

Comparing Health Outcomes of Traditional and Continuous ACEs Scales

Bickle, M.¹, Mnajjed, L.², Wyatt, S.², Shadid, A.², Nguyen, D.², Saleh, A.², Barkyoumb, D.¹, Klaassen, S.², Bell, S.B., PhD²
¹University of Oklahoma College of Medicine ; ²OU-TU School of Community Medicine

Background

- Adverse childhood experiences (ACEs) are linked to health and wellbeing in adulthood.¹
- The traditional ACEs scale asks whether or not people experienced 10 specific traumatic events in their childhood in a yes/no format.
- A limitation of the traditional ACEs scale is that it does not capture how severe each of these 10 experiences were on a continuous scale.
- **The present study created two supplemental ACEs scales, one measuring frequency of the traumatic event, and the other measuring how severely people felt the event impacted them.**

Methods

- A 150-question survey was distributed from January 26th to January 31st of 2023. The survey was emailed to all of OU-Tulsa. In addition, the survey was posted on various social media platforms and shared using snowball sampling.
- 212 people participated. The mean age was 36.48 ($SD=13.86$). Gender included 17.5% male people, 75.5% female people, and 7.1% people of other gender identities. Racial demographics included 20.6% POC. Sexual orientation included 33.1% LGBTQ+ people.
- **First, participants took the traditional yes/no ACEs scale. Next, they took a continuous scale asking how frequently each of the 10 ACEs occurred on a Likert scale of 1 to 7. Finally, they took a continuous scale asking how severely each of the 10 ACEs affected them on a Likert scale of 1 to 9.**
- Dependent variables correlating with the three scales are demonstrated in Table 1.

Results

Figure 1.

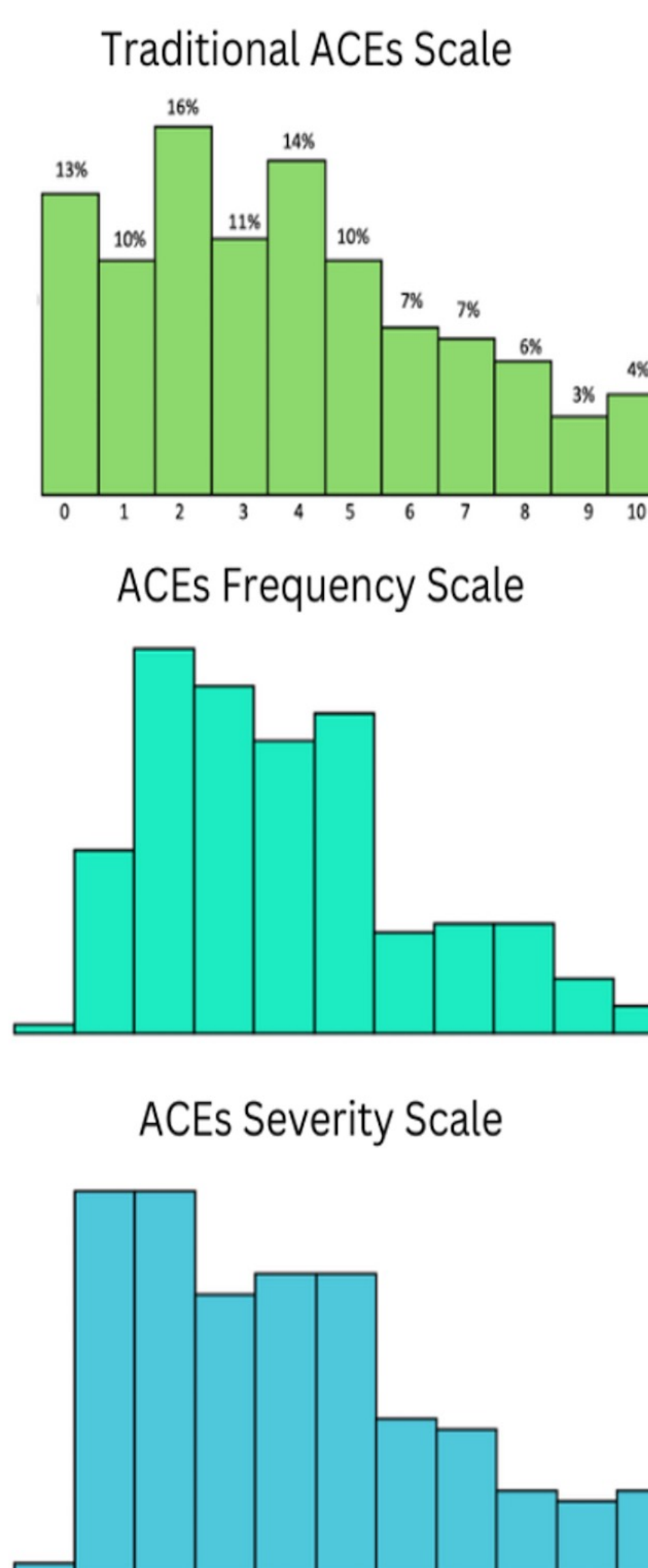


Table 1.

Variable	Traditional scale	Frequency scale	Severity scale
General health	-0.505	-0.511	-0.500
PACES	-0.627	-0.629	-0.585
Subjective SES	-0.482	-0.480	-0.418
Financial security	-0.396	-0.404	-0.402
Self-esteem	-0.476	-0.462	-0.447
Aggressive behavior	0.367	0.380	0.383
Social pain	0.476	0.504	0.502
Social support	-0.522	-0.549	-0.505
PTSD	0.559	0.571	0.594
Loneliness	0.438	0.422	0.402
Impulsivity	0.292	0.326	0.306

*all correlations in this table were significant at the $p<0.001$ level

- The average number of ACEs reported was 3.86 ($SD=2.81$) in comparison with a national average of around 1.56.²
- The three ACEs scales generally correlated to the dependent variables as expected based on previous literature.
- **Contrary to our hypothesis, the continuous ACEs scales were as equally associated with negative health outcomes as the traditional ACEs scales, while we hypothesized, they would better predict outcomes.**
- This may be because the traditional ACEs scale correlated more highly than expected with the continuous ACEs-frequency and severity scales ($r=0.89, p<0.001$ and $r=0.94, p<0.001$, respectively). The two continuous ACEs scales also correlated very highly with each other ($r=0.94, p<0.001$).

Conclusion

- Our results suggest an unexpected level of similarity between these ACEs scales and their relationship to physical, social, and mental health.
- **This may suggest that a larger, more severe event has a similar impact on health outcomes as multiple events that are smaller in perceived severity. However, more research is needed to examine this possible interpretation.**
- Notably, our sample contained people extremely at risk for negative outcomes as compared to the national average, with the average ACEs score in our sample being nearly 4.
- It is crucial to see if our findings replicate across other samples, especially samples with more average levels of ACEs.
- We will be conducting a replication study with a nationally representative sample this summer to see if findings from this study extend beyond our convenience sample.

References

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2. Giano Z, Wheeler DL, Hubach RD. The frequencies and disparities of adverse childhood experiences in the U.S. *BMC Public Health*. 2020;20(1):1327. Published 2020 Sep 10. doi:10.1186/s12889-020-09411-z.

Contact

Madison Bickle, MSIII
 Email: Madison-bickle@ouhsc.edu