A QUANTITATIVE STUDY OF ADVERSE CHILDHOOD EXPERIENCES AND MENTAL HEALTH AMONG KLANG VALLEY YOUTHS

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Abstract. This research investigates the relationship between adverse childhood experiences (ACEs) and mental health among youths in Klang Valley, Malaysia. ACEs, including various forms of abuse, neglect, and household dysfunction, are known to have lasting effects on psychological well-being. This study assesses the prevalence of ACEs among youths in Klang Valley and examines their contribution to mental health issues such as depression, anxiety, and behavioral problems. Data were collected from 200 respondents aged 15 to 24 years through structured questionnaires using a cross-sectional design. The questionnaire included 10 items from Adverse Childhood Experiences Questionnaire (ACE-Q) and 12 items from the General Health Questionnaire (GHQ-12). The questionnaire was distributed via Google Forms using purposive sampling. The findings revealed that there is a significant moderate-to-strong positive relationship between ACEs and mental health among youths. These results underline the need for early intervention programs and supportive policies to mitigate the negative impacts of ACEs on young individuals. By illuminating the specific dynamics within the Klang Valley context, this research contributes to developing targeted mental health strategies and promoting resilience among affected youths.
Keywords: *adverse childhood experiences, mental health, youth, Klang Valley, Malaysia*

Introduction

Adverse Childhood Experiences (ACEs) are a significant public health concern with far-reaching implications for mental, physical, and social well-being. ACEs refer to highly intense and recurring stressors during early life, including abuse, neglect, and household dysfunction such as exposure to substance abuse, domestic violence, or mental illness (Craig et al., 2023; Anderson, 2022). These experiences disrupt healthy brain development, alter stress response systems, and increase vulnerability to mental health disorders, chronic illnesses, and adverse social outcomes well into adulthood (WHO, 2020). Sustained toxic stress resulting from ACEs is associated with emotional dysregulation, cognitive impairment, relationship difficulties, and engagement in risky behaviors, all of which hinder academic achievement, employment prospects, and overall quality of life (Anderson, 2022; Hughes et al., 2019). Good mental health, defined as a state of emotional stability and cognitive functioning that enables individuals to manage life's challenges, fulfill their potential, and contribute to society (WHO, 2022), is essential for individual and community development. However, ACE-related trauma can compromise this stability, particularly among youth, who are at a critical stage of psychosocial and cognitive growth. Understanding the relationship between ACEs and mental health is therefore crucial for developing effective interventions, informing trauma-informed educational practices, and guiding public health policies. Addressing ACEs offers an opportunity to break intergenerational

cycles of adversity, reduce long-term healthcare and social costs, and foster resilience in at-risk populations. This study seeks to contribute to evidence-based strategies that enhance youth mental health, improve academic outcomes, and create supportive environments within families, schools, and communities. By integrating early intervention and prevention into policy and practice, the findings aim to promote well-being and ensure healthier trajectories for present and future generations.

Literature review

Adverse Childhood Experiences (ACEs) have been consistently linked to a range of adverse psychological outcomes across developmental stages and contexts. Cumulative ACE exposure is associated with heightened anxiety, depression, and maladaptive coping strategies, particularly among individuals seeking psychological support (Craig et al., 2023). Higher ACE counts correspond to greater symptom severity, underscoring a dose–response relationship between adversity and mental health outcomes (Knipschild et al., 2024; Landa-Blanco et al., 2024). Gender-specific patterns have been observed, with females more frequently reporting abuse, neglect, and household dysfunction, alongside higher prevalence of psychopathological symptoms such as attention difficulties, aggression, and social problems (Tsehay et al., 2020; Turner et al., 2020). These disparities indicate that ACE-related risk is shaped not only by the type of adversity experienced but also by socio-cultural factors influencing vulnerability and resilience. In adolescent populations, ACE exposure correlates strongly with both the prevalence and severity of depressive disorders (Tsehay et al., 2020), while in adult samples, it predicts poorer self-rated health and elevated depression and anxiety (Landa-Blanco et al., 2024). Early childhood research further shows that ACEs compromise developmental trajectories, with the presence of a supportive adult emerging as a critical protective factor (Webster, 2022). Beyond direct mental health effects, ACEs are associated with high-risk behaviours such as problem gambling, with evidence suggesting that flourishing mental health may buffer against these outcomes (Bristow et al., 2021). Both clinical and community-based studies confirm that greater ACE exposure corresponds to more severe internalising and externalising symptoms, as well as elevated post-traumatic stress (Knipschild et al., 2024). Certain forms of adversity; particularly abuse, exert disproportionately negative impacts compared to household dysfunction (Ho et al., 2019).

