Adverse Childhood Experiences Screening Among Adults in an Inpatient Behavioral Health Unit

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**Recommended Citation**  
Bales, Erika Y.; Neal, Allyson; and McGill, Brittany, "Adverse Childhood Experiences Screening Among Adults in an Inpatient Behavioral Health Unit" (2022). *Graduate Publications and Other Selected Works - Doctor of Nursing Practice (DNP)*.  
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Adverse Childhood Experiences Screening Among Adults in an Inpatient Behavioral Health Unit

Erika Bales BSN, RN
The University of Tennessee, Knoxville
Introduction
Clinical Problem

- ACEs study showed that potentially traumatic events in childhood (0-17 years) negatively impact health and well-being across a lifetime.
- Two-thirds of the study participants reported at least one ACE, and more than one in five participants reported three or more ACEs.
- As the number of ACEs a participant has experienced increases, so does their risk for negative health outcomes.

(Felitti et al., 1998)
• Childhood adversity affects how our stress response functions, even how our DNA is read and transcribed, leading to long-term changes in our bodies and causing health problems as we age. (Danese & McEwen, 2012).

• When high ACE scores are left untreated, you can see a decreased life expectancy of up to 20 years (Brown et al., 2009).

• Experiencing four or more ACEs significantly increases the risk for seven out of the ten leading causes of death including:
  • stroke, diabetes, heart disease, cancer, COPD, suicide, and Alzheimer’s disease (Bellis et al., 2019).
Clinical Problem Continued

- In North America, ACEs were attributed to 40% of depression cases and 30% of anxiety cases (Bellis et al., 2019).
- Children that experienced four or more ACEs are:
  - Approximately 12 times more likely to attempt suicide (Felitti et al., 1998).
  - More than seven times more likely to become alcoholics in adulthood (Felitti et al., 1998).
Clinical Problem Continued

- Total annual cost for ACEs attributable conditions in 2019 for North America was $748 billion
- 82% of the ACE attributed costs were connected to people who had experienced two or more ACEs
- Estimated that a 10% reduction in ACEs prevalence could lead to an annual savings of $105 billion

(Bellis et al., 2019)
Clinical Significance

• In order to help decrease their negative effects and costs, practitioners must work to raise awareness of ACEs in adults and pediatric patients and begin to routinely screen patients for them.

• The site of this DNP scholarly project is an inpatient behavioral health unit that does not screen for ACEs and has no process for implementing ACEs screening.

• By implementing screening rates at this site, providers can intervene with proper treatment.
Purpose and Goals

• The purpose of this project is to help practitioners identify adults with positive ACE screens so that they can provide appropriate treatment to mitigate negative outcomes.

• Goals:
  • Short-term: providers will incorporate ACEs screening into the assessment process; identification of ACEs will then allow providers to refer patients for appropriate treatment.
  • Long-term: identification and intervention can help reduce rates of mental health disease, suicide attempts, drug abuse, and other chronic diseases.
PICOT Question

“Among adults in an inpatient behavioral health unit, how does standardized Adverse Childhood Experiences (ACEs) screening affect length of stay over two months?”
Literature Search

Figure 1
Adopted PRISMA Flow Diagram

- Records identified through database searching CINAHL (n=183) Cochrane (n=42) PubMed (n=76) PsycInfo (n=91)
- Additional records identified through other sources (n = 0)

- Records after duplicates removed (n = 123)

- Records screened (n = 38)
- Full-text articles assessed for eligibility (n = 16)
- Full-text articles excluded, with reasons (n = 13)
  - Incorrect sample population
  - Not pertaining to ACEs screen

- Studies included for critical appraisal (n = 3)
- Studies included in synthesis of literature (n = 3)

For more information, visit www.prisma-statement.org.
Critical Appraisal

- Literature individually assessed with Johns Hopkins Nursing Evidence-based Practice (JHNEBP) tools
- Following individual appraisal, each article was assigned an evidence level and quality grade

(Dang & Dearholt, 2018)
• ACEs screening tool is one of the only ones available to assess childhood trauma.

• ACEs screening tool is recommended for implementation in adults as it is affordable, feasible, and effective at identifying childhood adversity (Kalmakis et al., 2018).

• Kalmakis & Chandler (2015) concluded providers should implement ACEs screening and utilize its results to create appropriate care plans and minimize negative health outcomes.

