INCIDENCE OF DEPRESSIVE SYMPTOMS AMONGST YOUNG ADULTS EXPOSED TO ACEs IN LAGOS STATE, NIGERIA

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ABSTRACT
Adverse Childhood Experiences (ACEs) have been shown to be linked to depression. Investigating this link is important to curb the menace of depression as a mental health disorder in Nigeria. The objective of the study was to examine the incidence of depression among young adults exposed to ACEs. The study was targeted at young adults between the ages of 18 –35 living in ten local government areas of Lagos State Nigeria. A total number of 862 participants were selected using the convenient sampling method. The WHO (ACE-IQ) Adverse Childhood Experience International Questionnaire, and the Beck Depression Inventory-II were administered to determine the level of their exposure to ACEs and the severity of their depressive symptoms. The participants were assessed and categorized in accordance with their levels of depressive symptoms and exposure to ACEs. Only 17.2% reported no depressive symptoms, 59.2% had minimal, 4.2% had mild, 10% had moderate and 9.5% had severe levels of depressive symptoms. Furthermore, the results showed that ACEs significantly and positively correlated with depression (r= 0.28, p <.01).This study concluded that exposure to ACEs account for high incidence of depressive symptoms in young adults.

Keywords: *depressive symptoms, adverse childhood experiences, young adults.*

INTRODUCTION
Globally, depression is one of the most common and severe mental health disorders. The World Health Organization(WHO) has ranked it as the third largest cause of disease burden since 2008 and expects that it will be ranked as the first by 2030 (Li, et al 2021) . To forestall this prediction, aggressive steps need to be taken to curb the rampage of this mental health disorder.
Here in Nigeria, depression accounts for 7.5% of the country's total years lost to disability (YLDs) (Suraj et al, 2021). It has also been found to be one of the most prevalent mental health disorders nationwide (Health Think, 2017) with far reaching effects on the productivity and quality of life of the citizens.
The exigent need to find effective techniques for preventing, identifying, and effectively managing depressive symptoms cannot be over emphasized.
In 2018, a study by the World Bank revealed that 22% of Nigerians, on average, are chronically depressed (World Bank Poverty and Equity Global Practice 2018). The study demonstrated a link between chronic depression and a reduction in the labour market and human capital investments (especially in heavy conflict areas) in Nigeria. This led the World Bank to conclude that depression is likely to have both a short and a long-term effect on welfare in Nigeria.
Over the years, various international studies have found that there is a link between Adverse Childhood Experiences and depressive symptoms in individuals (Anda et al, 1999; Felitti 1998; Kessler 2010; Chapman et al., 2004; Wilson- Genderson et al., 2021 & Bravo et al., 2022). The result of these studies suggests that exposure to ACEs is associated with an increased risk of depressive disorders up to several decades after the occurrence of these ACEs and may even result in suicide or suicide attempt.
In Nigeria, Gureje et al. (2010) in their study also stated that ACEs have been found to strongly predict the later development of mental health disorders in adulthood in Nigeria. However, research in this area has been limited resulting in a paucity of information and a huge knowledge gap in this area.
Depressive symptoms in this study are in line with the World Health Organization's (WHO) description of depression as a common mental disorder, characterized by persistent sadness

and a loss of interest in activities that one normally enjoys accompanied by an inability to carry out daily activities, for at least two weeks. According to the WHO, people with depression normally have several of the following symptoms: a loss of energy; a change in appetite; sleeping more or less; anxiety; reduced concentration; indecisiveness; restlessness; feelings of worthlessness, guilt, or hopelessness; and thoughts of self-harm or suicide (WHO, 2014).

The term Adverse Childhood Experiences (ACEs) was coined in 1998 in the landmark Kaiser Permanente population study which was conducted in collaboration with the Division of Violence Prevention at the Centre for Disease Control and Prevention (CDC) in the United States of America. According to the Centre for Disease Control, ACEs are potentially 10 traumatic events that occur in childhood (0-17 years). These events are grouped into 3- neglect, abuse, and household dysfunction. They include exposure to violence, physical/emotional abuse, and emotional / physical neglect, witnessing violence in the home or community, having a family member attempt or die by suicide. Also included are aspects of the child's environment that can undermine their sense of safety, stability, and bonding such as growing up in a household with substance misuse, mental health problems, instability due to parental separation or household members being in jail.