The theoretical framework includes Social Learning Theory (SLT) explains these outcomes by proposing that behaviour is acquired through observation and imitation (King, 2023). Children exposed to domestic violence may normalise aggression as a conflict-resolution strategy, while those in substance-abusing households may adopt substance use as a coping mechanism. These learned patterns contribute to mental health problems, interpersonal challenges, and diminished self-esteem. In parallel, Trauma Theory posits that exposure to traumatic events disrupts neurobiological development, increasing vulnerability to long-term psychopathology, including post-traumatic stress disorder (PTSD) (Antichi, 2021). Such experiences can dysregulate the stress response system, leading to hyperarousal, intrusive memories, and enduring emotional distress that persist into adulthood. Thus, this study aims to investigate the relationship between adverse childhood experiences and mental health among youths in Klang Valley.

Materials and Methods

This analytical cross-sectional study examined the association between Adverse Childhood Experiences (ACEs) and mental health among youths in Klang Valley. Quantitative methods were employed to test hypotheses and assess correlations through the objective collection and statistical analysis of data (Sirisilla, 2023). Cross-sectional designs provide a population snapshot, enabling the measurement of prevalence and the formulation of causal hypotheses (Simkus, 2023). Data were obtained via a structured self-administered questionnaire distributed through Google Forms, comprising closed-ended Likert-scale items for statistical analysis. A non-probability purposive sampling strategy was adopted due to the absence of a sampling frame. Participants met the criteria of being aged 15–24, residing in Klang Valley, and having experienced ACEs that impacted their mental well-being. A pilot study with 25 participants assessed instrument reliability and the Cronbach's alpha values indicated high internal consistency of 0.842. The instrument underwent back-to-back translation to ensure linguistic and cultural validity. The final questionnaire comprised three sections. Section A gathered demographic information while section B measured ACEs using the 10-item ACE Questionnaire (Zarse et al., 2019; Felitti et al., 1998), adapted from a dichotomous to a 5-point Likert scale and section C utilised the GHQ-12 to assess psychological distress across Anxiety, Depression, Social Dysfunction, and Loss of Confidence (Sánchez-López and Dresch, 2008), with responses rated on a 4-point Likert scale. Data analysis was conducted using SPSS version 25, with descriptive statistics used to summarise demographics and ACE/GHQ scores, inferential statistics applied to test hypotheses and examine correlations and ensuring the reliability and validity of the findings.

Results and Discussion

The data gathered from 200 respondents for this study is used to assess three types of analysis using SPSS. The results for reliability, descriptive and inferential analysis were performed using the Pearson Correlation Coefficient. The analysis above focuses on the demographic data which includes examining the distribution of gender, age, race, education level, working sectors, and monthly income. *Table 1* shows the sample comprised predominantly female respondents (71.5%, n=143), with males representing 28.5% (n=57), indicating a marked gender imbalance that may influence the study's perspectives. Age distribution was concentrated in the 18–20 group (51.5%, n=103), followed by 21–23 years (25.5%, n=51), with smaller proportions aged 24 years (12.0%, n=24) and 15–17 years (11.0%, n=22). Ethnic representation was primarily Malay (65.0%, n=130), with Chinese (11.0%, n=22), Indian (14.0%, n=28), and others (10.0%, n = 20) forming minority groups, reflecting the broader national demographic pattern yet suggesting cultural homogeneity within the sample. Educational attainment was dominated by diploma holders (56.5%, n=113), followed by secondary school (23.5%, n=47), bachelor's degree (12.5%, n=25), foundation (6.0%, n=12), and master's degree (1.5%, n=3), with no PhD holders, consistent with the younger age profile. Employment sector data showed most respondents in "others" (67.0%, n=134), likely students or non-formally employed individuals, with smaller representation from the private sector (20.5%, n=41), self-employment (6.5%, n=13), and government service (6.0%, n=12). Correspondingly, monthly income was low, with 76.5% (n=153) earning less than RM1,000, 19.0% (n=38) earning RM1,001–RM3,000, 3.5% (n=7) earning

