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UNDERSTANDING THE INFLUENCE OF ADVERSE CHILDHOOD EXPERIENCES (ACES), PSYCHOLOGICAL WELL-BEING ON HUMAN FLOURISHING AMONG STUDENTS IN UNIVERSITY OF LAGOS.

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Abstract

The university marks a critical juncture in student's lives where the shift to adulthood involves significant social, academic and personal obstacles, this shift can be made more difficult by past adverse experiences. This study set out to investigate the impact of adverse childhood experiences on the psychological well-being and human flourishing of undergraduates in the university. In carrying out this study, specific objectives were to: (a) determine if ACEs will significantly influence psychological well-being among Unilag students.(b) determine if there is a negative relationship between ACEs and human flourishing among Unilag students, it is also aimed at examining if age differences are moderating the impact of ACEs on psychological well-being, and lastly to determine if there are differences in the levels of adverse childhood experiences and psychological well-being between Males and Females. Students were conveniently sampled across various levels and departments at the University of Lagos. The study employed a cross-sectional design involving 400 undergraduate students. Participants completed self-reported questionnaires assessing their ACEs, psychological well-being and human flourishing. The findings indicate that ACEs have a significant negative influence on psychological well-being (B=-2.636, p= <.001), and showed a significant negative relationship between ACEs and human flourishing (r= -.503, p= <.01). However, age did have a significant influence on the impact of ACEs on psychological well-being (B= -.288, p=.033). Males did not report higher ACEs and psychological well-being than females (t(333)= 0.091, p=0.927), (t(333) = 1.077, p = 0.282). This study concludes that ACEs have a detrimental influence on university student's psychological well-being and that ACEs have a negative relationship with the flourishing of students at the University of Lagos. Discussions and recommendations were made in line with the research findings.

Keyword: Adverse Childhood Experiences (ACES), Psychological Well-Being, Human Flourishing, Undergraduate

Introduction

Mental health is an important dimension of the overall well-being of both young and adults. It also suggests that they are capable of successfully executing their thoughts, feelings, and behaviours. Having these capacities enables people to become productive, enjoy fulfilment in relationships with others, and effectively adapt, change, and cope with life challenges. Individuals' childhood experiences are of supreme importance in determining their future outcomes. A significant amount of research has surfaced over the last three decades that shows how childhood trauma negatively affects an adult's physical and mental health. For instance, it is now feasible to evaluate childhood trauma and ascertain its impact on an individual's future health and well-being thanks to the Adverse Childhood Experiences measure. ACEs include child maltreatment (e.g. physical, sexual, and verbal abuse) and broader experiences of household dysfunction, such as witnessing violence in the home, divorce, substance misuse, mental illness, or criminal behavior.

Research indicates a link between adverse childhood experiences (ACEs) and unfavoruable consequences; the more ACEs someone experiences, the higher their chance of engaging in activities that compromise their health (e.g. substance abuse, risky sexual behaviour), suffering poor adult health, and premature mortality. It has been found that childhood adversity is associated with lower levels of flourishing. Adverse childhood experiences are common and linked to detrimental effects on one's social and physical well-being. Our understanding of how exposure to patterns of ACEs correlates with favourable adult outcomes is limited. It has been discovered that psychological well-being (PWB) is linked to development, success, quality of life, and health. PWB is a significant predictor of life outcomes. High Psychological well-being (PWB) has been associated with better physical and mental

health, as well as greater life satisfaction (Pressman et al, 2019; Ryff, 2014). Given the importance of psychological well-being (PWB), many studied have attempted to understand the factors associated with PWB and found that life experience such as ACEs is an important one.

Many university students might have experienced ACEs in their childhood, and these traumatic events may have impacted their future success. However, the effects of ACEs on psychological well-being and human flourishing in university students have not been fully explored. University students who have experienced ACEs are more likely to engage in risky behaviors, such as substance use and unprotected sex, compared to their peers without a history of ACEs. Therefore, proactively identifying and managing ACEs could help reduce their negative impacts on university students' psychological well-being.

