universal precautions by creating safe and predictable environments. Trauma-impacted patients often have lost a sense of control with an increased need for safety. <sup>27</sup> Clinicians can create safe environments by providing and respecting privacy, such as draping, knocking before entering a room, and allowing a loved one to remain present if desired. Predictability can be increased through clear communication of what to expect and by calling patients with test results and understandable explanations rather than waiting for the next visit” (p. 156).
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This article is relevant to PBL question because it has a section focusing on ACEs effect on health across the lifespan. This article mostly talks about how to apply the information to healthcare professionals.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: This article has been published in a scholarly peer reviewed journal within the last two years. However, this article is not a systematic review.

	Overview of Article
Type of article	Overall Type: Review of Research Study Specific Type: Systematic Review
APA Reference	Sage, C. A. M., Brooks, S. K., & Greenberg, N. (2018). Factors associated with type II trauma in occupational groups working with traumatised children: A systematic review. <i>Journal of Mental Health</i> , 27(5), 457–467. doi: <a href="https://doi.org/10.1080/09638237.2017.1370630">https://doi.org/10.1080/09638237.2017.1370630</a>
Abstract	“Background: There is evidence that “Type II trauma” (TTT) - repeated exposure to traumatic events - can lead to the development of post-traumatic stress disorder (PTSD). TTT frequently occurs in occupational groups working with children who are themselves victims of trauma. Aim: To conduct a systematic review identifying risk factors for/protective factors against TTT-associated mental ill-health in employees working with traumatised children and explore how this type of work impacts upon social functioning. Method: Databases were searched for relevant studies and supplemented by hand searches. Results: 836 papers were found and 13 were included in the review. The key themes identified were coping mechanisms; social support; personality; demographics; occupational support; work-related stressors; traumatic exposure; organisational satisfaction; training/experience and impact on life. Conclusion: Unhelpful coping strategies (e.g. denial) appeared to increase the risk of TTT. Training and strong support may be protective and work-related stressors (e.g. excessive workload) appeared detrimental. Despite some positive impacts of the work (e.g. becoming more appreciative of life) many negative impacts were identified, demonstrating the importance of minimising risk factors and maximising protective factors for staff at risk of TTT.” (p. 457)
Author	Credentials: n/a Position and Institution: Department of Psychological Medicine, King’s College London Publication History in Peer-Reviewed Journals: 3 (limited)
Publication	Type of publication: Scholarly Peer Reviewed Journal Publisher: Taylor & Francis
Date and Citation History	Date of publication: 2018 Google Scholar Cited By: 5
Stated Purpose or Research Question	“conduct a systematic review identifying risk factors for/protective factors against TTT-associated mental ill-health in employees working with traumatised children and explore how this type of work impacts upon social functioning.” (p. 457)
Author’s Conclusion	“Our results suggest that many of the risk factors for the development of disorders such as PTSD identified in this study can be controlled and modified through good supervision by trained, and aware managers. Additionally, educating employees about coping styles and the potential impact of TTT and considering providing information to families too, may well be beneficial.” (p. 466)
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: This article focuses on people who have experienced trauma and explore the factors that impact their outcomes, which is related to the EBP question. However, it has a narrow focus on work performance only.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: This article was published within the last two years in a scholarly peer reviewed journal. However, the author’s reputation is not clearly stated.



