Adverse Childhood Experiences and Subjective Cognitive Decline:
An analysis of the Behavioral Risk Factor Surveillance System.

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INTRODUCTION

- Cognitive functioning plays a crucial role in maintaining a healthy, active, and independent lifestyle.
- A 2017 study found that the total net cost of care for an individual with dementia was 175% more than a person without dementia.[1]
- In 2021, an estimated 6.2 million Americans aged 65 and older live with Alzheimer's Disease and this number is expected to grow to 13.8 million by 2060.[1]
- With an aging population and increasing rates of dementia in the U.S., improved etiology of cognitive decline is pertinent to establishing preventative measures, and therefore slowing increasing rates.

RESEARCH QUESTION

The aim of this study was to determine the association between Adverse Childhood Experiences (ACE) domains and Subjective Cognitive Decline (SCD) in a representative sample of the US adult population.

METHODS

Data was obtained from the 2019 and 2020 Behavioral Risk Factor Surveillance Survey (N=18,096 ; ≥ 45 years). Multivariate logistic regression was used to determine the association between ACE domains and SCD.

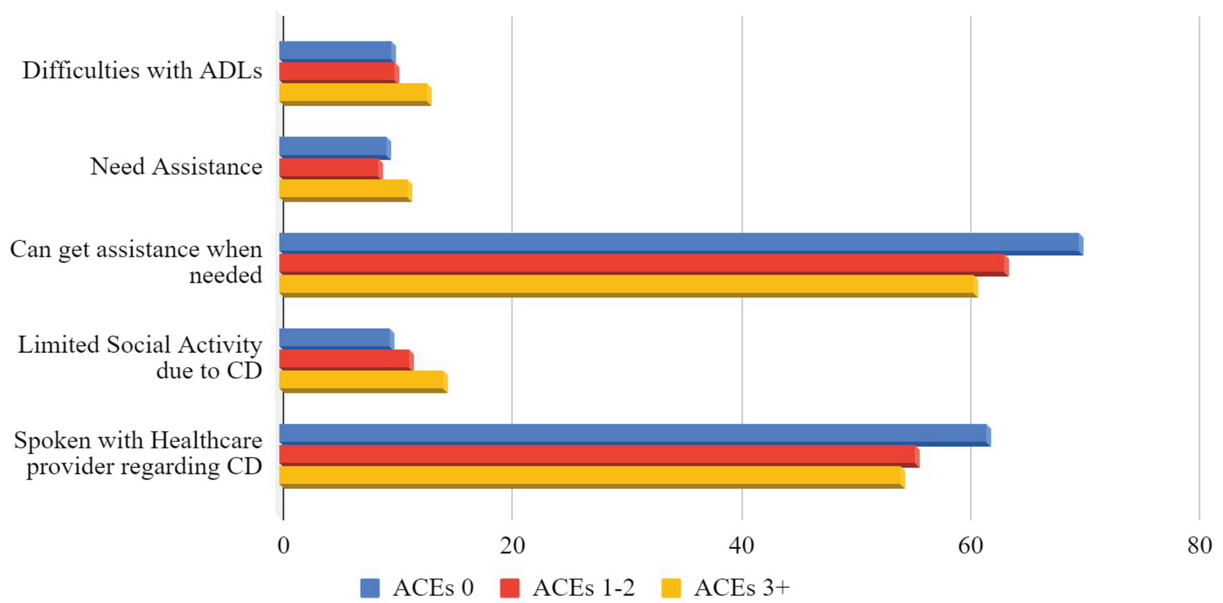
Table 1. Adverse Childhood Experiences (ACE) Domains

1. **Family Mental Illness**
2. **Family Substance Abuse**
3. **Family Incarceration**
4. **Parental Divorce**
5. **Intimate Partner Violence**
6. **Emotional Abuse**
7. **Physical Abuse**

RESULTS

- Among respondents aged 45 and over, 10.14% (n = 18,096; N = 3,960,992) reported experiencing cognitive decline. Mean ACE scores among participants reporting cognitive decline were 2.61 compared to an ACE score 1.44 in participants not reporting cognitive decline (P<.001).
- Compared to individuals reporting 0 ACEs, individuals reporting 1-2 ACEs were more likely to report frequently experiencing memory loss (OR: 1.59; 95%CI 1.43-1.76) and even greater among those reporting 3 or more ACEs (OR: 3.58; 95%CI: 3.23-3.96).
- Individuals reporting 3 or more ACEs were also significantly more likely to report frequent difficulties with activities of daily living (ADLs), needing assistance with ADLs, and experiencing social limitations due to cognitive decline compared to individuals with no ACEs. Further those with higher ACE scores were significantly less likely to have spoken with a healthcare provider about their cognitive decline (figure 1).
- Among individuals reporting 1 ACE of family mental illness, family substance abuse, family incarceration, emotional abuse, and physical abuse had significantly greater odds of reporting memory loss compared to individuals with no ACEs.
- Individuals with 1 ACE of parental divorce were less likely to get help with ADLs when needed, and individuals reporting 1 ACE of sexual abuse were significantly less likely to experience social limitations compared to those with no ACEs.

Prevalence of individuals experiencing cognitive decline reporting frequent impedance of life activities by number of adverse childhood events.



CLINICAL RECOMMENDATIONS

- Individuals reporting only 1 ACE of sexual abuse were less likely to discuss cognitive impairment with their physician.
- Individuals aged 55-64 years old were at the greatest risk of reporting cognitive decline symptoms.
- This finding supports screening interventions for individuals who may be at an increased risk of developing cognitive decline.
- Among individuals being treated for chronic conditions where early childhood trauma has occurred, screening may need to be done earlier.
- Intervention and preventative programs targeting ACEs may lower the incidence and prevalence of SCD in future generations.

CONCLUSION

- Having multiple ACEs was significantly associated with higher odds of cognitive decline and associated limitation of social activity and inversely associated with getting help when it is needed. Further, many ACE domains were associated with SCD—a novel addition to the literature and the methodology used herein.
- Interventions focused on improving cognitive health and preventing cognitive decline should consider the potential role of ACEs among affected populations
- Future studies should examine how implementation of preventative measures for ACEs in childhood impacts cognitive decline in adulthood.

REFERENCES

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