Background of the study

There are varied definitions of ACEs that have been used in diverse contexts which have evolved since its first use in literature. Adverse childhood experiences can be described as potentially traumatic events that children and adolescents under the age of 18 have experienced that can have negative lasting effects on health and well-being (Ford et al., 2019).

A study advocated an inclusive definition that considers the effects of socioeconomic determinants of health on ACEs. According to this author, this approach may provide significant insights into the importance of socioeconomic conditions in traumatic and abusive experiences (Agbaje et al., 2021). ACEs cover a broad range of traumatic events, including physical and emotional neglect, physical, sexual and emotional abuse, exposure to domestic violence, mental health problems, family incarceration, separation and substance misuse (Felitti et al., 1998). Various individual, family, and community factors can affect a child's likelihood of experiencing ACEs, such as living in unstable housing, having parents who have experienced ACEs and growing up in communities with high levels of social and environmental dysfunction (CDC, 2021). ACEs are associated with poor health outcomes such as cancer, heart disease, premature mortality stroke, depression, substance use, obesity, unemployment and persistent violence perpetration by victims (CDC, 2021). It was demonstrated that ACEs has an increasing effect, therefore individuals with higher abusive experiences have greater mental health disturbance (Spinazzola et al., 2014).

Psychological well-being, a key aspect of human flourishing refers to a person's subjective experience of affirming psychological states such as pleasure, life-fulfillment, and a sense of purpose. It encompasses different traits of an individual's mental and emotional health, including positive relationships, personal growth and development, positive self-esteem and self-acceptance and a feeling of being in control of one's life (Ryff, 1989). Psychological well-being is an important dimension of an individual's overall well-being; it also implies the capacity to perform successfully in terms of our emotional health (thoughts, feelings, and behaviors) and overall functioning. Having these capacities or functioning helps individuals be productive, enjoy fulfilment in relationships, and effectively adapt, change and cope with life challenges.

Human flourishing covers a comprehensive definition of well-being including emotional, psychological and social dimensions. It entails thriving in a variety of spheres including fulfilling relationships, a feeling of purpose, personal development and a positive self-image (Keyes, 2002). Despite the negative impacts of ACEs, individuals can achieve flourishing in several ways. The ability to flourish despite adversities highlights the possibility for recovery and growth, especially in the face of major early life challenges (Ryff & Singer, 2003). Human flourishing emphasizes the development of positive characteristics and experiences rather than only the absence of negative symptoms or illnesses (Diener et al., 2010). According to Burns et al. (2022), human flourishing is regarded as a crucial component of mental health promotion. Prior research suggests a relationship between childhood experiences and adult flourishing (Yu et al., 2022).

Studies suggest that there is a high prevalence of childhood adversity among Nigerian children and adolescents; for example, according to Oladeji et al. (2010), nearly half and 31.2% of their sample, respectively, have gone through one adversity and two or more adversities. According to the findings of the Nigeria Violence Against Children Study (VACS), which was carried out in 2014, six out of ten male and female children have been the victims of violence before the age of eighteen. Furthermore, approximately 1 in 6 adolescents aged 13 to 17 years had experienced two or more types (sexual abuse, emotional violence, physical violence and psychological violence) in the past 12 months. Due to the high prevalence of childhood adversities, there should be reliable data on young Nigerian adults' mental health status.

Findings from population-based studies show that childhood adversity is commonly associated with the development of psychological disorders not only in childhood but also in adolescence and adulthood. Adverse childhood experiences (ACEs) have indicated an increased risk in depression, anxiety, aggression, suicide risk (Chapman et al., 2004; Turner et al., 2006), personality disorders, behaviour disorders and substance abuse (Afifi et al., 2010).

There has also been significant advance mention research exposing the harmful effects that childhood adversity has on an individual's psychological health over the past few decades. For example, ACEs framework has provided a mechanism for retrospectively measuring childhood adversities and identifying their impact on health/well-being later in life.