	<b>Overview of Article</b>
Type of article	Overall Type: Review of Research Study Specific Type: Systematic review
APA Reference	Oh, D. L., Jerman, P., Silvério Marques, S., Koita, K., Purewal Boparai, S. K., Burke Harris, N., & Bucci, M. (2018). Systematic review of pediatric health outcomes associated with childhood adversity. <i>BMC Pediatrics</i> , 18(1), 83. doi:10.1186/s12887-018-1037-7
Abstract	<p>“Background: Early detection of and intervention in childhood adversity has powerful potential to improve the health and well-being of children. A systematic review was conducted to better understand the pediatric health outcomes associated with childhood adversity.</p> <p>Methods: PubMed, PsycArticles, and CINAHL were searched for relevant articles. Longitudinal studies examining various adverse childhood experiences and biological health outcomes occurring prior to age 20 were selected. Mental and behavioral health outcomes were excluded, as were physical health outcomes that were a direct result of adversity (i.e. abusive head trauma). Data were extracted and risk of bias was assessed by 2 independent reviewers.</p> <p>Results: After identifying 15940 records, 35 studies were included in this review. Selected studies indicated that exposure to childhood adversity was associated with delays in cognitive development, asthma, infection, somatic complaints, and sleep disruption. Studies on household dysfunction reported an effect on weight during early childhood, and studies on maltreatment reported an effect on weight during adolescence. Maternal mental health issues were associated with elevated cortisol levels, and maltreatment was associated with blunted cortisol levels in childhood. Furthermore, exposure to childhood adversity was associated with alterations of immune and inflammatory response and stress-related accelerated telomere erosion.</p> <p>Conclusion: Childhood adversity affects brain development and multiple body systems, and the physiologic manifestations can be detectable in childhood. A history of childhood adversity should be considered in the differential diagnosis of developmental delay, asthma, recurrent infections requiring hospitalization, somatic complaints, and sleep disruption. The variability in children’s response to adversity suggests complex underlying mechanisms and poses a challenge in the development of uniform diagnostic guidelines. More large longitudinal studies are needed to better understand how adversity, its timing and severity, and the presence of individual genetic, epigenetic, and protective factors affects children’s health and development.” (p.1)</p>
Author	<p>Credentials: MSc, PhD</p> <p>Position and Institution: Senior Translational Science Manager, Center for Youth Wellness</p> <p>Publication History in Peer-Reviewed Journals: Limited</p>
Publication	<p>Type of publication: Scholarly peer-reviewed journal</p> <p>Publisher: BMC Psychiatry</p> <p>Other: peer-reviewed journals about psychiatric disorders</p>
Date and Citation History	<p>Date of publication: February 23, 2018</p> <p>Cited By: 42</p>
Stated Purpose or Research Question	“The present systematic review, therefore, was focused on longitudinal studies in children to better understand the biological mechanisms linking exposure to childhood adversity with pediatric health outcomes” (p. 2)
Author’s Conclusion	“Childhood adversity affects brain development and multiple body systems, and the physiologic manifestations are detectable in childhood. The variability in children’s response to adversity suggests complex underlying mechanisms, including the timing and severity of adversity, the experience of cumulative adversity, and the presence of protective factors (i.e. resilience, genetic and epigenetic constitution, individual socioeconomic status) that mitigate or exacerbate the impact of the exposure.”(p.16)
Overall Relevance to your EBP Question	<p>Overall Relevance of Article: Good</p> <p>Rationale: This systematic review looked at 35 longitudinal studies that focused on the long-term outcomes of trauma on an individual’s physical health, which is important for our EBP question.</p>
Overall Quality of Article	<p>Overall Quality of Article: Good</p> <p>Rationale: This systematic review looked at 35 longitudinal studies that focused on the long-term outcomes of trauma on an individual’s physical health. It has strong evidence noting that exposure to childhood adversity is associated with delays in cognitive development, asthma, infection, somatic complaints, and sleep disruption.</p>

	Overview of Article
Type of article	Overall Type: Review of a Research Study Specific Type: Systematic Review
APA Reference	Meng, X., Fleury, M. J., Xiang, Y. T., Li, M., D'Arcy, C. (2018). Resilience and protective factors among people with a history of child maltreatment: A systematic review. <i>Social Psychiatry Psychiatric Epidemiology</i> , 53(5), 453-375. doi: 10.1007/s00127-018-1485-2
