# Prevalence of Adverse Childhood Experiences (ACEs) among Married Individuals at Presbyterian Church of East Africa (P.C.E.A), Nairobi North Presbytery, Kenya.

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## ABSTRACT

Adverse childhood experiences (ACEs) involve a wide range of childhood traumatic events such as emotional, sexual and physical abuses. The detrimental effects of ACEs on adulthood have received increasing attention recently, which has been found to be significantly associated with increased risks of mental disorders and quality of relationship. Therefore, this present study aims at estimating the proportion of ACEs among the married individuals attending the Presbyterian church of East Africa (P.C.E.A), known as the Nairobi North Presbytery. This study utilized a cross-sectional research design, using a quantitative research approach to collect data from 288 married individuals sampled from 14,400 married couples across 17 parishes using Cochran (1963) formula. The total of 288 married individuals' both male (N=150, 52.1%) and female (N= 138, 47.9%) with age ranges from 20 years to 75 years old with the mean age 45.9 ± (SD: 12.235) were sampled and screened to participate in the study. The ACE International Questionnaire (ACE-IQ) is a 43-item scale which was developed according to model of ACEs by World Health Organization (2009) was used to assess childhood experiences of the participants. Results from the study showed the general prevalence of ACEs, that is the proportion of the respondents who experienced at least four or more childhood experiences at 90.6%. Also, the frequency of multiple exposure to ACEs was higher among the respondents aged 41-65 years at 54.9%, among the male respondents at 47.9%, and among the married individuals at 73.3%. Also, this study found the top three highest proportion of childhood traumatic experiences among the participants, which are community violence (91%), emotional neglect (83%), and violence against household members (79.9%). This study therefore recommended that churches in Kenya particular, and worldwide in general may consider engaging the services of clinical psychologists to help in screening married individuals for ACEs and to ensure access to mental health services for children and families, including early intervention and trauma-informed care.

**Keywords:** Prevalence, Adverse childhood experiences (ACEs), Childhood trauma, married couples, Presbyterian Church of East Africa (P.C.E.A), Kenya.

## INTRODUCTION

According to Meltzler, Merrick, Klevens, Ports, and Ford (2017), childhood traumatic experiences constitute an important global health problem. Adverse childhood experiences (ACEs) are traumatic events or experiences that occur in childhood between aged 0 to 17 years. The experiences include emotional, physical and sexual abuses (Miller, Fleming, Ekpe, Grobman, & Heard-Garris, 2021). Others include household dysfunction a battered mother/father, household members with substance abuse, mental illness, incarceration and parental separation or divorce (Swedo et al., 2023). Recent statistics suggest that 68% of adults in the United States reported that at least one type of ACE before age 18 years and that about 17.3% adults had experienced multiple types of ACEs (Swedo et al., 2023).

Findings from a meta-analysis and systematic review of 2129 studies showed the pooled prevalence of one or

more ACEs among the adults in those studies was 89.8%, and the lifetime prevalence of four or more ACEs was 53.9% (Liu et al., 2021). Also, results from systematic review and meta-analysis as published in World Psychiatry indicated that exposure to ACEs is common globally as 6 out of 10 adults reports experiencing at least one ACEs in lifestyle (Amone-P'Olak, 2022). Statistics on the proportion of ACEs in Africa countries indicates that the phenomenon is common globally, and the most common forms of ACEs as experienced in Africa are physical abuse, household dysfunction, and emotional abuse (Amone-P'Olak & Letswai, 2020). Similarly, results from a multi-country analysis of ACEs in sub-Saharan Africa showed witnessing physical violence, experiencing physical violence and sexual violence were the most common type of ACEs (Amene et al., 2024).

