



ACE issue brief 4: mental illness & substance abuse

Findings of the Adverse Childhood Experience (ACE) Study
Oklahoma KIDS COUNT Factbook, 2006–2007 Issue Brief 4 of 5

The Innovation Center



the ACE study

The Adverse Childhood Experience (ACE) Study is a large-scale, ongoing evaluation of the link between negative childhood experiences and the origins of risk behaviors that evolve into the leading causes of disease and disability in adulthood. The study is a collaborative effort between the Centers for Disease Control and Prevention and Kaiser Permanente’s Department of Preventive Medicine.

The study conducted detailed biomedical and psychological evaluations of over 17,000 middle-aged, middle-class Kaiser patients. The study was designed to simultaneously assess childhood exposure to multiple types of abuse, neglect, parental substance abuse, domestic violence, and other types of serious household dysfunction. A scoring system was used to analyze the findings: a person exposed to none of the 10 factors had an ACE score of 0; a person exposed to any four factors had an ACE score of 4, and so on. The scores were then compared with the health status of these individuals.

explaining the connection

The ACE Study provides insight into how our experiences as children evolve into risky behaviors, which, in turn, evolve into disease and death. Child abuse and household trauma leave a child vulnerable, actually disrupting the normal development of the brain. The study suggests that children and adolescents adopt risky behaviors as a means of coping or covering their pain. The more trauma they experience, i.e. the higher

their ACE score, the greater the likelihood of adopting multiple risk behaviors, such as alcohol or drug abuse, smoking, overeating and promiscuity.

This series of issue briefs will explore the implications of the ACE Study in Oklahoma, and provide a basis for discussion among parents and other child advocates, health and social service professionals, policy makers and community leaders.

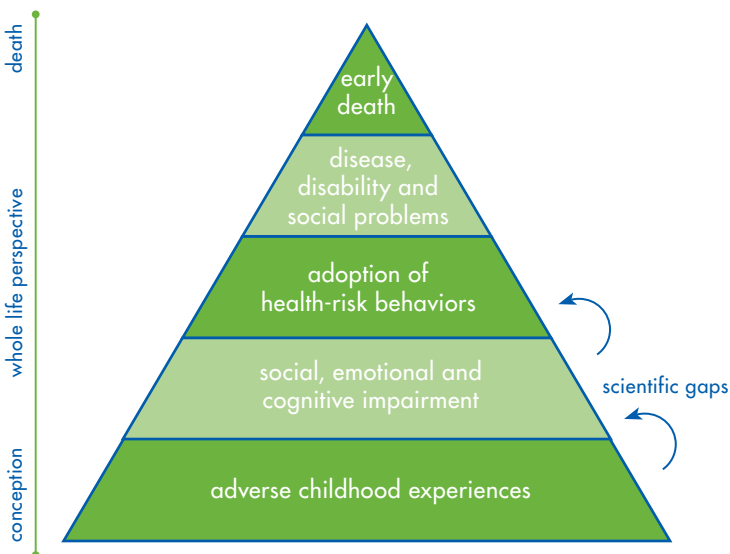
findings

The results were startling. Adverse childhood experiences are vastly more common than generally recognized. Almost three-quarters of the participants reported having experienced at least one ACE. More than one in five reported three or more, indicating that risk factors rarely occur in isolation. For example, many cases of child abuse also involve drug abuse, domestic violence and divorce. The study showed a powerful and compelling correlation between harmful experiences in childhood and adult health status decades later.

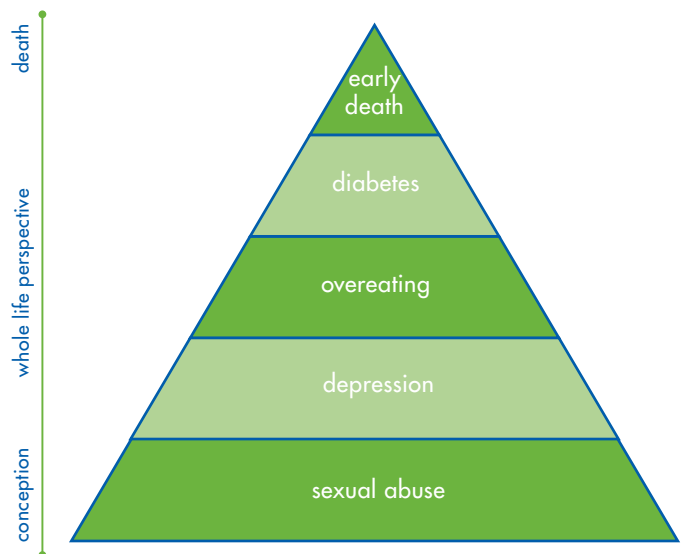
number of adverse childhood experiences (ACE score)	total
0	33%
1	26%
2	16%
3	10%
4 or more (up to 10)	12.5%

Compared to persons with an ACE score of 0, those with an ACE score of 4 or more were twice as likely to be smokers, 12 times more likely to have attempted suicide, 7 times more likely to be alcoholic, and 10 times more likely to have injected street drugs.

