RAPID EVIDENCE REVIEW

AcademyHealth

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What evidence-based interventions for parents and families help mitigate adverse childhood experiences among children?

Answer: The evidence identified through this review supports the use of interventions such as site-based parent education programs, home visits, and concurrent treatment for substance abuse and parenting skills to mitigate the effects of adverse childhood experiences among children. However, more rigorous, randomized controlled trials are needed to pinpoint the most effective components of these approaches.

Policy context

AcademyHealth undertook this review from the perspective of a Medicaid policymaker seeking to identify evidence-based interventions to help mitigate parental and familial factors (such as chemical dependency) that may contribute to adverse childhood experiences (ACEs) among children. ACEs are stressful or traumatic events, including abuse, neglect, and household disfunction.[1] The Centers for Disease Control and Prevention has outlined a set of risk factors for ACEs, which include inadequate parenting skills, substance abuse and/or mental health issues, parenting stress, and poor parent-child relationship.[2] In addition to providing direct treatment to the child, many government agencies and health care providers seek to address these and other parental/familial risk factors as a way of preventing and mitigating the negative effects of ACEs.

Supporting evidence

This review identified three systematic reviews and a fourth supporting article relevant to the review question. While many recent studies examining the effectiveness of interventions to address ACEs are randomized controlled trials (RCTs), a majority of the studies included in the systematic reviews use uncontrolled designs, raising concerns regarding methodological rigor. However, findings from both RCTs and other less rigorously designed studies supports use of strategies such as:

- **Parent education programs (conducted outside of the home):** These programs have been shown to address some "changeable" parental risk factors associated with ACEs, such as inadequate parenting skills, attitudes about child rearing, and dysfunctional parenting habits. They are shown to have a marginal impact on other risk factors such as depression and stress.[3-5]
- **Home visit programs**: Studies show a small reduction in the number of substantiated child maltreatment reports, instances of psychological aggression, harsh discipline, corporal punishment, and neglect following implementation of home visit programs. Home-based visits that include parent-child interaction therapy and child parent psychotherapy have a growing literature base that demonstrates early positive results.[3-5]
- **Dual treatment programs for substance abuse**: RCTs evaluating these programs suggest that combined substance abuse treatment and parenting interventions improve parenting more than substance abuse treatment alone, though few studies include long-term outcomes related to ACEs risk factors.[6]
- **Trauma-informed care:** Though not sufficiently studied, trauma-informed care is a rapidly growing, promising approach for health care providers that includes both screening and treatment for children and families.[3]

Limitations

- A significant number of included studies use less rigorous designs due to the difficulty of recruiting families to participate in interventions, withholding services to create a control group, and following up with study participants, among other challenges.
- Additional studies evaluating the effectiveness of interventions for particularly vulnerable subgroups (e.g., children with disabilities, children in foster care, parents with both substance abuse and mental health issues) are needed.
- While many studies included children in the child protective services system, more RCTs are needed to determine what strategies work best for parents who may not have custody of their children.
- This review does not include primary research studies published since the most recent systematic review.

*AcademyHealth conducted this rapid review over a **three-day** period using an established protocol that emphasizes timeliness, efficiency, and responsiveness to policymakers' needs. It synthesizes peer-reviewed systematic reviews published within the last 10 years. A primary analyst undertook and revised the review. Two additional AcademyHealth analysts and an external expert provided input on the initial findings and draft report. Appendix 2 lists the search terms and databases used in this rapid review.*

Appendix 1: Definition of Terms

Adverse childhood experiences (ACEs)—potentially traumatic events that can have negative, lasting effects on health and well-being. These experiences can include physical, emotional, or sexual abuse, parental divorce or the incarceration of a family member.[1]

Parent-child interaction therapy—A family-centered treatment approach developed for abused or at-risk children ages two to eight and their caregivers. During sessions, therapists coach caregivers while they interact with their children, teaching caregivers strategies that aim to improve the quality of the caregiver-child relationship, decrease child behavior problems, and improve parenting skills.[9]

Child-parent psychotherapy—An intervention for children and caregivers who have experienced at least one form of trauma. During sessions, the goal is to support and strengthen the relationship between a child and caregiver in order to repair the child's sense of safety, attachment, and appropriate affect to ultimately improve the child's cognitive, behavioral, and social functioning. Sessions are adapted to fit the child's age, development level, and the type of trauma.[10]

Trauma-informed care— An approach that aims to engage people with histories of trauma, recognize the presence of trauma symptoms, and acknowledge the role that trauma has played in their lives.[11]

Appendix 2: Search Terms and Databases

The following list shows the basic Boolean search term strategy used for the review. Searches were modified based on search functions within each database used.