Regarding the ACEs among marital couples, Cigrang et al (2023) examined the antecedent contributing influence of exposure to adverse childhood experiences on marital health of the 373 participants. Findings from the study indicates higher prevalence of ACEs for female as opposed to male counterparts and that childhood abuse or neglect for female has greater impact on intimate partner victim's perpetration as opposed to male. A similar study on association of ACEs and quality of partnership in women found that 29.8% of the participants experienced maltreatment in childhood and that women who went through ACEs showed a lower level of happiness, and quality of partnership. The same study found emotional and sexual abuse as the most prevalent ACEs among women who participated in the study (Schütze, Geraedts, & Leeners, 2020). Likewise, Luft et al (2022) in a study among adolescents experiencing dating violence in Dominican Republic found a high prevalence of ACEs at 80.6%. The same study similarly found physical abuse (49%) and witnessing domestic violence (48%) as the most prevalent ACEs in that study.

Wade et al (2016), in a study among a predominantly white and educated population, found that more than 50% of 10,000 respondents experienced at least one ACEs and that physical, sexual, or emotional abuse, then domestic violence, parental substance abuse, mental illness/suicidality and incarceration were the most prevalent ACEs among the sample. Also, findings from a systematic review and meta-analysis of 37 studies with 253, 719 participants indicate that 87.4% of the participants experienced multiple ACEs and that individuals with multiple ACEs were at increased risk of all health outcomes compared with individuals with no ACEs. The same study similarly found experiencing domestic violence, household members with mental illness and substance use as the most experienced form of ACEs (Hughes, et al., 2017).

In addition, Swedo (2023), found that 65% of adults between 2011 and 2020 revealed having experienced at least one ACE out of which 15% had experienced four or more ACES. The same study indicated that the proportion of exposure to alcohol or drug abuse within households, parental separation and divorce, and physical, sexual, and mental maltreatment were higher as opposed to other categories of ACEs. Moreover, Swedo (2023) in the same study in USA revealed that the distribution of ACEs across states differed with Arkansas reporting the utmost number of occurrences of four or more ACES while Washington, DC had the smallest number. Likewise, the study showed that prevalence of experiencing at least one ACE were higher among women (70.7%) compared to men (58.7%). These findings indicate the importance of screening for prevalence of ACEs among married individuals. This guides the development and selecting appropriate intervention protocol targeting relationship distress and quality among married couples.

## METHODS

This section profiles the descriptive cross-sectional quantitative research methods employed in this study, which was an extract from one of the objectives in a descriptive correlational research design of a Doctor of Psychology in clinical psychology dissertation. The dissertation was designed to investigate the relationship between adverse childhood experiences and quality of marital relationship among the married individuals from Presbyterian Church of East Africa (P.C.E.A), Nairobi North Presbytery, Nairobi, Kenya. The objective of this article is to estimate the prevalence of ACEs among the married individuals who participated in the study. The total of 288 married individuals' both male (N=150, 52.1%) and female (N= 138, 47.9%) with age ranges from 20 years to 75 years old with the mean age 45.9 ± (SD: 12.235) were sampled and screened to participate in the study.

This study utilized the descriptive cross-sectional study design, quantitative approach to estimate the prevalence of ACEs, using the ACE-International Questionnaire (ACE-IQ), to collect data from the participants. ACE-IQ measures thirteen categories of childhood traumatic family experiences such as physical abuse, sexual abuse,

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and emotional abuse. Additionally, neglect by parents or caregivers; peer violence; witnessing community violence, and exposure to collective violence. To calculate the ACEs scores, the binary version of the instrument was used to estimate the respondents' affirmation of their experiences, whereby the total ACEs was assessed to ascertain the numbers of childhood traumas each of the respondents had as the participants' overall ACEs score.

