



Associations Between Adverse Childhood Experiences and Pain, Health, and Functioning in Patients with Chronic Low Back Pain

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BACKGROUND

Chronic lower back pain is a common complaint in many physician offices all over the nation. In America nearly \$50 billion is spent each year on treatment for lower back pain, making it one of the most common causes of job-related disability and absenteeism in the work palce.¹

Previous studies have shown a strong relationship between Adverse Childhood Experiences (ACE) and Chronic Pain.^{2,3,4,5} Studies demonstrate the importance in including a history of adverse childhood experiences in the care and management of chronic pain patients. There is also a strong relationship with ACEs and poorer health status in patients with chronic pain.⁵ Most studies that demonstrate a strong relationship between ACE and Chronic Pain have focused on analysis of women.^{2,3,5}

The unique aspects of this study include its focus on chronic low back pain and its examination of a heterogeneous population including men and women from varying age groups and ethnic backgrounds. We aim to study the correlation between Adverse Childhood Experiences and functional status of chronic low back pain patients in several family community clinics in Texas.

METHODS

In eight Texas family medicine residency programs, medical students identified and surveyed 223 family medicine patients with chronic low back pain (3 months or longer) during a routine office visit. Surveys addressed characteristics of the pain (severity, cause, duration); characteristics of the patient (age, gender, ethnic background, occupation); mediators of pain (trust in the doctor, length of the doctor/patient relationship, treatments for pain, and social support), and issues that exacerbate pain (depression, anxiety, substance abuse, adverse childhood experiences, co-morbidities, and social stress). An Adverse Childhood Experience Risk Score was calculated from items addressing the experience of childhood sexual abuse, physical abuse, psychological abuse, witnessing domestic violence, crime in household or a family member with mental illness. Outcome measures included pain severity and health and functional status, measured by the MOS Short-Form-36.

After the visit, students surveyed subjects' doctors, addressing characteristics of the back pain, patients' use of and requests for medicines, and doctors' levels of trust of their patients.

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RESULTS

Table 1: Gender and Age

Male	74	33.2%
Female	144	66.8%
Total	223	
Average age	52	

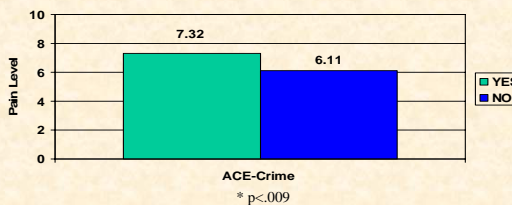
Table 2: Ethnic Background

White	104	47.4%
Hispanic	77	35.3%
African American	37	17%

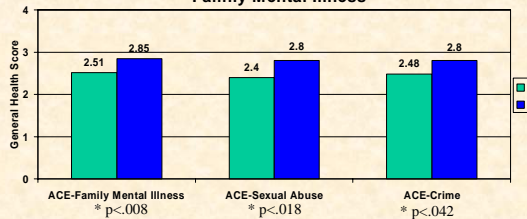
Table 3: Adverse Childhood Experiences (N=202)

27.5%	Childhood Psychological Abuse
16.1%	Childhood Physical Abuse
15.5%	Childhood Sexual Abuse
28.3%	Witnessing Parental Violence
38.1%	Addiction in the Childhood Family
33.7%	Childhood Mental Illness/ Suicidal Family Member
26.4%	Family Member in Prison During Childhood

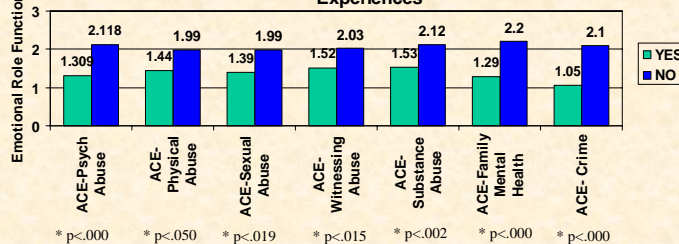
Relationship between Pain Level and ACE-Crime *



The Relationship between General Health and ACE-Family Mental Illness



Relationship between Emotional Role Functioning and ACE Experiences



Relationship Between Sum of Co-Morbidities and ACE Experiences

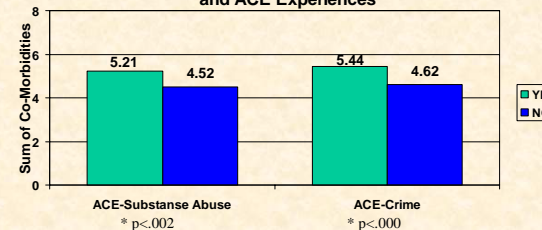


Table 4: Linear Regression

Outcome Variable= "Emotional Role Functioning"		
Adjusted R ² = .243		
	Beta	P-Value
Family Support	.228	.001
Family Stress	-.184	.011
Pain Level	-.114	.087
ACE- Crime	-.161	.000
ACE- Physical Abuse	-.400	.022

Predictors entered included: Age, Gender, Marital Status, and remaining ACE-variables. Backward Stepwise Elimination.

CONCLUSIONS

- Patients with Low Back Pain and ACE's had higher levels of pain, and more Co-morbidities than patients who reported no ACE's.
- Back pain patients with ACE's had significantly poorer general health and emotional role functioning, even when controlling for the influence of pain severity and current life support and stress.
- Several previous studies focused on ACE's in women only. However, this data represents a broader population of Texas family medicine patients, and shows significant relationships between ACE's and health outcomes.
- Physicians who treat patients with chronic pain, specifically Low Back pain, should include a history of Adverse Childhood Experiences to improve their understanding of the patient's life, and guide their methods of helping the patient to improve overall health, including pain severity, emotional, functional, and general health.

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