The World Health Organization (WHO, 2018) also describes ACEs as some of the most intensive and frequently occurring sources of stress that children may suffer early in life. Such experiences include multiple types of abuse, neglect, violence between parents or caregivers and other kinds of serious household dysfunction such as alcohol and substance abuse, peer, community, and collective violence. The WHO further pointed out that considerable and prolonged stress in childhood has life-long consequences on a person's health and well-being; they can disrupt early brain development and compromise functioning of the nervous and immune systems. In addition, because of the behaviours adopted by some people who have faced ACEs, such stress can lead to serious problems such as alcoholism, depression, eating disorders, unsafe sex, HIV/AIDS, heart disease, cancer, and other chronic diseases (WHO, 2018).

In Nigeria, a country where both parents are struggling to make a living and most children are left on their own without adequate adult involvement and supervision in their day-to-day lives, possible exposure to ACEs cannot be ignored. With many children required to begin to fend for themselves or at least contribute to the family purse by hawking, working as domestic servants and doing various other menial jobs to make ends meet, ACEs and their effects cannot be overlooked.

The study expects to investigate whether these harsh economic and social conditions in which children are raised in Nigeria qualify as ACEs and determine if there is a link between these experiences and levels of depressive symptoms in young adults. Linking ACEs to the risk of developing depressive symptoms will be extensively beneficial to investigating the pathogenesis of depression, the prevention of depression, and the risks of depression.

The early identification of depressive symptoms and provision of effective trauma- informed care and intervention will go a long way in ameliorating the debilitating effects of depression.

Furthermore, the study also expects to proffer suggestions on steps to be taken to prevent ACEs by emphasizing its consequences on the larger society. It will also highlight the importance of appropriate childcare and the inculcating of resilience-building skills in the education curriculum to help ameliorate the effect of ACEs. Ultimately it should aid the development of public policy and legislation to alleviate poverty, a major precursor of ACEs.

SCOPE OF STUDY

This study is targeted at young adults between the ages of 18 – 35years who have been exposed to Adverse Childhood Experiences with depressive symptoms living in ten local government areas of Lagos State Nigeria namely: Ikorodu North LCDA, Ikorodu West LCDA, Ibeju Lekki LGA, Epe LGA, Shomolu LGA, Ikeja LGA, Ojo LGA, Badagry LGA, Mainland LGA and Eti-Osa LGA.

OPERATIONAL DEFINITION OF TERMS

1. **Adverse Childhood Experiences (ACEs)**- These are a set of traumatic events or circumstances occurring before the age of 18 that have negative lasting effects on an individual's health and well-being as measured by the WHO ACE International Questionnaire (WHO ACE- IQ).
2. **Childhood –** The period of an individual's lifespan between the ages of 0-17years
3. **Young Adulthood**- The period of an individual's lifespan between the ages of 18-35years.
4. **Depressive Symptoms** – These are symptoms exhibited by individuals diagnosed with clinical depression. They include persistent sadness, a loss of interest in normally enjoyable activities, an inability to carry out daily activities, a loss of energy; a change in appetite, sleeping, anxiety, reduced concentration; indecisiveness; restlessness; feelings of worthlessness, guilt, or hopelessness and thoughts of self-harm or suicide.

PREVIOUS FINDINGS ON INCIDENCE OF DEPRESSION AMONG YOUNG ADULTS EXPOSED TO ACEs.

One of the landmark studies about the effect of ACEs on health and wellness was conducted by Felliti et al., (1998). In that study, they found ACEs to be a leading cause of death in adults. For the purposes of their study, a questionnaire about ACEs was mailed to 13,494 adults who had completed a standardized medical evaluation at a large Health Maintenance Organization. 9,508 persons responded and the findings of that study showed that there was a strong graded relationship between exposure to abuse or household dysfunction during adulthood and many other risk factors for various leading causes of death in adults. The study found that individuals that had experienced four or more categories of ACES had 4-12fold increased risks for alcoholism, drug abuse, depression and suicide attempt compared to those that had no ACEs. This finding was like that of Chapman, Whitfield, Dube, Felitti, Edwards & Anda (2004) who also found that adverse childhood experiences have a strong, graded relationship to a lifetime risk of depressive disorders. In their opinion, the more ACEs an individual has been exposed to the more likely s/he is to develop depressive symptoms. The result of their study suggests that exposure to ACEs is associated with an increased risk of depressive disorders up to several decades after the occurrence of these ACEs. In an earlier study they had also suggested a powerful graded relationship between adverse childhood experiences and the risk of attempted suicide throughout the lifetime of the individual (Dube, Anda, Felitti, Chapman, Williamson &Giles 2001).

