

# **EXAMINING THE CORRELATION BETWEEN SOCIAL DETERMINANTS OF HEALTH, MENTAL HEALTH, AND ADVERSE CHILDHOOD EXPERIENCES**

Cathy Ng, MD

The Zucker School of Medicine at Hofstra/Northwell

Hempstead, NY

**Background:** Adverse Childhood Experiences (ACEs) are traumatic experiences that occur during childhood. Studies show an association between  $\geq 4$  ACEs and chronic health conditions but little is known about how ACEs affect psychiatric outcomes.

**Aims:** Our objective is to investigate the correlation between ACEs, psychiatric outcomes, and social determinants of health (SDoH).

**Methods:** Results were collected between Jan 1, 2020 and Aug 1, 2021 from 6175 patients from the Zucker Hillside Adult Behavioral Health Crisis Center. Patients completed ACE, Drug Abuse Screener Test (DAST-10), Alcohol Use Disorder Identification Test (AUDIT), Patient Health Questionnaire (PHQ-9), and General Anxiety Disorder (GAD-7) screening tests. For each set of patients with a given ACE score, the average DAST-10, AUDIT, PHQ-9 and GAD-7 scores were calculated.

**Results:** The response rate to ACE surveys was 64% (n=3309). 25.8% of total respondents had an ACE score of 4 or higher (n=853; 312 men, 541 women). We found positive correlations in average DAST ( $r^2=0.973$  for women,  $r^2=0.927$  for men), PHQ-9 ( $r^2=0.954$  for women,  $r^2=0.917$  for men) and GAD-7 ( $r^2=0.901$  for women,  $r^2=0.982$  for men) scores with respect to cumulative ACE scores in both men and women. This positive correlation also applied to AUDIT scores in women ( $r^2=0.98$  for women), but was not as strong in men ( $r^2=0.693$  for men).

**Discussion:** Our study demonstrated that high ACE scores correlate with increased alcohol and substance misuse, anxiety, and depression in a dose-dependent manner. Women on average had higher ACE scores than men, and our population has approximately twice the prevalence of ACEs as the general US population. Future studies will evaluate how SDoH and patterns of intergenerational trauma interact with ACE scores so that we can ultimately identify and treat patients with these risk factors in a more comprehensive and effective way.

Full List of Authors

Danielle Howell, Cathy Ng, Samuel Lim

Learning Objectives

At the conclusion of this presentation, participants will be able to:

1. Identify the definition and implications of Adverse Childhood Experiences (ACEs) for a person's long-term physical, emotional and mental health.
2. Explain the potential correlations between ACEs, depression, anxiety, substance abuse, and social determinants of health.