

Examining Adverse Childhood Experiences, Contextual Triggers, and Emotion Regulation among Kenyan Custodial Youth

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Abstract

Adverse Childhood Experiences (ACEs) have long been associated with the occurrence of aggression in young individuals. However, cumulative risk models have not adequately explained the complex mechanisms by which childhood trauma is linked to aggression, particularly in custodial contexts. This research focuses on how ACEs, contextual triggers (situational variables like interpersonal conflict and institutional stress), and emotion regulation are interrelated in male juveniles in custody at Kamiti Youth Correctional and Training Centre (YCTC) in Kenya. Findings reveal a high prevalence of multi domain ACEs (mean = 4.57), moderate to high aggression levels (mean total aggression = 89.09), but a weak and non-significant linear association between cumulative ACE scores and aggression ($r = -0.174$, $p = 0.103$). Emotion regulation results indicate that participants primarily relied on withdrawal (41.1 percent) and activity-based distraction (20 percent), while help seeking was limited (6.7 percent). Qualitative data also goes further to articulate the contextual factors that induce aggression including interpersonal contempt and delays in court, which are influenced by early bodily cues plus additional regulation strategies of withdrawal, sleep, and distraction used by youths. The study provides a theoretical synthesis of General Strain Theory, Attachment Theory, and Social Learning Theory to explain custodial aggression as an interaction between strain, regulation capacity, and learned behavioural responses. The findings highlight the importance of addressing situational and regulatory processes in addition to cumulative ACE exposure, and have practical significance for developing trauma informed interventions in low resource juvenile justice settings.

Keywords: *Adverse Childhood Experiences, Aggression, Emotion Regulation, Juvenile Detention, Kenya*

1.0 Introduction

Adverse Childhood Experiences (ACEs), including abuse, neglect, and household dysfunction, are widely recognized as significant predictors of behavioural problems, particularly aggression, among young people globally (Afifi, 2020; King, 2020). Extensive research shows a cumulative or dose response pattern in which increased exposure to ACEs raises the likelihood of negative behavioural and mental health outcomes (Ports et al., 2020; Merrin et al., 2023). However, cumulative risk models, which aggregate ACEs into one score, can be ineffective at modelling the complicated and context-dependent processes by which early trauma can cause aggressive behaviour. This shortcoming is particularly pronounced in custodial setting where behaviour is not only the result of past experiences but also the outcome of institutional conditions along with real time situational stimuli. (Coll et al., 2021).

At the regional level, studies across Africa indicate that ACEs are highly prevalent and strongly associated with aggression and related behavioural risks among youth. In Ghana, South Africa, Nigeria and Tanzania, studies indicate that a big percentage of youths face several disadvantages like violence in the community, family disintegration and neglect, which increases aggression and mental disturbances (Byansi et al., 2023; Holtzhausen & Campbell, 2021). These findings highlight that cumulative adversity is widespread across African contexts and plays a critical role in shaping youth behaviour.

In Kenya, the burden of ACEs is intensified by poverty, family instability, and limited access to social and mental health services. National studies indicate that a substantial proportion of young people have experienced at least one form of childhood adversity, with many exposed to multiple forms of violence and neglect (Miedema et al., 2023). These experiences are associated with increased risks of aggression, delinquency, and emotional dysregulation, particularly among vulnerable populations. Regardless of this evidence, minimal studies have focused on how ACEs affect behaviour in custodial environments, where the institutional environment and day-to-day stressors can have an impact on the expression of aggression. In this paper, the focus will be on male juveniles who are held in Kamiti Youth Correctional and Training Centre (YCTC) which is a rehabilitation facility in Kiambu County, Kenya. It addresses the similarity of ACEs, the level of aggression and the relationship between ACE exposure and aggression and the processes of contextual triggers and emotion regulation on the behavioural outcomes. By integrating

quantitative and qualitative data, the study moves beyond cumulative risk to examine the situational and regulatory mechanisms that shape aggression among custodial youth.

The study is anchored in an integrative theoretical model combining General Strain Theory (GST), Attachment Theory, and Social Learning Theory to explain how ACEs influence aggression through strain, emotion regulation, and behavioural scripts.

2.0 Theoretical Framework

This research follows an interdisciplinary theoretical approach of General Strain Theory, Attachment Theory and Social Learning Theory to describe how bad childhood experiences, emotion regulation and aggression are interrelated among custodial youth. The reason why these three theories have been chosen is due to their ability to explain together how early adversity results in emotional strain, affects regulation capacity and induces learned behavioural responses. Together, they provide a comprehensive explanation of how aggression develops and is expressed within custodial environments.

