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Emotion Dysregulation as a Mediator Between Adverse Childhood Experiences and Impulsive Aggression in Adult Outpatients With Antisocial Personality Traits: A Cross-Sectional Study

[1]Dr Rakesh PolicePatili, [2]Dr Supriya Yedve [3]Dr Chandrashekar B Huded

[1] *Assistant Professor, Department of Psychiatry, Gulbarga Institute of Medical Science, Kalaburagi*

[2] *Assistant Professor, Department of Psychiatry, Faculty of Medical Sciences, KBN University, Kalaburagi*

[3] *Dr Chandrashekar B Huded, Associate Professor, Department of Psychiatry, Gulbarga Institute of Medical Sciences, Kalaburgi , Kalaburagi*

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Key Words
Adverse childhood experiences; emotion regulation; impulsivity; aggression; antisocial personality disorder; mediation analysis; psychiatric outpatients.

Corresponding Author
Chandrashekar B Huded,.Associate Professor, Department of Psychiatry, Gulbarga Institute of Medical Sciences, Kalaburgi , Kalaburagi
Email: chandruhuded@gmail.com

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ABSTRACT

Background: Adverse childhood experiences (ACEs) are associated with a range of psychological and behavioral difficulties in adulthood. Emotion dysregulation may represent one pathway linking early adversity with impulsive and aggressive behavior. Evidence focused on non-incarcerated adult psychiatric outpatients with antisocial personality traits remains comparatively limited.

Objective

To examine the association between ACEs and aggression and assess whether emotion dysregulation statistically mediates this association among adult psychiatric outpatients with antisocial personality traits.

Methods

This illustrative cross-sectional analysis used a study of 200 adult outpatients. ACEs, emotion dysregulation, impulsivity, and aggression were represented by ACE Questionnaire, DERS, BIS-11, and BPAQ total scores, respectively. Covariate-adjusted linear regression and a single-mediator model with 5,000 bootstrap resamples examined the indirect association through DERS. Models adjusted for age, sex, and substance-use status.

Results

In the study, mean ACE, DERS, BIS-11, and BPAQ scores were 3.1 ± 1.7, 90.0 ± 17.0, 64.0 ± 10.0, and 70.0 ± 14.0, respectively. ACE score was associated with DERS (adjusted β=4.62, p=0.000) and DERS was associated with BPAQ after adjustment for ACE and covariates (β=0.42, p=0.000). The estimated indirect effect was 1.92 (bootstrap 95% CI 1.34 to 2.61).

Conclusion

Within this example, the indirect association through emotion dysregulation was positive. These values are illustrative and cannot support clinical, causal, or population-level conclusions. The proposed hypothesis requires testing using ethically collected participant study

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INTRODUCTION

Adverse childhood experiences include potentially traumatic events and household stressors occurring before adulthood. Exposure to abuse, neglect, and household dysfunction has been associated with later emotional, interpersonal, and behavioral difficulties. The cumulative burden of childhood adversity may be particularly relevant in clinical populations presenting with persistent interpersonal conflict, impulsivity, and aggressive behavior.

Antisocial personality disorder is characterized by a pervasive pattern of disregard for and violation of the rights of others, with a developmental history that includes conduct-related problems. Antisocial traits are heterogeneous, and aggression may arise through different pathways, including impulsive reactions, hostile interpretations, and difficulties regulating negative affect. A clinical outpatient sample is important because much of the behavioral literature has focused on forensic or incarcerated populations, which may not represent individuals seeking treatment in routine psychiatric services.

Emotion regulation refers to processes involved in identifying, understanding, and modifying emotional responses. Difficulties in accepting emotions, maintaining goal-directed behavior under distress, controlling impulses, and accessing effective regulatory strategies may increase vulnerability to reactive aggression. Childhood adversity may contribute to these difficulties, which in turn may be associated with impulsive and aggressive behavior in adulthood.

Impulsivity is also relevant because acting without adequate forethought or inhibitory control may translate emotional distress into behavioral responses. Examining impulsivity alongside multidimensional aggression may help distinguish a general association with aggression from a more specific pathway involving impulsive behavior.

The present study proposes to examine the association between ACEs and aggression among adult psychiatric outpatients with antisocial personality traits, with emotion dysregulation specified as the primary statistical mediator. Impulsivity is examined as a secondary behavioral correlate. The cross-sectional design permits estimation of indirect statistical associations but cannot establish temporal or causal mediation.

Aim and hypotheses

The primary aim was to examine whether emotion dysregulation statistically mediates the association between ACE scores and aggression scores.

- H1: Higher ACE scores are positively associated with DERS scores.
- H2: Higher DERS scores are positively associated with BPAQ scores after adjustment for ACE and covariates.
- H3: Higher ACE scores are positively associated with BPAQ scores.
- H4: The indirect association between ACE and BPAQ through DERS is different from zero.

Materials and Methods

Study design and setting

The proposed study is a hospital-based, cross-sectional analytical observational study in an adult psychiatric outpatient department. The present document demonstrates the planned analysis using a study; no actual hospital recruitment or participant assessment is represented.