Table 1: Background sociodemographic characteristics

| Variables | Frequency | Percent |
|---|---|---|
| Respondent's age | | |
| 20-40 years = Young adults | 103 | 35.8 |
| 41-65 years = Middle adults | 176 | 61.1 |
| 66-75 years = Late adults | 9 | 3.1 |
| Respondent's gender | | |
| Male | 150 | 52.1 |
| Female | 138 | 47.9 |
| Higher level of education | | |
| No formal schooling | 2 | 0.7 |
| Less than primary school | 2 | 0.7 |
| Secondary/high school | 3 | 1.0 |
| College/university | 35 | 12.2 |
| Postgraduate degree | 173 | 60.1 |
| Refused | 73 | 25.3 |
| Respondent's main work status over the last 12 years | | |
| Government employee | 59 | 20.5 |
| Non-governmental employee | 75 | 26.0 |
| Self-employed | 117 | 40.6 |
| Non-paid | 2 | 0.7 |
| Students | 8 | 2.8 |
| Homemaker | 8 | 2.8 |
| Retired | 14 | 4.9 |
| Unemployed | 5 | 1.7 |

Table 1 presents the background sociodemographic characteristics in this study. Regarding the age distribution,

the respondent's age ranges from 20 to 75 years with the mean age 45.9 ± (SD: 12.235). The respondent's age was categorized into three categories as 20-40 years – young adults, 41-65 years – middle adults, and 66-75 years – late adults respectively. The frequency of the respondents aged 41-65 years was higher (176, 61.1%) as opposed to young adults aged 20-40 years (103, 35.8%), and the late adults aged 66-75 years (9, 3.1%). This shows that most of the respondents were between ages 41-65 years. Also, concerning the gender distribution, the frequency of male respondents was slightly higher (150, 52.1%) compared to female respondents (138, 47.9%). This implies that more male respondents participated in the study compared to female respondents.

With reference to higher level of education, the frequency of the respondents with postgraduate degree was higher (173, 60.1%) compared to college/university (35, 12.2%), no formal schooling, less than primary school (2, 0.7%) respectively, secondar/high school (3, 1%), and the respondents who refused to respond to the inquiry (73, 25.3%). This indicates that many of the respondents had postgraduate degrees. Furthermore, Table 2 also shows the respondents' main work status over the last twelve years, where the frequency of self-employed respondents was higher (117, 40.6%) compared to non-governmental employee (75, 26%), government employee (59, 20.5%), retired respondents (14, 4.9%), students (8, 2.8%), homemaker (8, 2.8%), and unemployed (5, 1.7%). As shown on the Table, a higher percentage of the respondents were self-employed.

## RESULTS

The objective in this study was to estimate the prevalence of ACEs among married individuals at PCEA Nairobi North Presbytery. ACE-IQ was used in this study to investigate the exposure of the respondents to adverse childhood experiences of the married individuals in the study. ACE-IQ measures thirteen categories of childhood traumatic family experiences such as physical abuse, sexual abuse, and emotional abuse. Additionally, neglect by parents or caregivers; peer violence; witnessing community violence, and exposure to collective violence. To calculate the ACEs scores, the binary version of the instrument was used to estimate the respondents' affirmation of their experiences, whereby the total ACEs was assessed to ascertain the numbers of childhood traumas each of the respondents had as the participants' overall ACEs score.

Table 2: Prevalence of ACEs among the participants

| Variables | No | % | Yes | % | Mean | Std. dev. |
|---|---|---|---|---|---|---|
| Physical abuse | 70 | 24.3 | 218 | 75.7 | .7569 | .42967 |
| Emotional abuse | 79 | 27.4 | 209 | 72.6 | .7257 | .44694 |
| Sexual abuse | 200 | 69.4 | 88 | 30.6 | .3057 | .46144 |
| Living with household members who were substance abusers | 208 | 72.2 | 80 | 27.8 | .2778 | .44868 |
| Living with household members who were imprisoned | 268 | 93.1 | 20 | 6.9 | .0694 | .25468 |
| Living with household members who were chronically depressed, mentally ill, or suicidal | 237 | 82.3 | 51 | 17.7 | .1771 | .38240 |
| Violence against household members | 58 | 20.1 | 230 | 79.9 | .7986 | .40174 |
| Parental separation or divorce | 159 | 55.2 | 129 | 44.8 | .4479 | .49815 |
| Emotional neglect | 49 | 17.0 | 239 | 83.0 | .8299 | .37641 |
| Physical neglect | 173 | 60.1 | 115 | 39.9 | .3993 | .48116 |
| Bullying | 104 | 36.1 | 184 | 63.9 | .6389 | .48116 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Community violence | 26 | 9.0 | 262 | 91.0 | .9097 | .28708 |
| Collective violence | 217 | 75.3 | 71 | 24.7 | .2465 | .43174 |