Statement of the problem

The impact of ACEs on psychological well-being has been an ongoing area of concern in mental health research; it has emerged as an important factor influencing an individual's psychological well-being. Understanding the extent of this impact is crucial for developing effective interventions and support system for individuals affected. Despite the growing recognition of the impact of ACEs, gaps remain in understanding the specific impact of ACEs on the psychological well-being and human flourishing of university students.

One of the prominent limitations in existing research is the inadequate consideration of interrelation, as studies often ignore the interaction of factors such as age difference, gender differences on ACEs in determining psychological well-being and human flourishing. There is a need to understand how age, and gender may influence the relationship between adverse childhood experiences, psychological well-being and human flourishing.

More importantly, this study will breach these gaps and examine how ACEs impact psychological well-being among student populations in University of Lagos. It will also measure if there is a relationship between adverse childhood experiences and human flourishing. It is also imperative to understand if the impacts of adverse childhood experiences on psychological well-being and human flourishing are influenced by the age of the students and gender of the students. Understanding these issues will be of great merit in developing effective interventions and support systems for individuals with a history of ACEs.

Objectives of Study

This study aims to examine the role of adverse childhood experiences (ACEs) on psychological well-being and human flourishing among students at the University of Lagos. The specific objectives of this study are to:

(a) examine if Adverse Childhood Experiences (ACEs) influences psychological well-being.
(b) examine the relationship between Adverse Childhood Experiences (ACEs) and human flourishing.
(c) determine if age differences are moderating the impact of Adverse Childhood Experiences (ACEs) on psychological well-being.
(d) determine if there will be a difference in the levels of adverse childhood experiences and psychological well-being between Males and Females.

Conceptual Review

Adverse Childhood Experiences

Adverse childhood experiences can be described as potentially traumatic events that have negative lasting effects on health and well-being, this wide definition may include maltreatment and/or abusive practices, as well as living environments that may be harmful to the child's development (Boullier & Blair, 2018). These traumatic events have an impact on a child's development of the brain and health as an adult. Negative outcomes tend to be more severe or long-lasting if the ACE experienced is recurring, chronic and contains multiple issues including poverty, or harmful parent-child relationships associated with sexual abuse.

Types of ACEs

Neglect: This can be physical or psychological; physical neglect refers to as situation where a parent or caregiver doesn't provide the basic care that a child needs to survive and thrive such as food, clothing, shelter and access to medical care (Marc & Hanafy, 2016). Psychological neglect on the other hand means the child's emotional and developmental needs are not fulfilled by parents or other caregivers such as attention and affection.

Abuse: Is defined by WHO refers to all forms of physical and emotional ill-treatment, sexual abuse and exploitation that result in actual or potential harm to the child's health, development and dignity (Gonzalez et al., 2023). There are different types of abuse such as Physical abuse which is any intentional act that causes physical harm through bodily contact, it is the most common ACE such as being slapped, pushed, burning, biting, restrained etc. Sexual abuse refers to any forceful, unwanted or otherwise abusive sexual behaviour such as oral, anal or vaginal penetration, exposure to sexually explicit materials, oral-genital contact, genital fondling etc.

Psychological abuse refers to any intentional act that causes psychological harm such as gas-lighting, bullying, abandonment, harassment, verbal abuse, isolation and unjustified withdrawals of service or supportive network.

Psychological Well-being: This is an important indicator of life outcomes and is associated with health, quality of life, development and success (Lyubomirsky et al., 2020). Ryff (1989) identified

six characteristics of psychological well-being: self-acceptance, autonomy, environmental mastery, personal progress, and social connections. These characteristics include an individual's feeling of self-determination, control over their environment, potential for personal growth, capacity to build fulfilling relationships, and sense of purpose in life. Diener et al. (2010) defined psychological well-being as a subjective evaluation of one's life that is categorized by affirmative emotions, engagement, and meaning. This definition covers a broad range of positive experiences including happiness, satisfaction and a sense of fulfillment. Seligman (2002) put out the idea of "positive psychology" which sees psychological well-being as a confluence of fulfilment and enjoyment. This definition acknowledges that happiness is characterized by positive emotions, pleasure, and a sense of meaning and purpose in life rather than just the absence of unpleasant feelings or events. Components of Psychological Well-being are **Self-acceptance** It refers to a positive attitude towards the self, including the acceptance of the self and positive feelings about past experiences. High scores reflect the respondent's positive attitude about his/herself.