In a study by Kessler (2010) titled "Childhood Adversities and Adult Psychopathology" in the WHO World Mental Health Surveys (2010), adverse childhood experiences were the strongest predictors of mental health disorders. A total of 51,945 adults (age 18 and older) participated in these surveys and the study established that childhood adversities had strong associations with all classes of disorders at all life-course stages in all groups of World Mental Health (WMH) countries. These WMH surveys were administered in 21countries classified by the World Bank as 9 high income (Belgium, France, Germany, Israel, Italy, Japan, The Netherlands, Spain, USA), 6 high-middle income (Brazil, Bulgaria, Lebanon, Mexico, Romania, South Africa), and 6 low/lower-middle income (Colombia, India, Iraq, Nigeria, People's Republic of China, Ukraine.

In a more recent study conducted by Zarse et al. (2019), a search was conducted for English language articles published before 2016 containing the phrase "Adverse Childhood Experiences" where the ACE questionnaire was utilized. This search came up with 134 articles including 44 based on the original ACE report. This ACE questionnaire research showed that exposure to ACEs increased the risk of a wide array of mental illnesses, addictions, and even multi-organ

medical diseases. They found that these adverse childhood experiences added up in doses to potentially increase the disease burden of the individual.

Another study by Lemon et al. (2022), examined the correlation of depressive symptoms with Adverse Childhood Experiences (ACEs), racial/ethnic discrimination, hope, social support, and their interactive effects, among a diverse sample of young adult college students. The results of this study showed that the participants (whose average age was 20.56 years old), that reported at least one ACE and racial/ethnic discrimination correlated with higher levels of depression.

In their study Li et al. (2022) explored the relationship between ACEs patterns and the levels of depressive symptoms trajectory at various points of 3,662 participants aged between 17and 22. They found that “High neglect/emotional abuse/community violence,” “High neglect/emotional abuse” and “High neglect/family dysfunction” demonstrated a high risk for “High depressive symptom” and “Moderate depressive symptom” in the participants.

Also in their study, Kim et al. (2022), grouped ACEs in to four; child maltreatment, household dysfunction, violence and low adversity and they found that individuals exposed to child maltreatment showed a significantly higher risk of depressive symptoms than the other groups while those that had low adversity showed significantly lower risk of depressive symptoms.

A systematic review investigating the association between ACEs and the allostatic load (AL) in an adult population was conducted by Misiak et al. (2020). The study concluded that most early-life psychosocial stress (which qualifies as ACEs) might have a lasting impact on the AL of the members of the population. According to their study an elevated AL index was found to predict several unfavorable health outcomes.

Despite numerous international research regarding the wellness and mental health of individuals that have been exposed to ACEs, there have been very few such research in Nigeria. This has led to scarcity of information with regards to depression and depressive symptoms in young adults. This paucity of information makes this study vital to the identification of the pathogenesis of depression in our country thereby closing the huge knowledge gap in this area.

The most remarkable study regarding the ACEs and mental health in Nigeria was conducted over a decade ago by Oladeji, Makanjuola & Gureje (2010). This study focused on ACEs within the family context. Oladeji et al. (2010) used data from a large community survey of mental health disorders in Nigeria. Assessments of family -related ACEs and lifetime mental health disorders were conducted. Almost half of the respondents had experienced an ACE within the context of family before they were 16years old and the study concluded that ACEs that consist of violence in the family, parental criminality, mental illness, and substance misuse were likely to have a significant mental health consequence in adulthood. They also found that the likelihood of adult substance abuse increased with those who had experienced family violence, neglect, or abuse. This present study looked at all the various categories of ACEs in general and depressive symptoms without limiting itself to family and household dysfunctions.

The need to tackle the crippling effects of depression in Nigeria cannot be over-emphasized and this underscores the necessity for this study.

METHOD

Research Design

The ex-post-facto, cross-sectional, correlational research design was employed for the data collection stage and paper and pencil questionnaires were used. The independent variable was Adverse Childhood Experiences while the dependent variable was the level of depressive symptoms score obtained in the Beck Depression Inventory -11 instrument.