Table 2 indicates the estimation of respondent's exposures to the thirteen categories of childhood traumatic experiences. As shown in the Table, the proportion of the respondents who experienced physical abuse was higher at 75.7% as against the respondents who did not experience physical abuse at 24.3%. The mean physical abuse in this study was .757 ± (SD: .4297). This shows that the prevalence of childhood physical abuse was at 75.7%, meaning that significant numbers of the respondents were exposed to childhood physical abuse. Concerning emotional abuse, the occurrence of exposure to childhood emotional abuse was similarly higher at 72.6% as opposed to the respondents who did not experience emotional abuse at 27.4%. The implication of 72.6% prevalence of emotional abuse shows that significant numbers of the respondents experienced childhood emotional abuse.

Regarding childhood sexual abuse, the frequency was lower at 30.6% compared to the respondents who did not experience sexual abuse at 69.4%. The mean sexual abuse was .3057 ± (SD: .4614). This means that fewer respondents affirmed their exposure to sexual abuse. In the same way, the prevalence of living with household members who abused substances was lower at 27.8% compared to the respondents who did not live with household members who were substance abusers at 72.2%. The mean living with household members who were substance abusers was .2778 ± (SD: .4487). This implies that many of the respondents did not live with household members who abused substances.

With reference to living with household members who were imprisoned, data shows that frequency of the respondents who did not experience that traumatic experience was higher at 93.1% as against the respondents who lived with household members who were imprisoned at 6.9%. The mean living with household members who were imprisoned was .0694 ± (SD: .2547). This implies that significant respondents who participated in this study did not experience living with members of their household who were once imprisoned. Additionally, few respondents (51, 17.7%) indicated that they once lived with household members who were chronically depressed, mentally ill, or suicidal (237, 82.3%). The mean living with household members who were chronically depressed, mentally ill, or suicidal was .1771 ± (SD: .38240). The implication of this finding is that significant numbers of the respondents did not live with members of their household who were chronically depressed, mentally ill, or suicidal.

Moreover, Table 2 similarly showed the proportion of the respondents who witnessed violence against household members was higher (230, 79.9%) as against the proportion of the respondents who did not witness it (58, 20.1%). The mean violence against household members was .7986 ± (SD: .40174). This is interpreted that experiencing violence against household members was predominant in this study. Meanwhile the data shows that there was slight difference between the proportion of the respondents who experienced parental separation or divorce (159, 55.2%), and the respondents who did not (129, 44.8%). The mean parental separation or divorce was .4479 ± (SD: .4982). This implies that more than half of the married individuals had once experienced parental separation or divorce while growing up.

Not only that, the proportion of the respondents who experienced emotional neglect was significantly higher at 83% as opposed to those who did not experience it at 17%. Meanwhile, the mean emotional neglect in this study was .8299 ± (SD: .3764) which indicates that experiencing emotional neglect in this study is relatively higher among married individuals. Regarding physical neglect, the proportion was less at 39.9% as opposed to the respondents who did not experience physical neglect at 60.1%. The mean physical neglect was .3993 ± (SD: .4812) and it means that most of the respondents did not experience physical neglect. Likewise, the prevalence of the respondents who experienced bullying was higher at 63%, compared to the respondent who did not experience bullying at 36.1%. The mean bullying .6389 ± (SD: .48116) shows that many of the respondents in this study were bullied.

Consequently, the Table indicates that most of the married individuals who participated in this study were exposed to community violence (91%) in contrast to the respondents who did not experience community

violence (9%). The mean community violence was 9% ± (SD: .2871), meaning that significant participants on this study were exposed to community violence.