• Pardee et al. (2017) revealed practitioners should screen for ACEs and provide secondary and tertiary interventions to reduce the severity and consequences of ACEs.
Recommendations for Practice Change

I **recommend** implementation of ACEs screening in adults to identify those at risk for negative health outcomes

I **recommend** implementation of trauma informed treatment referral for patients that screen positive for ACEs to improve health outcomes

Kalmakis et al. (2018); Kalmakis & Chandler (2015); Pardee et al. (2017)
Aims of Recommendation

- Implement the screening of ACEs during the admission process of adults in an inpatient behavioral health unit to increase the identification of those that have suffered from childhood trauma.
Clinical Expertise

• CDC has identified ACEs as one of the largest public health crises and recognizes the long-lasting negative impact that ACEs have on health and well-being.

• CDC has also identified ACEs as preventable if identified and treated appropriately.

• CDC recommends implementing ACEs screening and treatment referral to lessen the harms of ACEs and prevent health problems.
Patient Preferences

- Routine ACEs screening promotes healthcare equity
- ACEs screening is associated with improved outcomes for patients
- Screening is time and cost-effective and can easily be disseminated throughout entire populations
Guiding Framework

Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) Model

Figure 3.3 JHNEBP PET process.
Setting and Population

East Tennessee inpatient behavioral health hospital

Adult patients aged 18+ both voluntary and involuntary admissions

Treatment is targeted for substance use & psychiatric issues
## SWOT Analysis

### Internal Factors - Inpatient Behavioral Health Unit Implementation Site

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Few resources required</td>
<td>- Trauma therapy varies by therapy provider</td>
</tr>
<tr>
<td>- Cost-effective implementation</td>
<td>- Requires retrospective review of patient charts</td>
</tr>
<tr>
<td>- Backed by government-affiliated programs</td>
<td>- Need to study screening techniques/forms</td>
</tr>
<tr>
<td>- Opportunity for implementation in various behavioral health units and hospitals</td>
<td>- Stigma concerning past trauma</td>
</tr>
<tr>
<td>- Small hospital structure increases ease of communication</td>
<td>- Requires patient participation</td>
</tr>
<tr>
<td>- Chance to determine new procedural norms</td>
<td>- Requires multi-disciplinary approach for treatment</td>
</tr>
<tr>
<td>- Specific adult population that is easy to isolate</td>
<td></td>
</tr>
</tbody>
</table>

### External Factors - Inpatient Behavioral Health Unit Implementation Site

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Work with vulnerable psychiatric population</td>
<td>- Dependent upon voluntary participation by patients</td>
</tr>
<tr>
<td>- Build relationship with unit to determine standardized procedures</td>
<td>- Screening administration requires ability of patient to read and write</td>
</tr>
<tr>
<td>- Improve behavioral health procedures</td>
<td>- Dependent upon healthcare provider time/willingness to facilitate proposed intervention</td>
</tr>
<tr>
<td>- Reduce patient burden and increase quality of care</td>
<td>- Psychiatric screening procedures in inpatient facilities are limited</td>
</tr>
<tr>
<td>- Increase access to trauma therapy for psychiatric patients</td>
<td>- Cultural barriers (re: willingness to be vulnerable and discuss past trauma)</td>
</tr>
<tr>
<td>- Decrease need for secondary and tertiary treatment</td>
<td></td>
</tr>
</tbody>
</table>
### Stakeholders, Responsibilities, & Affiliated Agencies

<table>
<thead>
<tr>
<th>Name/Title</th>
<th>Responsibilities</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNP Student</td>
<td>Project leader, research relevant articles, apply evidence-based practice, collect data, analyze, and disseminate findings.</td>
<td>University of Tennessee, Knoxville</td>
</tr>
<tr>
<td>Manager of Behavioral Health Unit (BHU)</td>
<td>Leader of project department. Supervise the project procedures and project implementation. Facilitate data collection of treatment referral for target population.</td>
<td>Peninsula</td>
</tr>
<tr>
<td>Director of BHU</td>
<td>Supervises and approves department changes.</td>
<td>Peninsula</td>
</tr>
<tr>
<td>Medical Director of BHU</td>
<td>Ensures project is safe and appropriate for target population.</td>
<td>Peninsula</td>
</tr>
<tr>
<td>Manager of Access and Therapy of BHU</td>
<td>Supervises the access and therapy team that will facilitate implementation of project.</td>
<td>Peninsula</td>
</tr>
<tr>
<td>Access and Therapy staff of BHU</td>
<td>Responsible for assisting the administration of ACEs screening for all new admissions of the target population.</td>
<td>Peninsula</td>
</tr>
<tr>
<td>RN staff of BHU</td>
<td>Assist access staff in the collection of ACEs screening and ensures it is included in patient chart.</td>
<td>Peninsula</td>
</tr>
<tr>
<td>DNP Committee</td>
<td>Provide expertise and guidance in planning and implementing project.</td>
<td>University of Tennessee, Knoxville</td>
</tr>
<tr>
<td>Statistician</td>
<td>Provides assistance in analyzing and presenting project findings.</td>
<td>University of Tennessee, Knoxville</td>
</tr>
</tbody>
</table>
Implementation Process and Project Design