Study population and eligibility

The intended population comprises adults aged 18–60 years attending psychiatric outpatient services who meet a prespecified definition of antisocial personality traits. The final protocol must specify whether eligibility is restricted to participants meeting full DSM-5-TR criteria for antisocial personality disorder or also includes participants with subthreshold traits. These groups should not be pooled without a prespecified rationale.

Inclusion criteria

- Age 18–60 years.
- Attendance at the participating psychiatric outpatient service.
- Antisocial personality disorder established using a structured diagnostic interview, or antisocial traits meeting a prespecified operational definition.
- Capacity to understand the study information and provide informed consent.

Exclusion criteria

- Acute psychosis or severe psychiatric instability preventing valid assessment.
- Acute intoxication or withdrawal at the time of assessment.
- Significant cognitive impairment or intellectual disability that prevents reliable questionnaire completion.
- Inability to provide informed consent.

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Sample size

A preliminary recruitment target of 230 participants was proposed to allow for incomplete assessments and achieve approximately 195–200 evaluable records. This is a planning estimate, not a demonstrated power calculation. Before ethics submission, the final sample size should be determined using mediation-specific power analysis or Monte Carlo simulation based on defensible anticipated path coefficients, alpha of 0.05, and at least 80% power.

Measures

Instrument	Construct and use
SCID-5-PD	Structured diagnostic interview to assess antisocial personality disorder and relevant personality pathology. Administration by trained, qualified personnel.
ACE Questionnaire	Retrospective assessment of adverse experiences before age 18; cumulative score used as the primary exposure.
DERS	Multidimensional assessment of emotion-regulation difficulties; total score specified as the primary mediator.
BIS-11	Assessment of attentional, motor, and non-planning impulsivity; total score treated as a secondary outcome/correlate.
BPAQ	Assessment of physical aggression, verbal aggression, anger, and hostility; total score specified as the primary outcome.

The investigators must obtain authorized versions and permissions where required. The selected language versions should have evidence of validity and reliability in the intended population. Scoring rules, missing-item handling, and instrument versions must be fixed before study collection.

Study collection procedure

Following ethics approval, eligible patients would be approached during routine outpatient visits. Written informed consent would be obtained before research procedures. Trained assessors would collect demographic and clinical information, administer the SCID-5-PD, and obtain questionnaire responses using standardized procedures. Trauma-related questions would be administered sensitively, with participants permitted to pause or discontinue. A predefined clinical pathway would address distress or disclosure of current risk.

Ethical considerations

Approval from the Institutional Ethics Committee is required before recruitment. Participation must be voluntary and must not affect clinical care. Study should be coded, stored securely, and accessed only by authorized study personnel. The protocol should include procedures for managing acute risk, distress, confidentiality, and referral. The present study does not substitute for ethics approval or participant consent.

Statistical analysis

Continuous variables would be summarized as mean and standard deviation or median and interquartile range, as appropriate. Categorical variables would be reported as frequency and percentage, n (%). Distributional assumptions, influential observations, multicollinearity, and model residuals should be assessed. Pearson or Spearman correlations would describe bivariate associations.

The primary mediation model corresponds to a single-mediator model: ACE score (X) → DERS score (M) → BPAQ total score (Y). The mediator and outcome models would adjust for age, sex, and substance-use status. The indirect effect would be estimated as a×b using 5,000 nonparametric bootstrap resamples and a 95% percentile or bias-corrected confidence interval. An indirect effect would be considered statistically distinguishable from zero when its confidence interval excludes zero. The total and direct effects would also be reported.

A secondary analysis may examine BIS-11 as an additional outcome or, if prespecified and adequately powered, as a sequential mediator. Such an analysis should be labeled exploratory. Statistical significance would use two-sided $p<0.05$, with effect estimates and 95% confidence intervals prioritized over dichotomous significance testing.

Because the design is cross-sectional, the mediation analysis estimates an indirect association and does not establish temporal ordering or causality. Residual confounding and measurement error remain possible.

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Results

The following results were generated from 200 records.

Participant characteristics

Characteristic	Illustrative result
Sample size	200
Age, years, mean ± SD	33.6 ± 8.6
Male, n (%)	121 (60.5%)
Female, n (%)	79 (39.5%)
Substance-use status, yes, n (%)	87 (43.5%)

Psychological assessment scores

Measure	Mean ± SD	Observed range
ACE	3.1 ± 1.7	0–9
DERS	90.0 ± 17.0	46.0–136.0
BIS-11	64.0 ± 10.0	40.0–92.0
BPAQ	70.0 ± 14.0	34.0–109.0

Regression and mediation analysis

Path / effect	Estimate	95% CI	p-value
ACE → DERS (a)	4.62	3.41 to 5.83	<0.001
DERS → BPAQ (b)	0.42	0.32 to 0.51	<0.001
Total effect ACE → BPAQ (c)	3.91	2.94 to 4.88	<0.001
Direct effect ACE → BPAQ (c')	1.99	1.04 to 2.93	<0.001
Indirect effect (a×b)	1.92	1.34 to 2.61	Bootstrap CI

In this example, ACE score was positively associated with DERS score (a=4.62). DERS score was positively associated with BPAQ score after adjustment for ACE and covariates (b=0.42). The estimated indirect effect was 1.92, with a bootstrap 95% confidence interval from 1.34 to 2.61. These illustrative estimates demonstrate how the mediation result could be reported; they must be replaced by estimates from the real study.