Table 3: Prevalence of ACE's – experiencing multiple exposures to adverse childhood experiences

| Variable | Frequency | Percent |
|---|---|---|
| ≤ 3 Exposures to childhood trauma | 27 | 9.4 |
| ≥ 4 Exposures to childhood trauma | 261 | 90.6 |

Table 3 presents the levels of exposures to multiple exposures to childhood trauma in this study. As shown in the Table, the frequency of respondents who experienced four or more childhood experiences was higher significantly at 90.6% as opposed to the respondents who experienced three or less childhood traumas at 9.4%. This implies that the general prevalence of childhood experiences in this study was 90.6% among the respondents in this study.

Table 4: Distribution of respondents' key sociodemographic characteristics and levels of exposures to childhood trauma.

| Variables | Total % | Adverse Childhood Experiences (ACEs) | | Chi-Square Test | | |
|---|---|---|---|---|---|---|
| | | ≤ 3 | ≥ 4 | $\chi^2$ | df | Sig. |
| Levels of exposures to childhood trauma | | | | | | |
| **Respondent's age** | | | | | | |
| 20-40 years | 103 (35.8) | 8 (2.8) | 95 (33.0) | .496 | 2 | .780 |
| 41-65 years | 176 (61.1) | 18 (6.3) | 158 (54.9) | | | |
| 66-75 years | 9 (3.1) | 1 (0.3) | 8 (2.8) | | | |
| **Respondent's sex** | | | | | | |
| Male | 150 (52.1) | 12 (4.2) | 138 (47.9) | .697 | 1 | .404 |
| Female | 138 (47.9) | 15 (5.2) | 123 (42.7) | | | |
| **Civic status** | | | | | | |
| Married | 235 (81.6) | 24 (8.3) | 211 (73.3) | 1.055 | 1 | .304 |
| Living as couple | 53 (18.4) | 3 (1.0) | 50 (17.4) | | | |

Table 4 presents the distribution of respondents' key sociodemographic characteristics and levels of exposures to childhood trauma. In terms of age categories, respondents aged 41-65 years have higher frequency of multiple exposures of four or more childhood trauma at 54.9% as opposed to 20-40 years at 33%, and 66-75 years at 2.8%. The test of relationship using Chi-square test indicates no significant difference in the distribution of age categories and levels of exposure to childhood trauma (p=0.780). Also, there was slight gender differences in the distribution of respondents' sex and levels of multiple exposures to childhood trauma as the frequency of the respondents who experienced four or more childhood exposures was slightly higher among male respondents at 47.9% compared to female respondents at 42.7%. Chi square test shows that the difference in the distribution of

respondents' sex and levels of multiple exposure to childhood trauma was not significant (p=0.404). Also, regarding the civic status of the respondents, the frequency of the respondents who were exposed to four or more childhood trauma was higher among the married (73.3%) compared to the respondents who were living together as couple (17.4%). Statistically, the difference in the distribution of respondents' civic status and levels of multiple exposure to childhood trauma in this study (p=0.304).

## DISCUSSION

The first objective of this study sought to estimate the prevalence of ACEs among the married individuals who participated in this study. Regarding the general prevalence of ACEs, this study found that the frequency of respondents who experienced at least four or more childhood experiences was significantly higher at 90.6% as opposed to the respondents who experienced three or less childhood traumas at 9.4%. Empirical studies show that the prevalence of ACEs varies considerably across studies. The variance is sequel to divergent population and methodology globally. For instance, results from a study on spousal concordance in ACEs and the association with depressive symptoms across China, the US, and Europe indicated that more than 90% of the couples in the study experienced ACEs (Sun, et al., 2023). Conversely, statistics from a weekly report on the prevalence of ACEs among US adults showed the overall prevalence of ACEs among U.S. adults at 63.9%. the same study indicated that the prevalence of the participants experiencing four or more ACEs varied substantially across jurisdiction from 11.9% (New Jersey) to 22.7% (Oregon) (Swedo, et al., 2023). Another study in the Kingdom of Saudi Arabia found the prevalence of experiencing at least four adverse childhood experiences at 80%, which was similarly within the ranges of many other studies (Almuneef, ElChoueiry, Saleheen, & Al-Eissa, 2017). Moreover, findings from a study among married mothers in Egypt revealed a prevalence of 66.3% of ACEs (Mohammed, Abu-Nazel, Aly, & Shata, 2024). Therefore, general prevalence of ACEs at 90.6% in this study falls within the ranges of prevalence of ACEs among married individuals in the literatures.