General Strain Theory (GST)

According to Robert Agnew's (1992) General Strain Theory, people behave in a maladaptive way and commit acts of aggression and delinquency to relieve the stress and strain. However, unlike classical strain theories that usually factor in primarily economic deprivation, Agnew broadened the definition of such stressors, including failure to meet personal goals, the removal of positive stimuli, and exposure to negative stimuli (such as abuse and neglect). According to Van Wyk (2023), repeated exposure to such stressors leads to frustration and emotional dysregulation, that leads to the possibility of aggressive behaviour. In the context of ACEs, children who are chronically stressed from experiences like domestic violence, poverty, or neglect tend to have problems with emotional regulation, which leads to the externalized behaviours of aggression. Wilona et al. (2020) further argue that when the children lack mechanisms or social support, the stress experience is more likely to manifest in behaviours, such as delinquency, than in half to bear.

Stress, when conceptualized in GST, is particularly relevant to individuals that lack the social or emotional resources necessary to navigate stress in a healthy way. Shadmanfaat et al. (2021) affirm that chronic exhibition of adverse conditions disrupts the skill to develop an individual's adaptive bearing strategies, increasing the risk of delinquency and violence. For example, children that grow up in unstable houses where they witness violence or negligence can experience persistent emotional stress, which, if unaddressed, contributes to long-term behavioural issues. As King (2020) points out, GST explains that emotional dysregulation that follows emotional stressors as a result of chronic stressors can be used to fuel aggression, especially when the respondents feel powerless or victimised. Nevertheless, GST cannot entirely explain the individual disparities in resilience in cases where any of the children who are subjected to the stress do not acquire delinquent behaviours.

In this study, General Strain Theory guided the examination of how cumulative ACE exposure increases baseline emotional strain and contributes to aggression among youth in custody. It also informed the analysis of institutional stressors such as court delays and interpersonal conflict as triggers of aggressive behaviour.

Social Learning Theory

The social learning theory that was developed by Albert Bandura, posits that behaviour is mainly learnt by observation, imitation, and reinforcement. The individuals learn to develop behaviours through the role models that include parents, peers, professors, or media personalities and imitating their behaviours particularly when rewards or punishments support or discourage their behaviours (Bandura and Walters, 1963). The well-known Bobo doll experiment by Bandura showed that the children who had witnessed the act of aggression were more prone to repeat it, which shows the role of observational learning in determining behavioural patterns (Şengönül, 2017). The theory places particular emphasis on the impact of social setting, in particular, the display of repeated aggression, which has the potential to normalise violent behaviour as a sensible response to a conflict. According to Baştan and Dulek (2023), the theory focuses on the effects of social interactions and acquired experience in the development of behaviour. Though the Social learning theory has a solid ground in studying learnt aggression, it does not fully describe the psychological and emotional processes in whether an individual decides to follow the observed behaviour.

Małysz (2019) expands on this idea further by distinguishing direct reinforcement where aggressive behaviour is rewarded and vicarious reinforcement, whereby people pick up lessons from others' experiences and the consequences of their actions, have on them. In such an environment, children tend to internalise this violence and delinquency as an adaptive survival strategy. Aggression is a perceived way to exert control in juxtaposition or other social situations for individuals raised in homes involving such domestic violence or criminal activity. According to Trejo et al. (2022), children who frequently experience violent behaviour may see it as the appropriate, even normal, means of resolving disputes. Social Learning Theory explains the social transmission of aggression but does not account for cognitive and emotional factors that moderate behavioural choices. Social Learning Theory guided the understanding of how youths acquire and apply behavioural responses to provocation, including both aggressive reactions and prosocial coping strategies such as withdrawal and activity-based distraction observed within the institutional setting.

Attachment Theory

The attachment theory, developed by John Bowlby (1969) and later on expanded by Mary Ainsworth (1978), presents the significance of early emotional ties between children and their caregivers in determining future behavioural and emotional development. This theory affirms that the children depend on their primary carers for security, affection, and emotional regulation, which in turn influences their skill to form relations and manage stress. Secure attachment evolves when the carers are always aware of both the emotional and physical needs of the child, which makes them self-confident and emotionally stable. Children who have differences in attachment due to neglect or abuse or lack of consistent caregiving face the risk of developing insecure attachment styles, which translate to emotional control failure, impulsiveness, and interpersonal problems. Secure attachment is noted to be one of the protective factors that prevent the development of behavioural disorders, specifically when working in the forensic mental health context (Finch et al., 2024). The knowledge of these processes of attachment is essential to the development of how childhood adversity correlates with dysfunctional behavioural patterns and the role of early interventions aimed at reducing the long-term effects.

Insecure attachments are classified as disorganized attachment and anxious-ambivalent attachment. Disorganized attachment arises when attachment is uncompromised, contrary, or

neglectful caregiving leads to feelings of abandonment, emotional instability, and difficulty to trust others. In presenting Kamiti YCTC, Cook (2025) states that children who suffer trauma or continued abuse are prone to disorganized attachment and have a higher risk of delinquent emotional functioning.