Autonomy: It refers to the ability to make decisions and act in a self-determined way (Ryff, 1989). Individuals who have high levels of autonomy can pursue their own goals and interests which can lead to improved well-being (Waterman, 1993).

Human Flourishing: Is often considered a goal of human development and well-being, reflecting the highest potential of individuals and societies (VanderWeele, 2017). VanderWeele (2017) defined Human Flourishing as a multi-dimensional concept that goes beyond mere happiness or satisfaction encompassing a holistic sense of well-being and fulfilment. It refers to a state where individuals enjoy favorable results in different areas of their lives such as physical, social and psychological well-being. According to VanderWeele (2017), human flourishing comprises six core domains: happiness and life satisfaction, physical and mental health, meaning and purpose, character and virtue, close social relationships and financial and material stability. These dimensions of human flourishing are frequently considered universally desirable and reflect the World Health Organization's definition of health (WHO) "a state of complete physical, mental, and social well-being and not merely the absence of infirmity'. Therefore, human flourishing is not only a reversal of negative aspects of health; instead, it is different from and exists amidst illnesses and adversities (Keyes et al., 2012). It is therefore regarded as a crucial component of mental health promotions (Burns et al., 2022).

Dimensions of Human Flourishing

Happiness and Life Satisfaction: This domain involves the subjective well-being of individuals, distinguished by recurrent positive emotions, infrequent negative emotions, and general life satisfaction (Diener et al., 2003). This is our subjective experiences and evaluation of how happy and satisfied we think we are. Research has shown that happiness and life satisfaction are associated with better health outcomes, longevity and overall well-being (Diener & Chan, 2011).

Physical and Mental Health: This involves the absence of disease, physical fitness, and psychological well-being, such as low levels of anxiety and depression (Ryff & Singer, 2008). This domain is important because it influences overall life satisfaction and the ability to pursue personal and professional goals. Good physical and mental health enhances energy levels, increases productivity, and reduces the risk of illness all of which contribute to higher life satisfaction and improved quality of life (Diener et al., 2011; Huppert, 2009).

Trauma Theory

The major thrust of trauma theory which was developed by Judith Herman in 1992 emphasizes that traumatic experience, including those events that are considered ACEs, can impede the psychological well-being of individuals through the development of three symptom clusters: hyperarousal, constriction and intrusion (Herman, 1992). Hyper-arousal which is a key symptom of posttraumatic stress disorder (PTSD) occurs when an individual's sympathetic nervous system is activated by a traumatic memory. The chronicity of hyper-arousal produces a prolonged state of self-protective vigilance that is difficult to turn off or regulate (Herman, 1992). Oftentimes, traumatized individuals experience another system called 'constriction' where they may become physiologically, emotionally and cognitively unresponsive to stimuli. While constriction can functionally help individuals avoid painful trauma-related responses, intrusion may break through forcing the survivor to relieve the trauma through fragments of images and vivid sensations of the original experience, mostly in the form of nightmares (Huang et al., 2021; Herman, 1992).

In a study carried out by Anda et al. (2006), they used a sample of 17337 and found that a higher ACE score significantly increased the risk of affective, somatic and aggression-related outcomes. Traumatized individuals are highly sensitive to possible threats of danger, feeling as though danger may occur anytime; they are likely to dissociate from present situations, disrupting the ability to engage in situations and impeding psychological well-being in the long run. This theory highlights

ACE is associated with poorer mental health, reduced stress reactivity and increased depressed affect and impulsive behaviour (Merrick et al., 2017; Anda et al., 2006). ACEs may likely lead to lower psychological well-being and poorer health outcomes.

Literature Reviews

A study by Zhang et al. (2020) was carried out on the adverse childhood experiences and psychological well-being in a rural sample of Chinese young adults, they concluded that ACEs were widespread among Chinese adults and had harmful effects on their psychological well-being.