ACE Pyramid: Conceptual Framework



ACE Pyramid: Real Life Scenario



major findings of the ACE study

Many studies have examined the impact of a single type of maltreatment on children. Yet the ACE Study found that co-occurrence of multiple forms of childhood abuse and household dysfunction is common, and their effects are cumulative.

In Oklahoma, there is no data to track co-occurrence of abuse or dysfunction on individual children and families, i.e. whether a single child is victimized in multiple ways. Oklahoma KIDS COUNT has gathered county-by-county data to determine which counties report high incidents of adverse childhood experiences.



mental illness & substance abuse: state level findings

Mental and addictive disorders impose a greater burden of disability on Oklahoma citizens than cardiovascular disease or cancer. This was the surprising finding of the Oklahoma State Board of Health and the Board of Mental Health and Substance Abuse Services in a 2003 joint report. Though the leading cause of disability worldwide is infectious disease (22.9%), the leading cause in developed nations is neuro-psychiatric disorders (25.5%).

These reports make Oklahoma's predicament especially dire. Oklahoma

has one of the nation's highest rates of mental illness, estimated to be at 11% of the adult population, or almost 300,000 people. The national average is 9.2%.

Addictive disorders, including alcohol, tobacco and other drugs, are the number one public health problem in Oklahoma and nationally. It is estimated that nearly 140,000 Oklahoma adults need treatment for alcohol addiction, and an additional 21,000 people need treatment for other types of drug addiction.

Especially worrisome are the numbers of pregnant and parenting mothers in need

of treatment. Nearly 38,000 Oklahoma women are in need of substance abuse treatment, and almost 3,000 of those are pregnant. These numbers do not include figures for tobacco addiction.

Tobacco use during pregnancy remains one of the single most important preventable causes of poor outcomes for both mother and baby. Yet nearly one in five pregnant Oklahomans smoke during their pregnancies. Moreover, postpartum recidivism is high: almost 59% of women who quit during pregnancy resumed smoking after delivery.

ACE Category	Definition for Inquiry into Childhood Experience
Household or Family Dysfunction	
Household Substance Abuse	Lived with anyone who was a problem drinker or alcoholic and/or lived with anyone who used street drugs.
Household Mental Illness	A household member was depressed or mentally ill and/or a member attempted suicide.

implications of ACE study

Household mental illness and substance abuse significantly create the risk of an unpredictable home life, and are linked to higher rates of domestic violence, divorce, unemployment, and involvement in the criminal justice system. The children in these households have a higher prevalence of depression, anxiety, eating disorders and suicide attempts than their peers.

The ACE Study found that the presence of an alcoholic parent doubled the risk of every other ACE category. This certainly

plays out in Oklahoma, where research found that drug and alcohol addiction contributes to:

- 85% of all homicides
- 80% of all incarcerations
- 75% of all divorces
- 65% of all child abuse cases
- 55% of all domestic assaults

The financial costs of dealing with mental illness and diseases caused by tobacco, alcohol and other drug abuse in

Oklahoma is staggering. The Governor's and Attorney General's Blue Ribbon Task Force conservatively placed the costs at more than \$3.2 billion annually in direct expenditures. The majority of these costs are related to safety and security issues, as well as the contribution of substance abuse to domestic violence, sexual assault and the resulting child abuse and neglect. This underscores the findings of the ACE Study regarding the intermingled and cumulative effect of family dysfunction.

policy opportunities

The ACE Study confirmed that exposure to parental alcohol abuse is highly associated with the occurrence of additional adverse childhood experiences, and the increased likelihood that children of alcoholics will themselves become alcoholics. The ACE researchers recommend the following to interrupt the intergenerational cycle of adverse childhood experiences, and reduce the negative health consequences in adolescents and adults:

Improve the coordination of adult and pediatric health care with related mental health and substance abuse services

- expand the information gathered on medical histories to include exposure to adverse childhood experiences
- inform physicians about available treatment services for mental health and substance abuse, and domestic violence services

Develop the means to co-manage care

- practitioners who treat individuals abusing substances should be aware that these individuals' families need assessment for the increased probability that child abuse and neglect, domestic violence, and other forms of household dysfunction are co-occurring