Erzen and Çikrikçi (2024) also elaborate that ambivalent attachment, where the carers offer attention and uncertain affection to children, and consequently, leading to children fearing being rejected and their emotional suffering being aggravated. This type of attachment is frequently observed to have aggressive and challenging behaviour like fighting by children to manage their insecurity and low self-esteem. These insecure styles of attachment are common among children who went through ACEs and this highlights the importance of relationships between carers and children in further emotional and behavioural development in children. Attachment Theory guided the analysis of how early relational experiences influence youths' capacity for emotion regulation, particularly their ability to recognize and manage anger before it escalates into aggression.

3.0 Empirical Review of ACEs and Aggression

Empirical evidence indicates that while adverse childhood experiences are associated with aggressive behaviour, the strength and nature of this relationship are not always consistent. Studies such as Afifi (2020) and Ports et al. (2020) show that cumulative exposure to adversity is linked to increased behavioural risk, but the magnitude of this relationship varies across contexts and populations. Merrin et al. (2023) further demonstrate that aggression is often influenced by interacting factors such as emotional dysregulation and environmental stress rather than cumulative exposure alone.

According to research, exposure to various adversities is a risk factor in behaviours in African contexts, yet the results are mediated by the greater social and environmental circumstances (Byansi et al., 2023; Holtzhausen and Campbell, 2021). Kenyan research also shows that childhood adversity is widespread and related to behavioural difficulties, but the mechanisms between adversity and aggression are complicated and depend on contextual and individual factors (Miedema et al., 2023). Such results imply that cumulative ACE scores might not be a complete explanation of aggressive behaviour, especially in a structured setting like custodial settings. This raises the importance of studies that look at both the situational antecedents and emotion regulation mechanisms in studying the expression of aggression.

4.0 Methodology

Research Design

This study was conducted using a convergent parallel mixed methods design at Kamiti Youth Correctional and Training Centre (YCTC) in Kiambu County, Kenya. This design included quantitative and qualitative data collection and analysis in parallel with the results merged during interpretation to create a multifaceted picture of the phenomenon (Creswell and Plano Clark, 2018). The prevalence of adverse childhood experiences, the levels of aggression and the relationship between the two were measured using the quantitative element through statistical analysis. The qualitative strand explored participants' lived experiences of contextual triggers, coping processes, and emotion regulation within the institutional setting.

Quantitative data were collected from 90 male juveniles aged 14–18 years using structured interviewer administered questionnaires to accommodate varying literacy levels. Semi structured individual interviews with purposely sampled sub sample of youth participants and key informant staff such as rehabilitation staff and counseling staff were used in qualitative data collection. The data were gathered in confidential places in the institution to make the data confidential to elicit honest responses. Triangulation was used to integrate findings as quantitative patterns were interpreted with qualitative insights to elucidate the weak linear relationship between ACE exposure and aggression.

This study was guided by pragmatism as the philosophical rationale, emphasizing practical solutions to the research problem rather than adherence to a single paradigm. Pragmatism is in favor of the application of various approaches to answer research questions in the best way and enables the combination of quantitative indications of prevalence and association with qualitative knowledge about subjective experiences. It is especially appropriate to use this method in applied research fields, like juvenile justice facilities, where quantifiable trends and lived experiences are required to inform effective interventions.

Setting and Participants

The study was conducted at Kamiti Youth Correctional and Training Centre (YCTC) which is a government run rehabilitation centre of male juveniles in Kenya, Kiambu County. The centre takes on young offenders on remand or those serving custodial sentence in the juvenile justice

system. This location was chosen due to the fact that it offers a pertinent custodial context in which negative early life experiences and aggression can be studied in a controlled institutional context.

The sample size included 90 male juveniles aged between 14–18 years who were selected using convenience sampling based on their availability and willingness to participate during the period of data collection. The research subjects were all male underage (14-18 years) juveniles who were held in Kamiti YCTC during the research period. This age bracket is consistent with the juvenile definition by the law in Kenya as a group of people that are at a higher risk of aggression and emotional dysregulation. To achieve diversity in age, nature of offence and detention time, a qualitative sub sample of 20 youth participants was sampled. 10 key informant staff involved in youth supervision and rehabilitation processes were selected to provide institutional perspectives as part of the qualitative component of the study.

Quantitative Data Measures and Collection.

The quantitative data were gathered through structured interviews conducted by interviewers to make sure that the data will be understood by participants whose literacy levels are not the same. Standardized reliability and validity instruments were used:

Multi-domain childhood adversities, such as household dysfunction, abuse, neglect, community violence, and institutional stressor, were measured using ACE International Questionnaire (ACE-IQ) (World Health Organization, 2018). The rationale behind the choice of this extended version is due to its eco-applicability amongst low- and middle-income nations (LMICs), and the fact that it covers misfortunes that are not confined to the traditional domestic goods.