A study by Mosley-johnson et al., (2019 found that those exposed to ACEs were significantly associated with lower life satisfaction, lower psychological well-being, and lower social well-being, especially for those adults who report abuse and household dysfunction during childhood. They reported that more than half of U.S the population has experienced adverse childhood experiences (ACE) which are linked to physical and mental health issues.

"Higher exposure to childhood adversity is associated with lower adult flourishing' according to, Wang et al. (2022), their findings have inferences for efforts to identify ACE exposure through routine screenings to prevent adverse health and social consequence as well as monitoring to boost well-being to prevent ACE exposure.

Jones et al. (2022) on 'gender differences in early adverse childhood experiences and youth psychological distress, the results indicated that ACEs are related to psychological distress differently for boys and girls.

A study in Southeast Nigeria on ACEs and psychological distress among higher education students was conducted by Agbaje et al., (2021), the study reported that ACEs were prevalent among young adults and are associated with psychological distress in adulthood.

Akinwale & Aroyewun (2023) in a study among selected emerging adults in rural areas of Lagos found that ACEs were prevalent among emerging adults in rural communities and had deleterious effects on their psychological well-being. The study recommended that more work is needed in advocacies because several people do not know that physical and verbal abuse can affect the psychological well-being of emerging adults. Therefore, there is a need to develop various culturally appropriate assessment practices, interventions, and policy responses to the menace.

Method

This present study was carried out in the University of Lagos, Akoka, Yaba, Nigeria, located in the south-western region of Nigeria. Lagos based on the estimate provided by the University of Lagos pocket Statistics. A quantitative design which adopted the cross-sectional was chosen as the appropriate method for this study. This design is the most suitable for this study because it allows the researcher to collect data from various levels of (200-400L) students and departments at the University of Lagos at a single point in time and analyze the relationship between the study variables of interest. Using a questionnaire composed of standardized elements, the study gathered information on age, gender, the relationship between adverse childhood experiences and psychological well-being, as well as the relationship between human flourishing and adverse childhood experiences (ACE). The study includes three independent variables: adverse childhood experiences, sex, and age, and two dependent variables, which are psychological well-being and human flourishing.

The sample for this study was determined to be 400 of which 335 came back valid. The sample comprised 335 individuals, with a gender distribution of 182 males (54.3%) and 153 females (45.7%). This distribution shows a slight majority of male respondents, indicating a relatively balanced representation of genders. Regarding age, most participants were between 22-25 years old (148, 44.2%), closely followed by those aged 18-21 (142, 42.4%), with a smaller proportion aged 31 and above (45, 13.4%). This indicates that the sample is predominantly composed of younger adults, with the largest proportion of participants being in their early twenties. The academic level distribution showed that most students were in 200L (143, 42.7%), followed by 300L (117, 34.9%), and 400L (75, 22.4%). This distribution indicates that the sample is predominantly composed of students in the earlier stages of their university education, with the largest proportion of participants being 200-level students. The ethnic composition of the sample was predominantly Yoruba (213, 63.6%), followed by Igbo (62, 18.5%), and Hausa (37, 11.0%), with the remaining participants (23, 6.9%) belonging to other ethnic groups. In terms of family structure, the majority came from nuclear families (228, 68.1%), while 57 (17.0%) were from extended families. Single-parent families accounted for 32 (9.6%) of the participants, and 18 (5.4%) came from divorced or separated families.