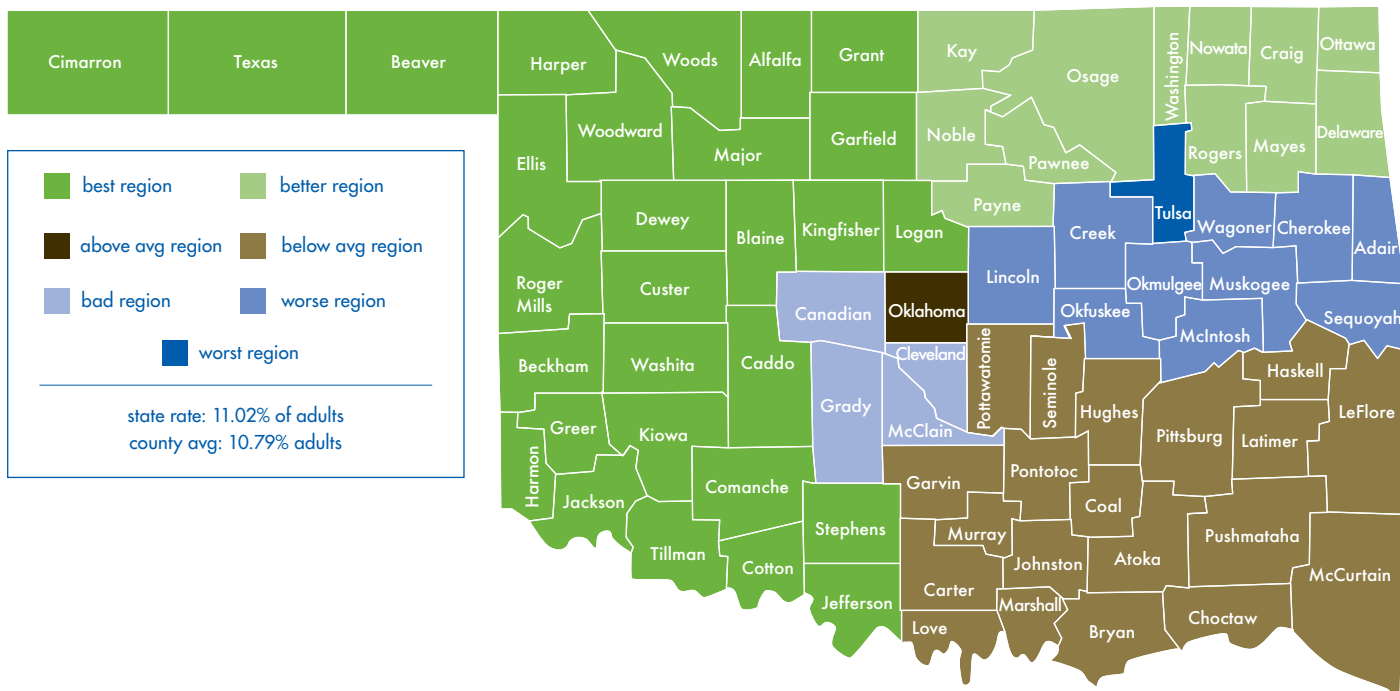
-practitioners treating abused and neglected children must ensure that the children's parents are screened for substance abuse

Other Oklahoma organizations have made additional recommendations. As a result of their 2005 Town Hall Meeting on Drugs, The Oklahoma Academy recommended the following:

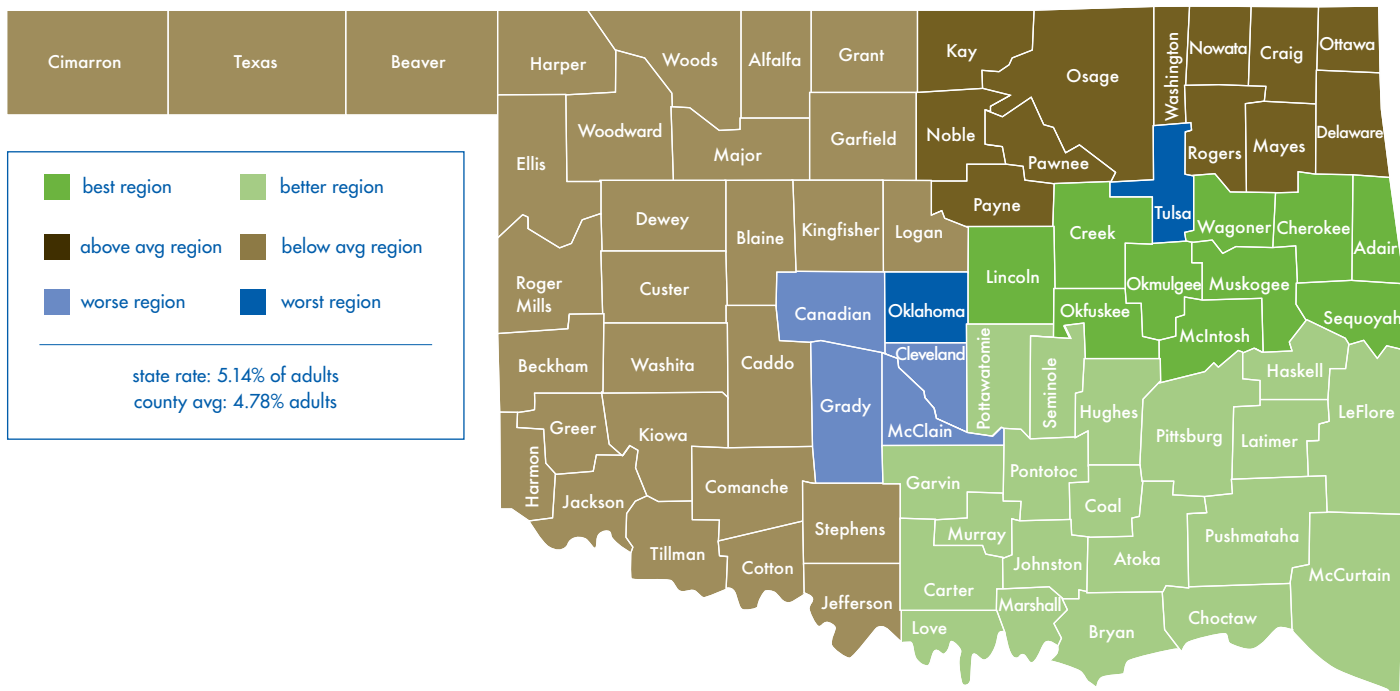
Allocate state resources for mental health and substance abuse treatment

- shift resources from high cost (low effectiveness) incarceration to lower cost (higher effectiveness) prevention and treatment programs
- expand the use of drug and mental health courts, and other community-based services
- provide drug treatment programs during incarceration and probation
- provide greater educational opportunities (high school GED, college credits, career tech) to those exiting prison to reduce recidivism
- provide post-incarceration reintegration assistance

percent of adults experiencing severe psychological distress (2002–2004)



percent of adults dependent on alcohol or illicit drugs (2002–2004)