RM3,001–RM5,000, and only 1.0% (n=2) exceeding RM5,001. In summary, the profile depicts a predominantly young, female, Malay, low-income population with mid-level educational qualifications and limited formal employment. These socio-demographic features are essential for contextualising the study's outcomes, given their potential influence on behavioural and psychosocial variables.

***Table 1**. Demographic profile.*

Category	Frequency (N)	Percentage (%)
Gender		
Male	57	28.5
Female	143	71.5
Age		
15-17	22	11.0
18-20	103	51.5
21-23	51	25.5
24	24	12.0
Race		
Malay	130	65.0
Chinese	22	11.0
Indian	28	14.0
Others	20	10.0
Education Level		
Secondary School	47	23.5
Foundation	12	6.0
Diploma	113	56.5
Bachelor Degree	25	12.5
Masters	3	1.5
PhD	0	0
Working Sectors		
Government	12	6.0
Private	41	20.5
Self-Working	13	6.5
Others	134	67.0
Monthly Income		
Less than RM1,000.00	153	76.5
RM1,001.00 – RM3,000.00	38	19.0
RM3,001.00 – RM5,000.00	7	3.5
More than RM5,001.00	2	1.0

Reliability analysis

Reliability refers to the degree of consistency and stability of a measurement instrument in producing similar results when applied to the same phenomenon under identical conditions. An instrument with a high level of internal consistency is considered more dependable, as it consistently yields reliable outcomes (Jansen, 2024). Cronbach's alpha (α) is a widely used index for measuring internal consistency, with values ≥0.70 generally regarded as acceptable, values near 0.70 considered minimally acceptable, and values ≥0.80 indicating strong reliability. *Table 2* presents the Cronbach's alpha values for the study constructs. The Adverse Childhood Experiences (ACE) scale demonstrated excellent internal consistency (α=0.900), while the General Health Questionnaire (GHQ-12) recorded a lower reliability coefficient (α=0.574).

When combined, the overall questionnaire achieved a high internal consistency of α=0.883 across 22 items. The high Cronbach's alpha for the overall instrument indicates that the measurement tool possesses strong internal consistency, supporting its suitability for the present research.

***Table 2**. Reliability statistics for study constructs.*

Construct	No of items	Sig. (2-tailed)
Adverse Childhood Experience (ACE)	10	0.900
General Health Questionnaire (GHQ-12)	12	0.574
Total	22	0.883

Inferential analysis

Pearson correlation analysis was employed to examine the relationship between Adverse Childhood Experiences (ACEs) and mental health outcomes among youth in the Klang Valley, Malaysia. Pearson's correlation was selected due to the continuous nature of the ACEs and mental health scores derived from the ordinal-scale survey items. *Table 3* presents the correlation results. The findings revealed a statistically significant, moderate-to-strong positive association between ACE scores and GHQ scores ($r=0.686$, $p<0.001$). This indicates that higher exposure to ACEs is associated with poorer mental health outcomes among the youth sample. The magnitude of the correlation ($r=0.686$) falls within the range commonly interpreted as a moderate-to-strong effect, suggesting that adverse childhood experiences have a substantial impact on mental health among youth in the studied population. The highly significant p-value (<0.001) reinforces the robustness of the relationship, providing strong empirical support for the hypothesis that increased ACE exposure is linked to deteriorated mental health outcomes in this demographic.