A paper and pencil questionnaire were administered to gather information from participants measuring the demographic variables, the independent and dependent variables. The questionnaire is structured

into four sections; the first section contains an introductory statement that underlines the aim of the study and the research ethics guiding participation in the research. Section A contained items that collected data on the socio-demographic variables such as age, sex, level, ethnicity and family Structure. Section B contained items measuring the independent variable, a set of questions was asked to determine the number of ACEs participants experienced which was assessed using the Adverse Childhood Experience Questionnaire (ACE-Q). The ACE-Q is a self-report questionnaire developed by Felitti (1998) to measure the occurrence and impact of childhood trauma before the age of 18. In section C, a set of questions was asked to determine the student's psychological well-being which was assessed using the Psychological Well-being Scales (PWBS). The PWBS is a standardized self-report questionnaire developed by Ryff (2007) to measure six components of psychological functioning. The PWBS is used to evaluate an individual's emotional health and overall functioning. In Section D, a set of questions were asked to assess psychological flourishing and feelings (positive and negative). The flourishing scale (FS) is a standardized self-report questionnaire developed by Diener (2009) to measure the self-perceived success of respondents; it measures an individual's overall psychological well-being and provides useful feedback on how to improve one's life.

Data Analysis

The data obtained from the survey were analyzed using Statistical Package for Social Sciences (SPSS) version 29. Descriptive statistics (mean, standard deviation and frequencies) were used to describe the participants based on the scores of the variables and demographics. To test the formulated hypothesis, inferential statistics was used. Linear regression was used to analyze the influence of adverse childhood experiences (ACEs) on psychological well-being, and Pearson correlation was used to analyze the relationship between adverse childhood experiences (ACEs) and human flourishing. Multiple regression analysis was used to test if age differences are influencing the impact of adverse childhood experiences (ACEs) on psychological well-being such that older students have higher psychological well-being than younger students and an Independent T-test was used to determine if there are differences in the levels of ACEs and psychological well-being between males and females.

Result

Presentation of Summary of Data Analysis

This chapter presents the results obtained using quantitative research methods to analyze the data gathered for the study from the sample. This study aimed to examine the role of Adverse Childhood Experiences (ACEs) on psychological well-being and human flourishing among students at the University of Lagos. Specifically, the study aimed to determine if adverse childhood experiences influence psychological well-being. Additionally, the study sought to examine if there are any relationships between adverse childhood experiences and human flourishing. The study further investigated if age differences are influencing the impact of Adverse Childhood Experiences on the psychological well-being of students, and if there are differences in the levels of ACEs and psychological well-being between males and females. In this study, a total of 400 questionnaires were distributed, of which 335 came back valid.

Descriptive Statistics of ACEs, Psychological Well-being, and Flourishing by Sex, and Age

Table 1:

	N	Minimum	Maximum	Mean	Std. Deviation
Sex	335	1	2	1.46	.499
Age	335	1	4	1.84	.969
Flourishing	335	12	56	45.56	9.432
Psychological Well-being	335	54	117	85.36	15.924
Adverse Childhood Experience	335	0	9	2.04	1.929

Source: fieldwork 2024

Hypothesis Testing

This section presents the analysis and results of the four hypotheses formulated for this study. The hypotheses were tested using a variety of statistical methods appropriate to the nature of the variables and the research questions. Specifically, Linear Regression was employed to test Hypothesis 1, Spearman's Rho correlation was used to test Hypothesis 2, Moderation Analysis using Multiple Regression was employed to test Hypothesis 3 and independent T-test was used to test Hypothesis 4. The following subsections detail the results of each hypothesis test, providing statistical evidence to support or refute the proposed relationships among the variables of interest.

Hypothesis one: Adverse Childhood Experiences (ACE) will significantly influence psychological well-being among Unilag students

Table 2: *Linear regression results for adverse childhood experiences on psychological well-being.*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	90.736	1.202		75.458	<.001
	Adverse childhood experience	-2.636	.429	-.319	-6.149	<.001

a. Dependent Variable: psychological well-being

The linear regression model indicates that Adverse Childhood Experiences (ACEs) affect psychological well-being among Unilag students. The unstandardized coefficient (B) for ACEs is -2.636, suggesting that for each unit increase in ACEs, the psychological well-being score decreases by 2.636 units. However, the p-value for ACEs is 0.001, which is well below the conventional threshold of 0.05 for statistical significance.

Therefore, based on this analysis, we reject the null hypothesis and conclude that ACEs have a statistically significant negative influence on psychological well-being among University of Lagos students at the 0.05 significance level.