Terms: (intervention* OR strategy OR program OR primary prevention OR secondary prevention OR tertiary prevention OR mitigate OR mediate) AND ("adverse childhood experience*" OR trauma OR "child maltreatment" OR "child abuse")

Databases: Health Systems Evidence, the Cochrane Library, EPPI-Centre Reviews, PubMed, Web of Science Core Collection, ProQuest Social Science Database, and EBSCO Social Sciences Full Text.

Appendix 3: Systematic reviews

Author and date	Focus of review	Methods	Relevant findings	Limitations and quality of evidence as reported by the author	AMSTAR Quality Rating[8]
Oral, Ramirez, & Coohey, et al., 2016[3]	Review of trauma informed care practices.	Note: While this paper is not a traditional systematic review, it provides one of the more recent overviews of ACEs and current interventions and approaches, thus it is included here.	Individual and family-level prevention programs: • Home visiting programs are found to be effective in reducing child abuse and neglect and improving family function. • Parent-child interaction therapy and child parent psychotherapy are also emerging as evidence-based treatment options working with parents and children in tandem. • Cognitive behavioral therapy (CBT) for adults is a common approach and has been shown to have some effect on reducing the psychological symptoms of post-traumatic stress disorder, depression, and anxiety. A recent study showed that a family-based approach for CBT is also beneficial. • Trauma–informed care is one of the top strategies for addressing ACEs, though there have been few outcomes-based studies to actually assess its effectiveness.	• No limitations were reported.	**N/A**
Chen & Chan, 2016[4]	Review of impact of parenting programs on child maltreatment prevention.	**Search:** The authors searched nine databases to identify studies published on or before September 2013. The authors manually searched the references of the reviewed articles and contacted authors to obtain unpublished reports and grey literature. **Inclusion criteria:** Studies were included in the review if they involved: (1) RCT designs with at least one control group and one intervention group; (2) primary, secondary, or tertiary prevention programs that particularly focused on child maltreatment; (3) standard of care provided to the control group; (4) the availability of data to calculate effect sizes; and (5) the studies were based	• This meta-analysis suggests that parenting programs are effective approaches for preventing child maltreatment, though further RCTs are needed. • Most of the 111 studies included in the review find small, but positive effects in reducing psychological aggression, harsh discipline, corporal punishment, neglect, and the number of substantiated child maltreatment reports. • Programs starting earlier in childhood and focused primarily on mothers seemed to have the biggest impact. • In the three studies that included both home and clinic-based therapy, the location (or combination of locations) was not associated with the demonstrated positive impact, suggesting that some interventions could have been conducted on site, perhaps incurring fewer costs to the provider, agency, or health system.	• Most of the studies failed to provide all the necessary study or intervention information, and only a few variables were reported. • Meta-analysis did not look at effectiveness across important sub-groups (e.g., children with disabilities). • The review did not include all possible outcomes of parenting programs, as many were not reported consistently in the individual studies.	**8/11**

		on use of different trials. **Review:** Independent review of the studies was conducted by two reviewers. **Quality assessment:** Quality of studies was assessed using a modified CONSORT checklist.[12]			
Neger & Prinz, 2015[5]	Review of dual substance abuse treatment and parenting interventions.	**Search:** Authors searched three databases for the period 1993-2014. **Inclusion criteria:** Studies were included in the review if: (1) they were published in English between 1993 and 2014, (2) involved concurrent (dual) substance abuse and parenting interventions, and (3) produced quantitative outcome data on both parental substance abuse and parenting. Studies with either randomized or non-randomized designs were included to capture trends in this growing but still emerging area of research. **Review:** Not specified. **Quality assessment:** The authors assessed the quality of included studies based on study design only.	• This review focuses on 21 outcome studies that tested dual treatment of substance abuse and parenting interventions. Nine of those studies utilized a RCT design. • The RCTs indicated that combined substance abuse treatment and parenting interventions improved parenting more than substance abuse treatment alone. With respect to adverse outcomes, risk for child maltreatment in two studies increased for the parents who received substance abuse treatment only. • Findings from non-RCTs support the findings from the RCTs. • Generally, the studies found that the earlier these interventions take place, the better in regards to preventing negative outcomes among children. • Common obstacles to session attendance include lack of transportation, hunger, unsupervised children, and stigma. Interventions should be accompanied by strategies for addressing each of these obstacles, such as providing vouchers or courtesy rides, meals, child care and a safe, supportive and non-judgmental environment.	• No limitations were reported.	**7/11**
Fraser, Lloyd & Murphy, 2013[6]	Comparative effectiveness review of parenting and trauma-focused interventions.	**Search:** Authors searched four databases for the period 1990-2012. **Inclusion criteria:** Defined using the PICOTS (populations, interventions, comparators, outcomes, timing, and settings) framework for organizing comparative effectiveness reviews.	• Although several interventions show promising comparative benefit for child well-being outcomes, the strength of the evidence for most interventions was weak due to methodological concerns with study design and sampling. • Parent-focused interventions were targeted toward increasing the caregiver's sensitivity and responsiveness to the child's needs, improving negative attitudes toward the child, teaching positive discipline techniques for managing challenging behavior, and addressing other risks	• Limiting the review to studies conducted with children with active child protective services involvement or known maltreatment exposure may have excluded promising	**8/11**