The method utilized in this study involved the assessment and categorization of young adults in the general population with depressive symptoms that had been exposed to Adverse Childhood Experience

The Convenience Sampling technique was used to select any available and willing individual while a purposive sampling technique was employed and participants were selected based on the purpose of the study and their meeting the criteria for inclusion.
The inclusion criteria were:

- Individuals between the ages of 18-35years.
- Minimum of 12 years of education (Senior Secondary School level).
- Ability to read and write.
- Ability to operate and use a computer.
- Resident in Nigeria for the first 18years of their life.

The procedure involved first recruiting and training of research assistants from the randomly selected Local Government Areas of Lagos State on the contents and technicalities of the instrument ensuring that they were able to administer, score and interpret the instruments. They were also trained on the ethical issues to be considered in the study. The purpose and benefit of the research were carefully explained to the participants with assurance of confidentiality and their written consent was sought and obtained and only those who accepted to participate and met the inclusion criteria were selected for the study.
Altogether, about one thousand (1000) questionnaires were distributed to the general population out of which only 862 were legibly and adequately completed. These were used for analysis.

Instruments:
The following instruments were used to collect data:

- **A self-developed form for socio-demographic and contact details.** The researcher created a form to collect data on contact details, socio-demographic variables, such as age, level of education, marital status, religion, ethnic group, and respondents' willingness to be contacted for therapeutic intervention.
- **The WHO (ACE-IQ) Adverse Childhood Experience International Questionnaire** ACE-IQ is 43 items, seven sections scale with different response formats ranging from Yes or No to Likert. Several studies have confirmed the good validity of the content of the ACE-IQ, reliable internal consistency of α =.81 (Kazeem, 2015), and a satisfactory test-retest reliability since all the key elements of the questionnaire ensures that the information collected is independent. (Ho GWK et al. 2018). Convergent validity evidence was observed in a sample of 253 Nigerian prisoners and reported a correlation between ACE-IQ and the CTQ ranging from = .49 to .72
- **Beck Depression Inventory (BDI-2)** The BDI-II is a widely used 21-item self-report inventory measuring the severity of depression in adolescents and adults. It is one of the most widely used instruments for screening and estimating the intensity of depression. It has been revised in the second edition, to reflect the Diagnostic and Statistical Manual Fourth Edition (DSM-IV) diagnostic criteria. In terms of its psychometric properties, the second edition of BDI has been positively correlated with the Hamilton depression rating scale with a Pearson coefficient (δ) of 0.71, showing good agreement. The test was also shown to have high test-retest reliability (δ =0.93) and a high internal consistency (δ = 0.91).

Procedure
The researcher recruited and trained research assistants from the selected local government areas of Lagos State on the contents and technicalities of the instrument ensuring that they were able to administer, score and interpret the instruments. They were also trained on the ethical issues to be considered for this stage of the study.
The researcher and research assistants met with the participants in their respective homes, institutions of learning, business premises and public spaces in the 10 LGA/LCDA between 2:00

pm - 4:00 pm, to avoid it being too early and to also fall within working hours. The purpose and benefit of the research was carefully explained to the participants and their consent was sought and obtained for participation in the study. All those who volunteered to participate and met the inclusion criteria formed the participants for the study.

The researcher and assistants after meeting and introducing themselves set out to establish rapport with conventional dialogue and assurance of confidentiality. The participants were given adequate time and space to complete the questionnaires. The first instrument administered was the form to obtain the socio-demographic, contact details and willingness to participate in future therapy where necessary.

The WHO ACE-IQ (World Health Organization Adverse Childhood Exposure International Questionnaire) was administered to the participant to determine the level of their exposure to ACEs and the Beck Depression Inventory (BDI-2) was also administered alongside to test the level of their depressive symptoms.

Data Analysis

All analyses in this study were done using SPSS 24 (IBM Corp. Released 2016. IBM SPSS statistics for windows, Version 24.0: IBM Corp).

The descriptive statistics was used to assess the characteristics of the data. This was assessed using the skewness and kurtosis values to check both the distribution of the data and to detect any outliers.

Inferential statistics was then used to compare the mean differences between the levels of exposure to ACEs in the population and compute the test of hypotheses.

The Multivariate Regression Model was used to test the influence of socio-demographic (age, marital status, and gender) of the participants on their depressive symptoms level.