Abstract	<p>“PURPOSE: To provide an overview of resilience and protective factors associated with a better life following child maltreatment exposure, to compare protective factors across specific subtypes of maltreatment, and to explore existing issues in the current state of the literature.</p> <p>METHODS: Electronic databases and grey literature up to October 2017 were systematically searched for English language with observational study designs for the research on resilience and childhood maltreatment. Systematic review and qualitative approaches were used to synthesize the results. Study quality and heterogeneity were also examined.</p> <p>RESULTS: Initial screening of titles and abstracts resulted in 247 papers being reviewed. A total of 85 articles met eligibility criteria of this review. Most of these studies had low or middle study quality. There were two subgroups of studies reviewed: (1) 11 studies examined whether resilience protected against the negative consequence of childhood maltreatment, and, (2) 75 studies explored what protective factor was associated with a kind of adaptive functioning. Although the conceptualization of resilience significantly varied from study to study, protective factors associated with resilience at individual, familial, and societal levels reduced the likelihood of negative consequences of childhood maltreatment. Negative consequences following childhood maltreatment can be prevented or moderated if protective factors are provided in time. Future research needs to address the conceptualization issue of resilience.</p> <p>CONCLUSIONS: Public and population mental health preventions should focus on early childhood and apply preventive strategies as early as possible. Cost-effective studies should be considered in the evaluation of resilience prevention program.” (p. 453).</p>
Author	<p>Credentials: Xiangfei Meng</p> <p>Position and Institution: Department of Psychiatry, Faculty of Medicine, McGill University</p> <p>Publication History in Peer-Reviewed Journals: Extensive</p>
Publication	<p>Type of publication: Scholarly, Peer-reviewed</p> <p>Publisher: Social Psychiatry and Psychiatric Epidemiology</p>
Date and Citation History	<p>Date of publication: May 2018</p> <p>Cited By: 16</p>
Stated Purpose or Research Question	“To provide an overview of resilience and protective factors associated with a better life following child maltreatment exposure, to compare protective factors across specific subtypes of maltreatment, and to explore existing issues in the current state of the literature.” (p. 453)
Author's Conclusion	“Overall, we found that a scientific consensus is emerging that protective factors were associated with a wide range of adaptive functioning that guard against the negative sequelae of child maltreatment.” (p. 473)
Overall Relevance to your EBP Question	<p>Overall Relevance of Article: Good</p> <p>Rationale: This article analyzed the effect that resilience level and protective factors had on overall quality of life after childhood maltreatment. This is directly related to EBP question, asking about some predictive qualities trauma has on an individual.</p>
Overall Quality of Article	<p>Overall Quality of Article: Moderate</p> <p>Rationale: Although this article is relevant to our search question, there were a few limitations that appear to be significant. The studies were collected with a wide range of year selection and throughout those years, various definitions of maltreatment and resilience have been used. Secondly, the identification of child maltreatment and quality of the studies varied throughout, creating heterogeneity in the review. There was also no meta-analysis because variable characteristics were too varied throughout the studies.</p>

	<b>Overview of Article</b>
Type of article	Overall Type: Review of Research Study Specific Type: Systematic review
APA Reference	Kalmakis, K. A., & Chandler, G. E. (2015). Health consequences of adverse childhood experiences: A systematic review. <i>Journal of the American Association of Nurse Practitioners</i> , 27(8), 457-465. doi:10.1002/2327-6924.12215
Abstract	<p>“Purpose: Adverse childhood experiences (ACEs) have been associated with negative health outcomes, but the evidence has had limited application in primary care practice. The purpose of this study was to systematically review the research on associations between ACEs and adult health outcomes to inform nurse practitioners (NPs) in primary care practice. Data sources: The databases PubMed, CINAHL, PsycINFO, and Social Abstracts were searched for articles published in English between 2008 and 2013 using the search term “adverse childhood experiences.” Forty-two research articles were included in the synthesis. The evidence was synthesized and is reported following the preferred reporting items for systematic reviews and meta-analysis procedure (PRISMA). Conclusions: ACEs have been associated with health consequences including physical and psychological conditions, risk behaviors, developmental disruption, and increased healthcare utilization. Generalization of the results is limited by a majority of studies (41/42) measuring childhood adversity using self-report measures. Implications for practice: NPs are encouraged to incorporate assessment of patients’ childhood history in routine primary care and to consider the evidence that supports a relationship between ACEs and health. Although difficult, talking about patient’s childhood experiences may positively influence health outcomes” (p. 457)</p>
Author	<p>Credentials: Karen A Kalmakis, PhD, FNP-BC  Position and Institution: Associate Professor, University of Massachusetts Amherst  Publication History in Peer-Reviewed Journals: extensive</p>
Publication	<p>Type of publication: scholarly peer-reviewed journal  Publisher: Journal of The American Association of Nurse Practitioners  Other: N/A</p>
Date and Citation History	<p>Date of publication: March 5, 2015  Cited By: 178</p>
Stated Purpose or Research Question	“This systematic review of research on health outcomes of ACE is intended to educate and raise awareness among NPs.” (p.458)