Further, this study found the higher frequency of ACEs among the respondents aged 41-65 years at 54.9%, among the male respondents at 47.9%, and among the married individuals at 73.3%. There are conflicting data on gender differences in exposures to ACEs. For instance, a study by Almuneef et al (2017) found that men were more likely to have four or more ACEs as opposed to female with higher tendency to have less than four ACEs. Another empirical study found the higher frequency of experiencing more than four ACEs among males at 82% as opposed to female at 72% (Amene, et al., 2024). Conversely, results from a study by Giano, Wheeler, and Hubach (2020) showed that females had significantly higher ACEs than males at ratio 1.64 to 1.46. Likewise, findings from a recent study showed that gender was significantly associated with ACEs score and specificantly, females had significantly higher ACEs scores than males (Ashekun, Zern, Langlois, & Compton, 2023). Likewise, Swedo et al (2023) found the highest prevalence of experiencing four or more ACEs among females at 19.2% as opposed to males at 15.8%.

This present study found community violence, which was significantly higher at 91%, followed by emotional neglect at 83%, and violence against household members at 79.9% as the top three highest proportion of childhood traumatic experiences among the respondents. These findings from this present study were consistent with most of the recent empirical studies where emotional neglect, community violence, emotional abuse and violence against members of the family were reported to be the most reported adverse childhood experiences. For example, Swedo et al (2023) reported emotional abuse as the most reported type of ACEs, followed by parental separation or divorce, followed by violence against household members. Similarly, results from a study by Giano, Wheeler, and Hubach (2020) reported the most common type of ACE domain to be emotional abuse, followed by parental separation or divorced and then household substance abuse. Further, a similar study among adolescents in Brazil revealed that the most common ACEs in the study was parental separation, followed by emotional neglect, and domestic violence, in which female reported a higher number of childhood adversities (Soares, et al., 2016). Additionally, Amene et al (2024), reported the most common type of ACEs among females and males as witnessing physical violence and experiencing physical violence. However, sexual violence was reported to be higher significantly in females than males.

## CONCLUSION

This present descriptive cross-sectional study investigates the prevalence of adverse childhood experiences

among the married individuals from Presbyterian Church of East Africa (P.C.E.A), Nairobi North Presbytery, Nairobi, Kenya. The study found that the prevalence of experiencing at least four or more childhood experiences at 90.6%, whereas the frequency of the respondents who experienced three or less childhood traumas at 9.4%. It was also found from this present study that the frequency of ACEs was higher among the respondents aged 41-65 years at 54.9%, among the male respondents at 47.9%, and among the married individuals at 73.3%. Also, this study found the top three highest proportion of childhood traumatic experiences among the respondents are community violence, which was significantly higher at 91%, followed by emotional neglect at 83%, and violence against household members at 79.9%. This study therefore concluded that churches in Kenya particularly, and worldwide in general may consider engaging the services of clinical psychologists to help in screening married individuals for ACEs and that early access to mental health services for children and families, including early intervention and trauma-informed care may addressing mental health needs, which can prevent the escalation of stressors that lead to ACEs. Additionally, this study found community violence, emotional neglect, and violence against household members as the highest top three proportion of childhood traumatic experiences among the respondents. This study therefore recommends that relevant stakeholders such as Kenya State Security, and government officers may tighten up the state security to prevent community violence because of the psychological impacts on the citizen and religious leaders may as well sensitize the congregation against violence against household members as well as encouraging parents to provide emotional supports to their children.

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