The ACE-IQ was complemented with the details of emotional, physical, and sexual abuse and physical and emotional neglect given by the Childhood Trauma Questionnaire (CTQ) (Bernstein et al., 2003).

Buss-Perry Aggression Questionnaire (BPAQ) (Buss and Perry, 1992) was used to assess aggression in four subscales namely: physical aggression, verbal aggression, anger and hostility. This tool has been shown to have good internal consistency ($\alpha > .70$) in a variety of population groups including forensic youth.

The instruments were administered by trained research assistants in intimate settings in order to reduce response bias and also provide confidentiality.

Quantitative Data Analysis

Verification of data was done through IBM SPSS Statistics (Version 27). ACE exposure and aggression levels were summarized by descriptive statistics (means, standard deviations, frequencies and prevalence rates). Bivariate Pearson correlations were also tested to assess the relationship between cumulative ACE scores (and subscales) and total/subscale aggression scores. The predictive value of ACE totals on aggression was examined using simple linear regression models with assumption checks including linearity, homoscedasticity, residual normality, and the presence of influential outliers assessed using Cook's distance (Cook, 1977). The level of significance was set at $\alpha = .05$.

Qualitative Data Collection and Analysis.

Semi structured interviews lasting 45–60 minutes were used to collect qualitative data. Youth participants were purposively selected from the quantitative sample to ensure variation in age, type of offence, and duration of detention. Interviews explored situational triggers, warning signs such as somatic cues, coping strategies, and emotion regulation processes. Staff interviews were based on youth behaviour observed, institutional factors and de-escalation methods. All interviews were audio-taped with permission, transcribed verbatim and either in English or Swahili at the participants discretion.

NVivo 14 software was used to conduct thematic analysis following the six-step approach described by Braun and Clarke (2006): familiarization, initial coding, theme development, review, definition, and reporting. The deductive analysis was driven by the integrated theoretical framework of General Strain Theory, Attachment Theory, and Social Learning Theory and themes were free to emerge inductively. Member checking on a subsection of the participants, peer debriefing, and coding decisions audit trail was used to increase trustworthiness.

5.0 Ethical Considerations

The research was conducted in compliance with high ethical standards to guarantee the safety of the participants and their autonomy and confidentiality, according to the Kenyan regulations and the international standards of ethics.

Before data was collected, ethical permission was taken out of various authorities to make certain that national and institutional rules were adhered to. Approval was given by the Daystar University Institutional Scientific and Ethical Review Committee (DU-ISERC), which determined that the study did not endanger the interests of vulnerable people. Moreover, the National Commission of Science, Technology and Innovations Web (NACOSTI) granted a research license (License No. NACOSTI/P/25/4176313) that approved the study in a Kenyan correctional setting. The Commissioner of Prisons was also involved in granting a special permit permitting access to YCTC and the management of the Kenya Prisons Service.

Data collection began once written, signed informed consent was obtained from the YCTC Officer-in-Chief, along with consent from the youth participants (Nakalega et al., 2021). The consent procedure consisted of a thorough description of the purpose of the study, which is to investigate the relationship between adverse childhood experiences (ACEs), aggression, and coping strategies, the procedures (surveys, interviews), risks (e.g., its emotional discomfort) and benefits (e.g., it enlightens rehabilitation programs). The Officer-in-Charge was a signatory on behalf of the institution, accepting the study's objectives and consenting to facilitate access to participants and facilities. The 90 youth participants were given an assent form written in understandable, age-appropriate language explaining that participation was voluntary and that they could withdraw at any time without penalty. They told the participants that participation was voluntary and that it would have no implications on their treatment at YCTC (Jiménez & Jiménez, 2023).

6.0 Results

Prevalence of ACEs

The respondents indicated that a large proportion of participants experienced adversity. A total of 90 male juveniles who met the inclusion criteria and were available and willing to participate were included in the study. The total ACE score ranged from 0 to 14, with a mean of 4.57 (SD = 3.08). The occurrence of adversity was further reflected in the fact that 72% of participants reported at least 3 ACEs, while 43% reported 5 or more ACEs (Figures 2 and 3). The most commonly reported adverse experiences included witnessing neighbourhood violence (53.3 per cent), being bullied at school (41.1 per cent), and parental separation or divorce (38.9 per cent). Other prevalent

adversities included feeling unloved or unprotected, witnessing domestic violence, and household substance abuse, all reported by approximately one third of participants. Community and institutional adversities, including detention or incarceration (30.0 percent), were also notably present alongside household dysfunction.