Author’s Conclusion	<p>“This review of the literature reveals extensive evidence on the impact of ACE on individuals’ future health. ACEs have been associated with physical and psychiatric health problems, several health-risk behaviors that represent a threat to future chronic physical and emotional health problems, and several developmental disruptions that affect health status. NPs aware of the consequences of ACE should use this evidence in their practice to screen for patients with a history of ACE and design appropriate plans of care to help patients manage their emotional and biological responses to childhood adversity, thus avoiding or minimizing their negative health outcomes”. (p.463)</p>
Overall Relevance to your EBP Question	<p>Overall Relevance of Article: Moderate  Rationale: This article shows the relevance of ACE’s to poor health outcomes, which relates to the EBP question. However, it is directly related to practice for nurse practitioners. However, useful and valuable information can still be gleaned from this article.</p>
Overall Quality of Article	<p>Overall Quality of Article: Good  Rationale: This is a systematic review of 42 articles. It provides strong evidence of the negative effect of ACE’s. Aside from that, the article is published in a reputable journal.</p>

	<b>Overview of Article</b>
Type of article	Overall Type: Review of Research Study Specific Type: Systematic review, Meta-analysis
APA Reference	Hughes, K., Bellis, M. A., Hardcastle, K. A., Sethi, D., Butchart, A., Mikton, C., ... Dunne, M. P. (2017). The effect of multiple adverse childhood experiences on health: A systematic review and meta-analysis. <i>The Lancet Public Health</i> , 2(8), e356-e366. doi:10.1016/S2468-2667(17)30118-4
Abstract	<p>"Background: A growing body of research identifies the harmful effects that adverse childhood experiences (ACEs; occurring during childhood or adolescence; eg, child maltreatment or exposure to domestic violence) have on health throughout life. Studies have quantified such effects for individual ACEs. However, ACEs frequently co-occur and no synthesis of findings from studies measuring the effect of multiple ACE types has been done.</p> <p>Methods: In this systematic review and meta-analysis, we searched five electronic databases for cross-sectional, case-control, or cohort studies published up to May 6, 2016, reporting risks of health outcomes, consisting of substance use, sexual health, mental health, weight and physical exercise, violence, and physical health status and conditions, associated with multiple ACEs. We selected articles that presented risk estimates for individuals with at least four ACEs compared with those with none for outcomes with sufficient data for meta-analysis (at least four populations). Included studies also focused on adults aged at least 18 years with a sample size of at least 100. We excluded studies based on high-risk or clinical populations. We extracted data from published reports. We calculated pooled odds ratios (ORs) using a random-effects model.</p> <p>Findings: Of 11 621 references identified by the search, 37 included studies provided risk estimates for 23 outcomes, with a total of 253 719 participants. Individuals with at least four ACEs were at increased risk of all health outcomes compared with individuals with no ACEs. Associations were weak or modest for physical inactivity, overweight or obesity, and diabetes (ORs of less than two); moderate for smoking, heavy alcohol use, poor self-rated health, cancer, heart disease, and respiratory disease (ORs of two to three), strong for sexual risk taking, mental ill health, and problematic alcohol use (ORs of more than three to six), and strongest for problematic drug use and interpersonal and self-directed violence (ORs of more than seven). We identified considerable heterogeneity (I<sup>2</sup> of &gt;75%) between estimates for almost half of the outcomes.</p> <p>Interpretation: To have multiple ACEs is a major risk factor for many health conditions. The outcomes most strongly associated with multiple ACEs represent ACE risks for the next generation (eg, violence, mental illness, and substance use). To sustain improvements in public health requires a shift in focus to include prevention of ACEs, resilience building, and ACE-informed service provision. The Sustainable Development Goals provide a global platform to reduce ACEs and their life-course effect on health." (p.356)</p>
Author	<p>Credentials: PhD</p> <p>Position and Institution: Professor at the College of Health and Behavioural Sciences at Bangor University and Directorate of Policy, Research and International Development, Public Health Wales</p> <p>Publication History in Peer-Reviewed Journals: Moderate</p>
Publication	<p>Type of publication: Scholarly peer-reviewed journals.</p> <p>Publisher: The Lancet Public Health</p>
Date and Citation History	<p>Date of publication: August 2017</p> <p>Cited By: 368</p>
Stated Purpose or Research Question	"In this study, we present findings from a systematic review and meta-analysis of studies measuring associations between multiple ACEs and health outcomes. The primary outcomes of interest were pooled measures of relations between multiple ACEs and health outcomes" (p. 357)
Author's Conclusion	"This systematic review and meta-analysis identifies the pervasive effects that childhood adversity can have on health across the life course, with exposure to multiple ACEs affecting all 23 of the health outcomes examined, including some of the leading causes of the global burden of disease. Outcomes showing the strongest relations with multiple ACEs (violence, mental illness, and problematic substance abuse) can represent ACEs for the next generation (exposure to parental domestic violence, mental illness, and substance use) and thus are indicative of the intergenerational effects that can lock families into cycles of adversity, deprivation, and ill health" (p. 364-365).