RESULTS

Participant Demographics

Table 1: Descriptive statistics of the respondent's socio-demographic characteristics

Variables	Measures	N	%
Sex	Male	261	30.3
	Female	601	69.7
Age	Youth (18-25)	586	68.0
	Young adult (26-30)	86	10.0
	Adult (31-35)	190	22.0
Marital Status	Single	618	71.7
	Married	244	28.3
	FSLC	34	3.9
Education	Secondary school	160	18.6
	ND/NCE	544	63.1
	HND/B.Sc.	118	13.7
	Postgraduate Degree	6	.7
Religion	Christianity	716	83.1
	Islam	144	16.7
	Others	2	.2
	Igbo	106	12.3
Ethnic Affiliations	Hausa	24	2.8
	Yoruba	542	62.9
	Others	190	22.0
	Self - employed	107	12.4
	Civil Service	161	18.7
Occupation	Professional	100	11.6
	Schooling	463	53.7

Unemployed	31	3.6

Table 1 presents the demographic statistics of the sample that participated in the study. The sample is predominantly female 601 (69.7%), while the male gender constitutes 30.3% i.e., 261 persons.

Most of the participants in the sample were single. Singles about were 618 constituting 71% of the sample while the married were 244 constituting 28.3% of the sample.

The participants were literate with a larger percentage completing some form of formal education. About 34(3.9%) had first school living certificate, 160(18.6%) had secondary school certificate, Majority 544(63.1%) completed their Diplomas or Colleges of Educational level courses, 160 (18.6%) completed their secondary school education, 118 (13.7%) completed their First Degree, and 6 (0.7%) completed their Master studies respectively.

Majority 716(83.1%) of the sample practice Christianity, 144 (16.7%) practice Islam, and the remaining 2 (0.2%) practice other religions.

Regarding their ethnic affiliation, 106(12.3%) are Igbo, 24(2.8%) are Hausa, 542 (62.9%) are Yoruba, and 190 (22.0%) reported other Ethnic affiliations. In respect to the respondent's occupation, 107(12.4%) were self-employed, 161(18.7%) were civil servants, 100(11.6%) were professionals, 463(53.7%) were schooling and 31(3.6%) were unemployed.

Table 2: Descriptive statistics for the study variables

Measure	N	Range	Min	Max	Mean	S.E	SD	Variance	Skewness	Kurtosis
Adverse childhood experiences	862	60	60	120	98.36	0.33	9.70	94.08	-0.25	1.20
Depression	862	44	0	44	12.15	0.39	11.48	131.89	1.11	0.65
Valid N(listwise)	862									

From Table 2, it was observed that the skewness values of all the variables ranged between -0.04 and 3.85 and the values of kurtosis ranged between -0.32 and 43.43. The values for skewness and kurtosis were therefore within the accepted limit showing that the data is normally distributed with no outliers.

Table 3: Correlation matrix and descriptive statistics for key study variables (N = 862 for all analyses)

Variables	M	(SD)	1	2
1. ACE	98.36	9.70	1	
2. Depression	12.15	11.80		.28**

Key: ACE = Adverse Childhood Experiences

** Correlations is significant at the 0.01 level (2-tailed)

The relationship between the variables was assessed using Pearson-Product Moment Correlation (Pearson r). The correlation matrix helped to assess the relationship among the variables to know the variables to be included in the model testing. The result presented in Table 3 showed that ACEs significantly and positively correlated with depressive symptoms ($r= 0.28$, $p <.01$)

Table 4: 95% CI test of the incidence of ACEs with Depressive symptoms

Confidence interval type	Parameter	Estimate	95% Confidence interval	
			LLCI	ULCI
One-sample Binomial Success rate Clopper Pearson	Probability depression	.35	.31	.38

LLCI= lower limit confidence interval, ULCI= upper limit confidence interval

This was determined with the one sample non-parametric test for 95% confidence interval of incidence proportion of those who experience ACEs with depressive symptoms. The result showed that the proportion of incidence with Depressive symptoms is .35(35%). The 95% confidence interval (CI), ranges from .32 to .38 so this implies that there is 95% confidence that the proportion of the population with ACEs who have depressive symptom will fall significantly within *LLCI* = .32 to *ULCI* = .38.

Table 5: Descriptive Statistics showing pattern of depression among young adults exposed to Adverse Children Experiences

Factor	Rating	F	%
Depression	Absent	148	17.2
	Minimal	510	59.2
	Mild	36	4.2
	Moderate	86	10.0
	Severe	82	9.5
	Total	862	100.0

Table 5 shows the pattern of depressive symptoms among young adults exposed to Adverse Children Experiences. 59.2% had minimal depression, 4.2% at mild level of depression and 10% had moderate depression, 9.5% had severe depression. Only 17.2% reported no depressive symptoms.