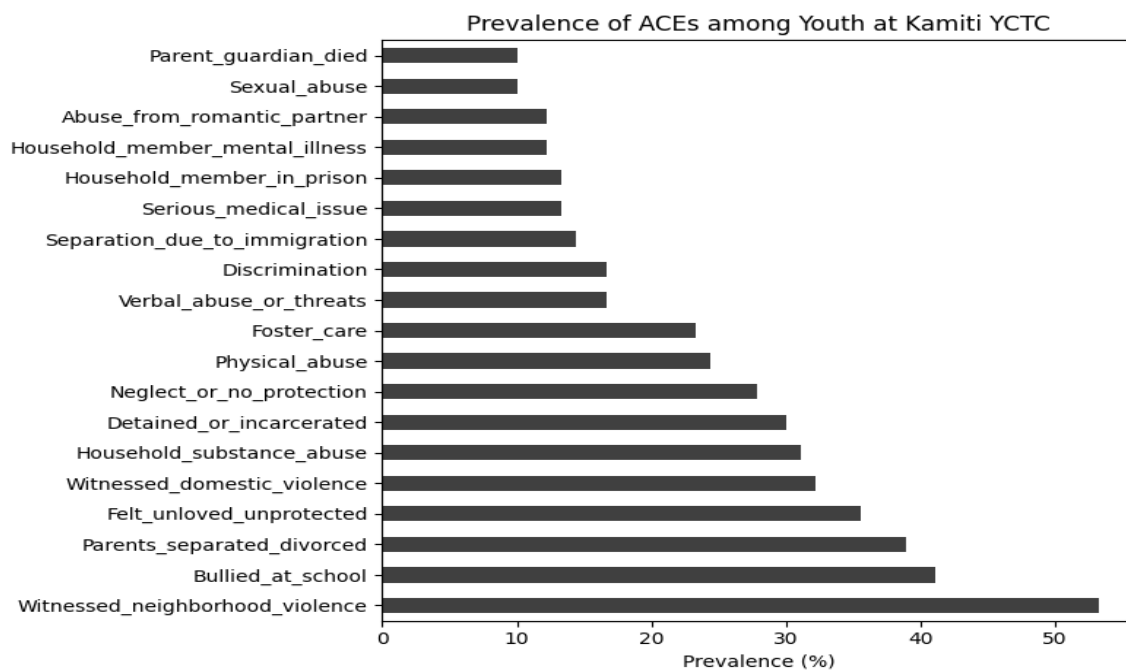


Figure 1: Prevalence of ACEs among Youth at Kamiti

Levels of Aggression

Aggression scores ranged from 41 to 138, with a mean total aggression score of 89.09 (SD = 16.37). Physical aggression scored highest (M = 27.98), followed by hostility (M = 24.06), anger (M = 21.61), and verbal aggression (M = 15.45) (Table 8, Figure 4).

Relationship Between ACEs and Aggression

Contrary to expectations, Pearson correlations revealed weak, non-significant negative associations between cumulative ACE scores and aggression ($r = -0.174$, $p = 0.103$). Subscale correlations followed a similar pattern (Physical Aggression $r = -0.138$, Anger $r = -0.191$, Hostility $r = -0.180$, all $p > 0.05$) (Table 8, Figure 6). Linear regression confirmed that ACE totals explained only 3% of the variance in aggression ($\beta = -0.915$, $p = 0.103$, $R^2 = 0.03$). A simple linear regression yielded the same conclusion as the correlations: cumulative ACE scores did not significantly predict total aggression. The regression model indicated that ACE totals explained only 3% of the variance in aggression ($\beta = -0.915$, $p = 0.103$, $R^2 = 0.03$). Subscale models also

generated non-significant and weak effects. Figure 7 (ACE totals vs Total Aggression) shows a very shallow slope and a flat point cloud, providing graphical evidence of the small coefficient and low R^2 . The rudimentary model screening (linearity, homoscedasticity, residual approximately normal; no influential outliers as measured by Cooks Distance did not reveal offenses that would explain the feeble effect.