Overall Relevance to your EBP Question	<p>Overall Relevance of Article: Good</p> <p>Rationale: This relates to our EBP question because it summarizes the risk factors associated with trauma and the strength of the relationship (i.e. strong association for sexual risk taking, mental health, etc.)</p>
Overall Quality of Article	<p>Overall Quality of Article: Good</p> <p>Rationale: This systematic review and meta-analysis looked at 37 studies that provided risk estimates for 23 outcomes and 253, 719 participants. It focused on strong, moderate, and weak associations between ACEs and different health conditions.</p>

	<b>Overview of Article</b>
Type of article	Overall Type: Conceptual Specific Type: N/A
APA Reference	Bucci, M., Marques, S., Oh, D., & Harris, N. (2016). Toxic stress in children and adolescents. <i>Advances in Pediatrics</i> , 63(1), 403-428. doi:10.1016/j.yapd.2016.04.002
Abstract	“Early life adversity, also referred to as adverse childhood experiences (ACEs), includes stressful or traumatic experiences in childhood and abuse, neglect, and household dysfunction. ACEs put children at risk of negative physical, mental, and behavioral health outcomes. When a child is exposed to stressors, such as early life adversity, the body’s natural stress response can become maladaptive or toxic to the body. The toxic stress response results from a disruption of the circuitry between neuroendocrine and immune systems, and it affects multiple biological systems, laying the foundation for long-term health outcomes.”(p. 403)
Author	Credentials: MD Position and Institution: Director of Research, Center For Youth Wellness. Professional Faculty Researcher UCSF Publication History in Peer-Reviewed Journals: Extensive
Publication	Type of publication: Scholarly peer-reviewed journals. Publisher: Advances in Pediatrics
Date and Citation History	Date of publication: August 2016 Cited By: 60
Stated Purpose or Research Question	“In this article, the authors describe early life adversity and toxic stress, and their implications for pediatric health.” (p.404)
Author’s Conclusion	“ACEs, including abuse, neglect, household dysfunction, and other early life adversities, have been associated with long-term negative health outcomes. A toxic stress response has been implicated as a contributing factor to the development of these outcomes.” (p. 421)
Overall Relevance to your EBP Question	Overall Relevance of Article: Poor Rationale: This article has good background knowledge; however, it is not focused on a research study.
Overall Quality of Article	Overall Quality of Article: Moderate Rationale: This article has good explanations of toxic stress and how it negatively affects the human body, but it is focused on an overview of the topic and not based on specific research studies.

	<b>Overview of Article</b>
Type of article	Overall Type: Theoretical / Conceptual Article Specific Type: Review
APA Reference	Lupien, S., McEwen, B., Gunnar, M., Heim, C. (2009). Effects of stress throughout the lifespan on the brain, behaviour and cognition. <i>Nature Reviews Neuroscience</i> (10), 434–445. doi:10.1038/nrn2639
Abstract	“Chronic exposure to stress hormones, whether it occurs during the prenatal period, infancy, childhood, adolescence, adulthood or aging, has an impact on brain structures involved in cognition and mental health. However, the specific effects on the brain, behaviour and cognition emerge as a function of the timing and the duration of the exposure, and some also depend on the interaction between gene effects and previous exposure to environmental adversity. Advances in animal and human studies have made it possible to synthesize these findings, and in this Review a model is developed to explain why different disorders emerge in individuals exposed to stress at different times in their lives” (p. 434)
Author	Credentials: PhD Position and Institution: Research Chair on Gender and Mental Health by the Canadian Institutes of Health Research Publication History in Peer-Reviewed Journals: 39
Publication	Type of publication: Scholarly peer-reviewed Journal Publisher: Nature Publishing Group Other: “Aims to provide a complete understanding of the structure and function of the central nervous system. Covers the breadth and depth of modern neuroscience by providing an authoritative, accessible, topical, and engaging first port of call for scientists who are interested in all aspects of neuroscience.” Indexed since 2000.
Date and Citation History	Date of publication: 29 April 2009 Cited By: 4197
Stated Purpose or Research Question	“This Review describes the effects of stress during prenatal life, infancy, adolescence, adulthood and old age on the brain, behaviour and cognition, using data from animal and human studies. Here, we propose a model that integrates the effects of stress across the lifespan, along with future directions for stress research” (p. 434)
Author’s Conclusion	“Studies of modern individuals who have developed resilience by facing significant adversity should inform us about the physiological and psychological mechanisms at the basis of vulnerability or resilience to stress. understanding these mechanisms, which are possibly rooted in genes and modulated by the family environment, is extremely important if one wants to provide interventions early enough to individuals who are the most likely to respond to them” (p. 442)
Overall Relevance to your EBP Question	Overall Relevance of Article: Moderate Rationale: Examines the physiological, behavioral and cognitive effects of stress throughout the lifespan. Connects personal and environmental factors to positive and negative health, behavioral and cognitive outcomes.
Overall Quality of Article	Overall Quality of Article: Good Rationale: Compares human and animal studies, examines the effects of stress over the lifespan, examines the topic through a variety of lenses and gives substantive recommendations for the direction of future research. Extensively cited by other research and includes extensive citation of related research.