DISCUSSION

This study was undertaken to assess the incidence of depressive symptoms among young adults exposed to Adverse Childhood Experiences in Lagos State, Nigeria.

The data collection involved the researcher and research assistants administering questionnaires to young adults between the ages of 19-35years in 10 local government areas of Lagos state. The questionnaires that were administered were, a self-developed form to obtain the socio-demographic and contact details of the participants, the WHO ACE- IQ and the Beck Depression Inventory-11 (BDI-2).

The research found that exposure to ACEs correlated with depressive symptoms and did account for significant incidence of depressive symptoms amongst the population being studied.

The research question was tested using the one sample non-parametric test. The finding of this study indicated that exposure to ACEs did indeed account for high levels of depressive symptoms within the population under study.

The oldest members of the population in this study were born around 1986 while the youngest were born about 2003. This time span of 17 years has marked a very sharp decline in the economic fortunes of Nigeria. According to Wikipedia the Nigerian Naira which was 2.02 to the USD in 1986 had fallen to 114-127 to the USD by 2003. This sharp decline in the Naira/ Dollar value has continued and has had a very negative effect on poverty levels, job opportunity and the general wellbeing of Nigerians. This decline into poverty started during the childhood of most of the members of the population under study and research has shown that being poor is associated with so many childhood adversities that it may be considered an ACE, more pervasive and

persistent than all others (Felliti et al., 1998; Steele et al., 2016; Hughes *et al*., 2018; Lacey *et al*., 2022). Since as many as 4 in 10 Nigerians live below the national poverty line (World Bank, 2022) it is therefore not surprising that ACEs are prevalent amongst members of this population. This present study's finding that the incidence of depressive symptoms amongst these young adults exposed to ACEs is elevated is confirmed by various other research which have shown an association between ACEs, depressive symptoms, and general wellbeing of the individual (Felliti et al., 1998; Lemon et al., 2022; Li et al. 2022; Zarse et al., 2019).

It is possible that the anxiety associated with poverty, family dysfunction, neglect and abuse may act as catalysts making these young adults vulnerable to depressive symptoms even where they are not genetically predisposed to them. Associations of early childhood adversity trauma may be reinforced by life events that other young adults who have not been exposed to these experiences may find less difficult to cope with.

The result of this study has theoretical and practical implications. First it reiterates the fact that depression is gradually becoming a mental health emergency in Nigeria with a significant percentage of the sample being positive with depressive symptoms. Secondly, it confirms that there is a theoretical link between ACEs and depression. Thus, one of the immediate or remote causes of depression includes ACEs.

CONCLUSION

The study contributed to knowledge by identifying the incidence and pattern of depressive symptoms among young adults that have been exposed to Adverse Children Experiences. The study also gave a clear-cut positive association between ACEs and depressive symptoms in young adults. This means that since most young adults in Lagos, Nigeria have been exposed to ACEs, elevated depressive symptoms will be the consequence. By implication, policy planners and makers should put ACE in perspective as a known predictor of depression which needs to be controlled.

This finding is also instructive as it will assist the early identification of these symptoms and enable effective intervention.

Implications of Exposure to Adverse Childhood Experiences and Depression in Young Adults

Practitioners should carry out comprehensive assessments including ascertaining the other possible factors such as ACEs as a co-morbid factor when clients present with depressive symptoms. Such knowledge will enable them to manage the impact of ACEs on the individual's current mental health and determine the appropriate treatment plan expediently.

Trauma-informed care should be adapted as the template for managing depression in young adults bearing in mind that most of them have been exposed to some level of trauma and Adverse Childhood Experiences.

Resiliency training skills should be incorporated in schools and therapeutic intervention for young adults to forestall the negative consequence of ACEs.

Suggestions for Future Studies

This study was limited by the homogeneity of our sample i.e., educated, computer literate and access to the internet. Also, since our study location was in Lagos State, our sample frame underrepresented rural areas in Nigeria.

Another limitation was the retrospective nature of this study and the fact the report of ACEs and depressive symptoms may have been hindered by inaccurate recall, bias, and social acceptability.

Further research is recommended to investigate Adverse Childhood Experiences in the entire Nigeria geo-political areas.

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