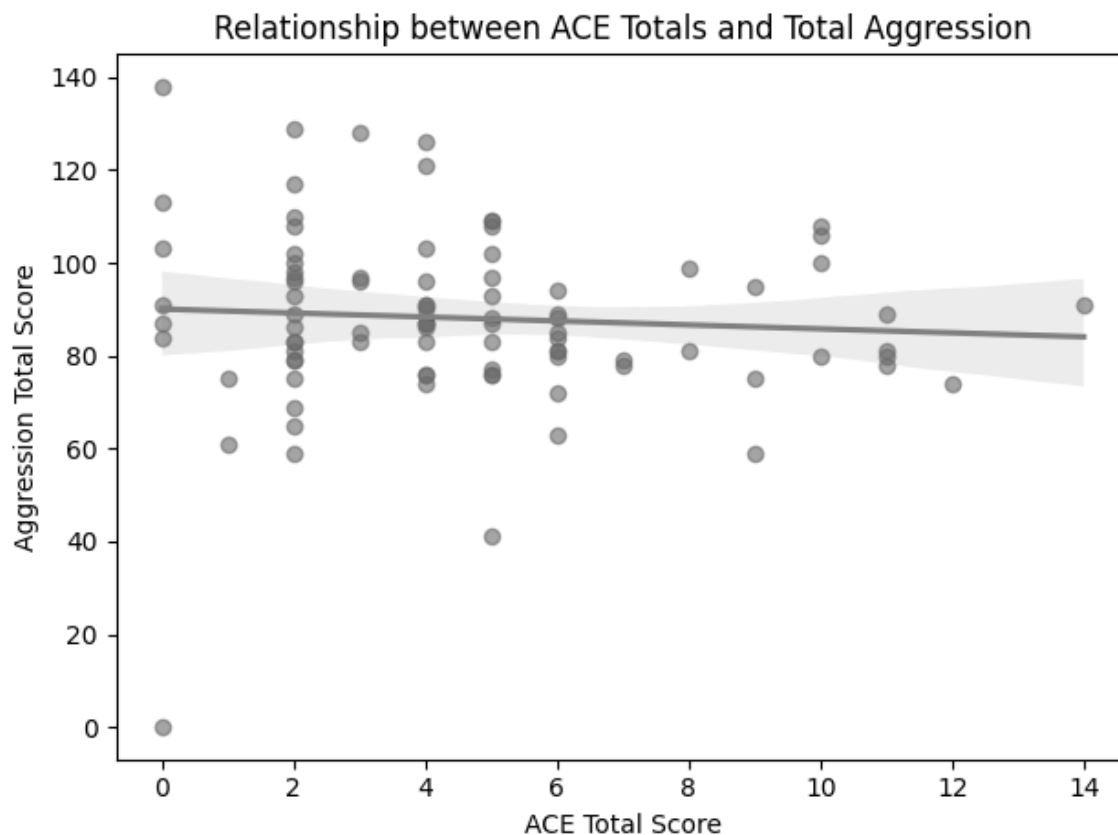


Figure 1: Relationship between ACE Totals and Total Aggression

Coping Mechanisms and Contextual Triggers

Quantitative Findings

The most frequently reported reactions to anger were withdrawal or quietness (41.1%) and activity-based distraction (20.0 percent), as indicated by survey data. Reports of aggressive actions, such as hitting or shouting, were recorded in 17.8% of participants, and only 6.7% reported talking to someone. Regarding the aspect of anger control, half the participants (50.0 per cent) said they rarely controlled their anger, 30.0 per cent of the participants said they sometimes controlled

their anger, 14.4% said that they never controlled their anger, and only 5.6 per cent said that they always controlled their anger. Of those who received guidance, 66.7 per cent indicated they received counselling, 16.7 per cent had peer discussions, 11.1 per cent received no guidance, and 5.6 per cent received religious or spiritual guidance.

Qualitative Findings

Qualitative interviews revealed early somatic cues, including red eyes, clenched fists, and shaking, which signaled rising anger. These were preceded by situational triggers such as disrespect toward the persons, delays in court, and the stress associated with home conditions. The participants reported short-term coping methods such as taking a break, sleeping, exercising, or praying to deal with emotional outbursts. These findings were supported by the staff views, which stated that sports were a common de-escalation technique, and there were also the methods of quiet withdrawal and spiritual practices. Nonetheless, systemic issues, such as overcrowding, scarcity of resources, and inconsistent routines, were also pointed at by staff as having a negative impact on behavioural outcomes.

These findings are consistent with previous studies, which indicate that aggression is often influenced by situational stressors and emotion regulation processes rather than cumulative exposure alone (Merrin et al., 2023; Byansi et al., 2023). Similarly, research in African and Kenyan contexts has shown that environmental conditions and coping mechanisms play a significant role in shaping behavioural outcomes among youth exposed to adversity (Holtzhausen & Campbell, 2021; Miedema et al., 2023).

Table 1: Coping mechanisms and support needs (n = 90)

Category	Response	N	%
Reaction to Anger	Keep quiet/withdraw	37	41.1
	Distract with activities	18	20.0
	Hit/shout	16	17.8
	Talk to someone	6	6.7

Anger Control	Rarely	45	50.0
	Sometimes	27	30.0
	Never	13	14.4
	Always	5	5.6
Guidance Received	Counseling	60	66.7
	Peer discussions	15	16.7
	Religious/spiritual	10	11.1
	None	5	5.6