	Two additional exclusion criteria important to highlight: (1) Studies with families broadly identified as “at risk” due to sociodemographic or other factors. (2) Studies including older adolescents (>=15 years) in recognition of the major shift in developmental needs and capacities during middle and late adolescence. **Review:** Teams of two reviewers independently reviewed each of the titles and abstracts. Reviewers resolved conflicts by discussion and consensus or by consulting a third member of the review team. **Quality assessment**: For each included study, authors assessed the potential for selection bias, performance bias, attrition bias, detection bias, and reporting bias. **Strength of evidence assessment:** Authors graded the strength of the evidence based on guidance established for the Agency for Healthcare Research and Quality Effective Health Care Program, as detailed in an article by Owens et al.[7]	to the child's safety and well-being. One trial, a large effectiveness RCT, had a positive impact and moderate strength of evidence. All other bodies of evidence were graded as low, despite showing positive impacts on outcomes. • Child parent psychotherapy improved child attachment behavior and significantly reduced negative self-representations related to the parent-child relationship among preschool-age children compared with usual care, along with increased maternal sensitivity.	studies worthy of consideration. • Limiting the scope to children through age 14 and not including studies with mixed populations may have excluded trials that might bolster evidence for included interventions or support inclusion of other interventions.

Endnotes

1. Substance Abuse and Mental Health Services Administration. Adverse childhood experiences. [Internet] Updated 3/7/2016. Retrieved from: http://www.samhsa.gov/capt/practicing-effective-prevention/prevention-behavioral-health/adverse-childhood-experiences
2. Centers for Disease Control and Prevention. N.D. [Internet]. Retrieved from: http://www.cdc.gov/violenceprevention/childmaltreatment/riskprotectivefactors.html
3. Oral R, Ramirez M, Coohey C, Nakada S, Walz A, Kuntz A, Benoit J, Peek-Asa C. Adverse childhood experiences and trauma informed care: the future of health care. Pediatr Res. 2016 Jan;79(1-2):227-33.
4. Chen, M, Chan KL. Effects of Parenting Programs on Child Maltreatment Prevention: A Meta-Analysis. Trauma, Violence & Abuse. 17 (1): 88-104.
5. Neger E, Prinz R. Interventions to address parenting and parental substance abuse: Conceptual and methodological considerations. Clin Psychol Rev. 2015 Jul;39:71-82.
6. Fraser JG, Lloyd S, Murphy R, Crowson M, Zolotor AJ, Coker-Schwimmer E, Viswanathan M. A comparative effectiveness review of parenting and trauma-focused interventions for children exposed to maltreatment. J Dev Behav Pediatr. 2013 Jun;34(5):353-68.
7. Owens DK, Lohr KN, Atkins D, et al. AHRQ series paper 5: grading the strength of a body of evidence when comparing medical interventions—Agency for Healthcare Research and Quality and the Effective Health-Care Program. J Clin Epidemiol. 2010;63:513–523.
8. Systematic reviews were assessed for their quality using the AMSTAR quality appraisal tool, which rates overall quality on a scale of 0-11, with 8-11 being high quality, 4-7 being medium quality, and 0-3 low quality: http://amstar.ca/Amstar_Checklist.php
9. The National Child Traumatic Stress Network. PCIT: Parent-child interaction therapy. N.D. [Internet]. Retrieved from: http://www.nctsnet.org/sites/default/files/assets/pdfs/pcit_general.pdf
10. The National Child Traumatic Stress Network. PCIT: Child-parent psychotherapy. N.D. [Internet]. Retrieved from: http://nctsn.org/sites/default/files/assets/pdfs/cpp_general.pdf
11. Substance Abuse and Mental Health Services Administration. Trauma-Informed Approach and Trauma-Specific Interventions. 2015. [Internet]. Retrieved from: http://www.samhsa.gov/nctic/trauma-interventions
12. Schulz KF, Altman DG, Moher D, for the CONSORT Group. CONSORT 2010 Statement: updated guidelines for reporting parallel group randomised trials. Ann Int Med 2010;152. Epub 24 March.