mental illness & substance abuse

county name	Household or Family Dysfunction Mental Illness/Substance Abuse ACES				county name	Household or Family Dysfunction Mental Illness/Substance Abuse ACES			
	Mentally Ill Household Member		Substance Abusing Household Member			Mentally Ill Household Member		Substance Abusing Household Member	
	three year 2002-2004 psycholog- distress rate	three year 2002-2004 psycholog- distress rank	three year 2002-2004 substance abuse rate	three year 2002-2004 substance abuse rank		three year 2002-2004 psycholog- distress rate	three year 2002-2004 psycholog- distress rank	three year 2002-2004 substance abuse rate	three year 2002-2004 substance abuse rank
STATE TOTALS	11.02%		5.14%		Latimer County	10.89%	tie for 43	4.57%	tie for 11
Adair County	11.91%	tie for 67	4.23%	tie for 1	Le Flore County	10.89%	tie for 43	4.57%	tie for 11
Alfalfa County	10.38%	tie for 1	5.00%	tie for 31	Lincoln County	11.91%	tie for 67	4.23%	tie for 1
Atoka County	10.89%	tie for 43	4.57%	tie for 11	Logan County	10.38%	tie for 1	5.00%	tie for 31
Beaver County	10.38%	tie for 1	5.00%	tie for 31	Love County	10.89%	tie for 43	4.57%	tie for 11
Beckham County	10.38%	tie for 1	5.00%	tie for 31	McClain County	11.30%	tie for 63	5.25%	tie for 72
Blaine County	10.38%	tie for 1	5.00%	tie for 31	McCurtain County	10.89%	tie for 43	4.57%	tie for 11
Bryan County	10.89%	tie for 43	4.57%	tie for 11	McIntosh County	11.91%	tie for 67	4.23%	tie for 1
Caddo County	10.38%	tie for 1	5.00%	tie for 31	Major County	10.38%	tie for 1	5.00%	tie for 31
Canadian County	11.30%	tie for 63	5.25%	tie for 72	Marshall County	10.89%	tie for 43	4.57%	tie for 11
Carter County	10.89%	tie for 43	4.57%	tie for 11	Mayes County	10.42%	tie for 30	4.72%	tie for 31
Cherokee County	11.91%	tie for 67	4.23%	tie for 1	Murray County	10.89%	tie for 43	4.57%	tie for 11
Choctaw County	10.89%	tie for 43	4.57%	tie for 11	Muskogee County	11.91%	tie for 67	4.23%	tie for 1
Cimarron County	10.38%	tie for 1	5.00%	tie for 31	Noble County	10.42%	tie for 30	4.72%	tie for 31
Cleveland County	11.30%	tie for 63	5.25%	tie for 72	Nowata County	10.42%	tie for 30	4.72%	tie for 31
Coal County	10.89%	tie for 43	4.57%	tie for 11	Okfuskee County	11.91%	tie for 67	4.23%	tie for 1
Comanche County	10.38%	tie for 1	5.00%	tie for 31	Oklahoma County	10.43%	42	5.86%	tie for 76
Cotton County	10.38%	tie for 1	5.00%	tie for 31	Okmulgee County	11.91%	tie for 67	4.23%	tie for 1
Craig County	10.42%	tie for 30	4.72%	tie for 31	Osage County	10.42%	tie for 30	4.72%	tie for 31
Creek County	11.91%	tie for 67	4.23%	tie for 1	Ottawa County	10.42%	tie for 30	4.72%	tie for 31
Custer County	10.38%	tie for 1	5.00%	tie for 31	Pawnee County	10.42%	tie for 30	4.72%	tie for 31
Delaware County	10.42%	tie for 30	4.72%	tie for 31	Payne County	10.42%	tie for 30	4.72%	tie for 31
Dewey County	10.38%	tie for 1	5.00%	tie for 31	Pittsburg County	10.89%	tie for 43	4.57%	tie for 11
Ellis County	10.38%	tie for 1	5.00%	tie for 31	Pontotoc County	10.89%	tie for 43	4.57%	tie for 11
Garfield County	10.38%	tie for 1	5.00%	tie for 31	Pottawatomie County	10.89%	tie for 43	4.57%	tie for 11
Garvin County	10.89%	tie for 43	4.57%	tie for 11	Pushmataha County	10.89%	tie for 43	4.57%	tie for 11
Grady County	11.30%	tie for 63	5.25%	tie for 72	Roger Mills County	10.38%	tie for 1	5.00%	tie for 31
Grant County	10.38%	tie for 1	5.00%	tie for 31	Rogers County	10.42%	tie for 30	4.72%	tie for 31
Greer County	10.38%	tie for 1	5.00%	tie for 31	Seminole County	10.89%	tie for 43	4.57%	tie for 11
Harmon County	10.38%	tie for 1	5.00%	tie for 31	Sequoyah County	11.91%	tie for 67	4.23%	tie for 1
Harper County	10.38%	tie for 1	5.00%	tie for 31	Stephens County	10.38%	tie for 1	5.00%	tie for 31
Haskell County	10.89%	tie for 43	4.57%	tie for 11	Texas County	10.38%	tie for 1	5.00%	tie for 31
Hughes County	10.89%	tie for 43	4.57%	tie for 11	Tillman County	10.38%	tie for 1	5.00%	tie for 31
Jackson County	10.38%	tie for 1	5.00%	tie for 31	Tulsa County	12.08%	77	5.86%	tie for 76
Jefferson County	10.38%	tie for 1	5.00%	tie for 31	Wagoner County	11.91%	tie for 67	4.23%	tie for 1
Johnston County	10.89%	tie for 43	4.57%	tie for 11	Washington County	10.42%	tie for 30	4.72%	tie for 31
Kay County	10.42%	tie for 30	4.72%	tie for 31	Washita County	10.38%	tie for 1	5.00%	tie for 31
Kingfisher County	10.38%	tie for 1	5.00%	tie for 31	Woods County	10.38%	tie for 1	5.00%	tie for 31
Kiowa County	10.38%	tie for 1	5.00%	tie for 31	Woodward County	10.38%	tie for 1	5.00%	tie for 31

This issue brief is the fourth in a series describing the impact of adverse childhood experiences on adult health status. This brief is made possible through Project ACT (All Children can Thrive), a project of the Oklahoma Institute for Child Advocacy in partnership with Oklahoma KIDS COUNT, the Oklahoma Department of Mental Health and Substance Abuse Services, and the Innovation Center. Publication of this brief was funded in part by a Transformation State Incentive Grant (SM-05-009) awarded to Oklahoma by the Substance Abuse and Mental Health Services Administration. All five issue briefs and the Oklahoma KIDS COUNT Factbook will be available online at www.oica.org in January of 2007.

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