7.0 Discussion

There were significant levels of aggression, but its linear relationship with total ACEs was not strong. The correlation between the ACE total and overall aggression had a zero-order correlation of $r = -.174$ ($p = .103$; $n = 90$) and the weak pattern was repeated across subscales; Physical $r = -.138$ ($p = .199$), Anger $r = -.191$ ($p = .074$), Hostility $r = -.180$ ($p = .092$), Verbal $r = .006$ ($p = .958$). A straightforward linear equation was also pointed in the same direction ($\beta = -0.915$, $p = .103$, $R^2 = .03$), meaning that the total of ACE did not contribute much to the variance in aggression. However, the aggression level was not low: the overall means are 89.09 ($SD = 16.37$), and the higher scores were on Physical Aggression ($M = 27.98$, $SD = 6.58$), Hostility ($M = 24.06$, $SD = 5.90$), Anger ($M = 21.61$, $SD = 4.74$), and Verbal ($M = 15.45$, $SD = 4.05$). The figures and tables in the findings support a clear narrative: the scatterplots are flat (Figures 6–7), the subscale means are elevated (Table 5, Figure 4), and the ACE profile remains multi-domain (Table 5). In other words, this cohort shows notable aggression alongside only a small, inconsistent linear association with cumulative ACEs, a pattern more consistent with context-dependent expression than with a simple dose–response rule.

These results support previous findings that adverse childhood experiences are linked to aggression, but this is not necessarily a strong and linear relationship. Other research has found that cumulative ACE scores are generally effective at predicting behavioural outcomes, but the strength of the association is contingent on contextual and environmental variables (Afifi, 2020; Ports et al., 2020). On the same note, Merrin et al. (2023) found that the interaction between

emotional dysregulation and situational stress is more effective at explaining aggression than cumulative exposure.

Unlike other studies, which indicate that there is a strong dose-response relationship between ACEs and aggression, the current results indicate that the pattern in custodial settings is more complex. The insignificant and weak relationships found in the current study show that environmental stimuli, institutional circumstances and personal coping mechanisms might have a more direct influence on aggressive behaviour as compared to cumulative ACE exposure. This lends credence to a contextually specific conceptualisation of aggression, especially in the low-resource juvenile justice contexts where day-to-day stressors and regulation issues prevail.

The pattern suggests that context and regulation shape how adversity appears in behaviour. The scatterplots in Figures 6–7 show tight, flat clouds rather than ascending trends, consistent with the small coefficients reported above. When the distributions of aggression scores in Table 4 and Figure 4 are compared with the distributions of ACE in Figures 2 and 3 and Table 6, no obvious dose-response pattern is observed. Rather, the image that is formed is in line with the frequency of coping and anger-control in the results (Table 8; Figure 8): momentary triggers (such as disrespect or court delays), early bodily signals (shaking, clenched fists), and brief, practical resets (sleep, stepping away, sport) can often dictate the expression or suppression of anger. This is one reason why the relationships are weak and the R^2 of the regression is low: the individual cumulative ACE count fails to capture the situational moderating factors of behaviour in this custodial environment; therefore, a simple linear relationship cannot be expected to be strong.

National work in Kenya often shows very high emotional abuse and sexual violence affecting more than one in five adolescents, with small-to-moderate links to aggression that typically run through trauma symptoms, hostile beliefs, and weak regulation (Goodman et al., 2019). They are most evident in school and community samples that focus on household ACEs, in which a simple dose-response may develop. Here, the results outline another situation: a predominantly male, custodial group that is measured on an extended inventory that also encompasses neighbourhood violence and detention as types of community and justice harms (see Figures 2–3; Table 6). Situational triggers, short resets (sleep, stepping away, sport), and the routines and supervision which organise

everyday life give rise to moderate-high aggression (in this context), but to small and nonsignificant linear ACE - aggression correlation (Figures 67), which is understandable when behaviour is determined by situational antecedents, short resets (sleep, stepping away, sport) and routines and supervision Combined, an ACE-IQ style, ecological frame is more appropriate in peri-urban contexts of justice than a household-only list and is naturally more prone to alter the effects sizes that one anticipates in cross-sectional tests (Miedema et al., 2023; Wado et al., 2022). Simply put, the intermediate-high aggression, small, non-significant ACE correlation in the results, is compatible with an ecological, moderated mechanism: adversity is widespread, but the expression of anger into behaviour is determined by the capacity to regulate, moment-to-moment strain, and the presence of learned scripts (Leone, 2023; Goodman et al., 2022).

Unlike prior studies, which often report clear dose–response relationships between cumulative adversity and aggression in school and community settings, including African samples, the Kamiti study shows a weak, non-significant relationship (Miedema et al., 2023; Goodman et al., 2019). This disparity is probably related to the custodial context, male-dominated sample and an extended ACE model that places an emphasis on community and justice stressors. Interview data demonstrate actual time moderators such as early withdrawal, short sleep, distractors due to activity and selective disclosure, which disrupt escalation and undermine the linearity of cross-section. Context reviews in Kenya observe structural delays and gaps in protection that determine the daily triggers and coping strategies. (Leone, 2023; Goodman et al., 2022). Methodologically, cross-sectional models excluding mediators and moderators may inflate simple relationships, while context-specific measures alter effect sizes. An integrated strain–attachment–learning framework better explains Kamiti’s findings and avoids applying general-population assumptions to a peri-urban custodial setting. These factors likely interact dynamically.