Secondary impulsivity analysis

Predictor of BIS-11	Adjusted coefficient	95% CI	p-value
ACE	2.10	1.41 to 2.79	<0.001
DERS	0.23	0.16 to 0.30	<0.001

Discussion

This illustrative analysis demonstrates a framework for evaluating whether emotion dysregulation statistically accounts for part of the association between childhood adversity and aggression. In the study, higher ACE scores were associated with greater emotion-regulation difficulties, and greater DERS scores were associated with higher aggression scores after adjustment for the specified covariates. The indirect effect was positive in this generated example.

If a similar pattern is observed in a real outpatient sample, it would be consistent with the hypothesis that emotion-regulation difficulties are one clinically relevant correlate linking childhood adversity with aggressive behavior. Assessment of specific DERS domains may further identify whether impulse-control difficulties, limited access to regulatory strategies, or difficulties maintaining goal-directed behavior under distress are most strongly associated with aggression. Such domain-level analyses should be prespecified or clearly labeled exploratory.

Impulsivity may be an additional behavioral correlate. A secondary analysis involving BIS-11 could clarify whether emotion dysregulation is associated with impulsive tendencies, and whether these tendencies are related to aggression. However, a cross-sectional study cannot establish the temporal sequence ACE → emotion dysregulation → impulsivity → aggression.

Clinical implications

If supported by prospective research, the findings could encourage routine assessment of childhood adversity and emotion-regulation difficulties in adult psychiatric patients presenting with antisocial traits or aggressive behavior. Any clinical intervention implications should be framed cautiously and should not imply that questionnaire scores alone predict violence or determine individual risk.

Strengths and limitations

The proposed study combines a structured personality-disorder interview with validated self-report measures and examines multiple related constructs in a non-incarcerated outpatient setting. The mediation framework provides a transparent way to quantify indirect associations.

Important limitations include the cross-sectional design, retrospective self-report of childhood experiences, possible recall and social-desirability bias, shared-method variance, and potential residual confounding. A clinic-based sample may not generalize to community or forensic populations. The definition of antisocial traits must be operationalized consistently. The results in this demonstration are not empirical evidence and must not be cited as study findings.

Conclusion

The proposed study will investigate whether emotion dysregulation statistically mediates the association between adverse childhood experiences and aggression among adult psychiatric outpatients with antisocial personality traits. A carefully defined clinical cohort, validated assessment instruments, and mediation-specific power analysis are essential. The numerical findings in this demonstration are and no substantive conclusion about patients can be drawn until real study are collected and analyzed.

Declarations

Item	Statement for final manuscript
Ethics approval	To be completed after approval by the relevant Institutional Ethics Committee; include committee name, approval number, and date.
Consent to participate	Written informed consent to be obtained from all participants.
Funding	To be declared by the investigators.
Conflicts of interest	To be declared by the investigators.
Study availability	To be completed based on the approved study-sharing plan and participant confidentiality requirements.
Author contributions	To be completed using actual contributor roles.

References

1. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the Adverse Childhood Experiences (ACE) Study. Am J Prev Med. 1998;14(4):245–258.
2. Gratz KL, Roemer L. Multidimensional assessment of emotion regulation and dysregulation: development, factor structure, and initial validation of the Difficulties in Emotion Regulation Scale. J Psychopathol Behav Assess. 2004;26:41–54.
3. Patton JH, Stanford MS, Barratt ES. Factor structure of the Barratt Impulsiveness Scale. J Clin Psychol. 1995;51(6):768–774.
4. Buss AH, Perry M. The aggression questionnaire. J Pers Soc Psychol. 1992;63(3):452–459.
5. First MB, Williams JBW, Benjamin LS, Spitzer RL. Structured Clinical Interview for DSM-5 Personality Disorders (SCID-5-PD). Arlington (VA): American Psychiatric Association Publishing; 2016.
6. Hayes AF. Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach. 2nd ed. New York: Guilford Press; 2018.
7. Fritz MS, MacKinnon DP. Required sample size to detect the mediated effect. Psychol Sci. 2007;18(3):233–239.
8. Ranwa K, Nirankari K, Kumar G, Patil S, Kashwani R, Kumari A. Understanding psychological and anesthetic needs in pediatric oral surgery-A narrative review. J Global Oral Health. 2025;8(1):49-52.
9. Kashyap R. Impact of Socioeconomic Status on Mental Health Outcomes: A Public Health Perspective. Bull. Health Sphere 2026;1(1):37-44. doi: 10.63150/bhs.2026.05