***Table 3**. Pearson Correlation between ACEs and mental health outcomes.*

Construct	N	r	Sig. (2-tailed)
Adverse Childhood Experience (ACE) General Health Questionnaire (GHQ-12)	200	0.686**	<0.001

*Note: **p<0.01 level (2-tailed).*

The present study sought to examine the relationship between Adverse Childhood Experiences (ACEs) and mental health outcomes among youth in the Klang Valley, employing a psychometrically validated instrument. Reliability analysis revealed that the ACE scale demonstrated excellent internal consistency (α=0.900), aligning with established psychometric benchmarks (≥0.80 as strong). The overall instrument achieved a high reliability coefficient (α=0.883), affirming the robustness of the composite measure. However, the General Health Questionnaire (GHQ-12) exhibited a lower reliability coefficient (α=0.574), indicating limited internal consistency in this sample. This limitation suggests that, while the GHQ remains a widely adopted screening tool, its application within this demographic may require careful interpretation or supplementation with alternative mental health measures. Inferential analysis using Pearson's correlation revealed a statistically significant, moderate-to-strong positive association between ACE exposure and mental health difficulties ($r = 0.686$, $p < 0.001$). This finding indicates that higher ACE scores are associated with substantially elevated mental health challenges, consistent with global literature

demonstrating the enduring psychological burden of early-life adversity. The magnitude of the observed correlation underscores the pervasive influence of childhood trauma, potentially manifesting in increased vulnerability to depression, anxiety, and other psychopathologies in later life.

These findings carry several critical implications. First, the robust internal consistency of the ACE scale strengthens confidence in the reliability of the data and its potential utility in future Malaysian-based trauma research. Second, the observed association supports the urgent integration of trauma-informed care within youth mental health services, particularly in urban Malaysian contexts where exposure to adverse events may intersect with other psychosocial stressors such as poverty, family conflict, or community violence. Third, the lower internal consistency of the GHQ-12 highlights a need for further validation work to ensure its sensitivity and specificity for diverse Malaysian youth populations. Nonetheless, the interpretation of these results should be tempered by certain methodological limitations. The cross-sectional design precludes causal inference, and the reliance on retrospective self-reporting for ACEs introduces the possibility of recall bias. Furthermore, unmeasured moderating variables, such as resilience, social support, or cultural coping strategies; may shape the strength and direction of the observed relationship. In sum, this study provides strong statistical evidence linking ACE exposure to adverse mental health outcomes among youth in the Klang Valley. The results emphasize the need for multi-level intervention strategies such as spanning preventive efforts, early detection, and long-term psychological support to mitigate the impact of childhood adversity. Future research should adopt longitudinal designs, employ culturally adapted assessment tools, and examine mediating pathways to better inform policy and practice aimed at breaking the intergenerational cycle of trauma.

Conclusion

This study provides robust empirical evidence that adverse childhood experiences (ACEs) exert a substantial and measurable impact on youth mental health in the Klang Valley, Malaysia. The strong internal consistency of the ACE scale (α=0.900) and the high overall reliability of the instrument (α=0.883) reinforce the validity of the measurement approach, while the significant, moderate-to-strong positive correlation between ACE exposure and mental health difficulties (r=0.686, p<0.001) confirms the enduring psychological burden of early-life adversity. These findings are consistent with global evidence linking cumulative childhood trauma to increased vulnerability to depression, anxiety, and behavioural dysregulation. Critically, the results underscore the urgent need for targeted, trauma-informed interventions that extend beyond symptom management to address the structural and familial contexts in which ACEs occur. This requires multi-sectoral collaboration, integrating education, healthcare, and community-based services, to identify at-risk youth early, mitigate ongoing harm, and foster resilience. The relatively lower reliability of the GHQ-12 in this context (α=0.574) highlights the necessity of culturally adapting or complementing existing screening tools to improve sensitivity for Malaysian youth populations. While the cross-sectional design limits causal inference and self-reported measures may introduce recall bias, the strength and consistency of the observed relationship provide a compelling basis for policy and practice reform. Future longitudinal and mixed-methods research should explore mediating and moderating factors such as social support, coping strategies, and

cultural norms to deepen understanding of how ACEs shape mental health trajectories. Addressing ACEs proactively is not only a clinical priority but a public health imperative for safeguarding the well-being of Malaysia's next generation.

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Conflict of interest

The authors confirm that there is no conflict of interest involved with any parties in this research study.

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