This data suggests a mixed model of GST-Attachment-Social Learning: adversity enhances risk (Agnew, 1992), yet regulation capacity, based on attachment, and learnt patterns determine whether anger is converted to behavior when provoked (Bowlby, 1969; Ainsworth, 1978; Bandura & Walters, 1963).

The prevalence of ACEs in Kamiti YCTC youth is consistent with Kenyan and African statistics on multi-domain adversity stressors of household, community, and institutional (Miedema et al., 2023; Leone, 2023). Behavioral risk is validated by the high aggression levels,

and the weak linear relationship with cumulative ACEs questions the naive dose-response paradigm that dominates the literature on ACEs (King, 2020; Afifi et al., 2020). This deviation can be explained by the mixed theoretical framework. GST explains the effects of chronic strain and unachievable goals (e.g. court delays) in increasing the baseline frustration but it is only expressed through the capacity to regulate emotions based on the attachment histories (Bowlby, 1969). The signs of somatic alertness and steep escalation rates are indicative of impaired controls in youth characterized by insecure attachments. (Finch et al., 2024).

Social Learning Theory posits that aggression is a learned script, but youths also adopt prosocial routines such as sport and withdrawal when these are modelled and reinforced (Bandura & Walters, 1963). The qualitative data also emphasize that aggression is situationally activated and that prosocial routines such as sport and withdrawal are also acquired and regulated by moment-to-moment decisions, which nullify assumptions that cumulative ACE counts are the sole determinants of behavior (Band Escalation is interrupted with low effort, fast emotion control strategies, including short-term withdrawal, sleep, or distraction based on activity, which forms a nonlinear ACE-aggression interaction. The results align with Kenyan contextual influences such as resource availability, institutional routines, and social learning about disclosure and coping in explaining aggression among custodial children (Goodman et al., 2019; Leone, 2023). The results indicate the significance of going beyond cumulative risk scores since they alarm about ecological, institutional routines, and cultural norms of disclosure and coping in explaining aggression in children under custody. The methods to adopt should be early recognition of cues, offering of short de-escalation routines, formal prosocial events, and selective counseling that does not interfere with the trust in youths. (Miedema et al., 2023; Wado et al., 2022).

8.0 Implications for Practice

The findings of this study have important implications for practice within custodial settings. The findings suggest that situational factors and constraints in emotion regulation, rather than cumulative exposure to adversity alone, influence aggression among youth. This underscores the importance of interventions based on real-time behavioural control rather than relying on past risk profiles. Custodial facilities need to have trauma-informed strategies that focus on early detection of somatic signs of physical tension, agitation and emotional escalation. The staff and youth are to be trained to identify such early warning signs and implement simple de-escalation techniques,

including temporary withdrawal, planned breaks, and activity-based coping. Such strategies are feasible and applicable in low-resource settings. Prosocial activities including sports and peer support programs should be reinforced because these are good sources of emotional control and minimize chances of aggressive behaviour. Improvements in institutions, such as regular routines, effective communication about court proceedings, and increased access to counselling services, are also important for alleviating situational stressors that precipitate aggression.

9.0 Conclusion

This study addressed the research objective of examining the relationship between adverse childhood experiences, contextual triggers, and emotion regulation in shaping aggression among Kenyan custodial youth. The results indicate that cumulative ACE exposure is high and levels of aggression are moderate to high, but the direct linear relationship between the two is weak. This shows that aggression is more of a context-dependent process, determined by immediate antecedents and regulatory abilities rather than by cumulative adversity itself. The qualitative results also indicate that aggression is influenced by situational stressors such as interpersonal conflict and institutional pressures, as well as early somatic cues that signal the escalation of emotion. Short-term coping strategies, including withdrawal, distraction, and sleep, are indicative of regulation efforts, but in many cases, are constrained in their ability to deal with underlying emotional strain. The environmental context is also important because institutional conditions are a key determinant of behaviour.

These findings support an integrated theoretical explanation that combines General Strain Theory, Attachment Theory, and Social Learning Theory, in which aggression emerges from the interaction among accumulated strain, regulatory capacity, and learned behavioural responses. The research thus adds to more in-depth insight into aggression in custodial environments by highlighting the influence of situational and regulatory processes. Following these results, it is suggested that custodial facilities should implement trauma-informed, low complexity interventions which aim at early identification of emotional escalation and application of practical de-escalation tactics. Future studies ought to conduct longitudinal research to better understand causal relationships, incorporate a variety of custodial groups, including female youth, and

determine how intercessory-based strategies can be used to reduce aggression and enhance rehabilitation outcomes.

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