Aug 2021 - July 2022
Project Design: PDSA cycles

May-July 2022
Implement Intervention

July-Sept 2022
Evaluate EBP Process/ Outcomes

Aug-Nov 2022
Dissemination of Findings & Institute Practical Change
### Instructions:
Below is a list of 10 categories of Adverse Childhood Experiences (ACEs). From the list below, please place a checkmark next to each ACE category that you experienced prior to your 18th birthday. Then, please add up the number of categories of ACEs you experienced and put the total number at the bottom.

1. Did you feel that you didn’t have enough to eat, had to wear dirty clothes, or had no one to protect or take care of you?  
   - [ ]

2. Did you lose a parent through divorce, abandonment, death, or other reason?  
   - [ ]

3. Did you live with anyone who was depressed, mentally ill, or attempted suicide?  
   - [ ]

4. Did you live with anyone who had a problem with drinking or using drugs, including prescription drugs?  
   - [ ]

5. Did your parents or adults in your home ever hit, punch, beat, or threaten to harm each other?  
   - [ ]

6. Did you live with anyone who went to jail or prison?  
   - [ ]

7. Did a parent or adult in your home ever swear at you, insult you, or put you down?  
   - [ ]

8. Did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?  
   - [ ]

9. Did you feel that no one in your family loved you or thought you were special?  
   - [ ]

10. Did you experience unwanted sexual contact (such as fondling or oral/anal/vaginal intercourse/penetration)?  
    - [ ]

**Your ACE score is the total number of checked responses**

Do you believe that these experiences have affected your health?  
- [ ] Not Much  
- [ ] Some  
- [ ] A Lot
<table>
<thead>
<tr>
<th>Outcome Measures</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE score</td>
<td></td>
</tr>
<tr>
<td>Impact on Health</td>
<td></td>
</tr>
<tr>
<td>Length of Stay</td>
<td></td>
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</table>
Methods of Evaluation

- Data Collection:
  - Prospective chart review (post-intervention)
- Variables and Descriptive Stats
  - Demographics: Sex, Age, Race
  - Length of Stay
  - ACEs screening score
  - Impact on Health
- Data Analysis
  - Significance of ACE score & Impact on Health Data vs. Length of Stay
  - Confidence values & clinical/statistical significance of findings
Findings

- ACE score vs. Length of Stay ($\rho = -0.040$, $p = 0.724$)
- Impact on Health vs. Length of Stay ($p$-value of 0.195)
- ACE score vs. Impact on Health ($p$-value of 0.002)

81 study participants

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>54.3%</td>
</tr>
<tr>
<td>Female</td>
<td>45.7%</td>
</tr>
<tr>
<td>Caucasian</td>
<td>95.1%</td>
</tr>
<tr>
<td>African American</td>
<td>4.9%</td>
</tr>
<tr>
<td>Mean Age</td>
<td>38.81</td>
</tr>
</tbody>
</table>
Implications for Practice

- Project significance: ACEs screening and appropriate treatment may increase quality of care for patients and decrease negative health outcomes
- Sustainability: Simple and cost-effective intervention with minimal risks to patients
- Collaboration among multiple disciplines will help engage providers to provide quality care to patients and improve patient outcomes based on evidence-based practice
Dissemination Plan

- Submission of manuscript to peer-reviewed journal
- Presentation of PowerPoint to stakeholders
Ethical Issues & Principles

- Letter of support to conduct DNP project obtained from site
- IRB approval obtained before implementing project
- Security: All data de-identified, password enabled Microsoft Excel, physical copies of PHI shredded at project site
- Ethical principles associated with the DNP: social responsibility, respect for persons, do no harm, justice as fairness
References