Hypothesis two: There will be a significant negative relationship between ACEs and human flourishing among Unilag students.

Table 3 *Pearson Correlations of Adverse Childhood Experiences and Human Flourishing*

Variables		*M*	*SD*	*ACEs*	*FS*
1	Adverse Childhood Experiences	2.04	1.929	1	-.503**
2	Human Flourishing	45.56	9.432	-.503**	1

**. Correlation is significant at the 0.01 level (1-tailed).

The correlation analysis presented in Table 4 reveals a significant relationship between Adverse Childhood Experiences (ACEs) and human flourishing among undergraduate students. The descriptive statistics show that the mean ACEs score was 2.04 (SD = 1.929), and the mean human flourishing score was 45.56 (SD = 9.432) across the sample. ACEs demonstrated a negative and statistically significant correlation with human flourishing ($r = -.503$, $p < .01$). This indicates that as ACEs level increases, the level of human flourishing decreases. Therefore, we fail to reject the hypothesis which states that "There will be a significantly negative relationship between Adverse Childhood Experiences (ACEs) and human flourishing among undergraduate students."

Hypothesis three: Age will significantly influence the impact of Adverse Childhood Experiences (ACEs) on psychological well-being such that older students will report higher psychological well-being than younger students

Table 4 *Model Summary*

Variable	β	Beta	T	Sig	R	R^2	Fcal	Pv
Age,	1.014	.062	1.160	.247				
ACE_Score	-2.478	-.333	-6.257	<0.01	.325	.106	19.598	<.001
Age,	3.323	.202	2.397	.017				
ACE_Score,	-1.120	-.136	-1.275	.203				
Age-ACE Interaction	-.777	-.288	-2.138	0.33	.343	.118	14.729	<.001

a. Dependent Variable: Psychological Well-being

A two-stage hierarchical multiple regression was conducted with PWB Score (psychological well-being) as the dependent variable. At stage one, Age and ACE Score were entered into the regression model. This model was statistically significant, $F(2, 332) = 19.60$, $p < .001$, and explained 10.6% of the variance in PWB Score ($R^2 = .106$).

Age was not a significant predictor ($B = .062$, $t = 1.160$, $p = .247$), indicating that age alone does not significantly predict psychological well-being. ACE score was a significant negative predictor ($B = -.333$, $t = -6.257$, $p < .01$), suggesting that higher ACE scores are associated with lower psychological well-being. At stage two, the interaction term between age and ACE score was added to the model. The final model explained 11.8% of the variance in well-being ($R^2 = .118$, $F(3, 331) = 14.73$, $p < .001$) explaining an additional 1.2% increase in variance $R^2 = .012$. Age became a significant positive predictor ($B = .202$, $t = 2.397$, $p = .017$). The ACE score, while still negative was no longer a significant predictor ($B = -.136$, $t = -1.275$, $p = .203$). The ACE-age interaction was significantly negative ($B = -.288$, $t = -2.138$, $p = .033$).

These findings suggest that age moderates the impact of ACEs on psychological well-being with older students reporting higher psychological well-being than younger students despite the negative effective effects of ACEs which means our hypothesis is accepted.

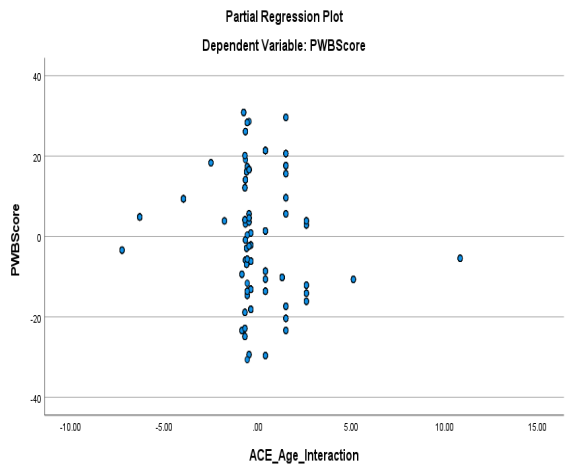

Image 1: *Scatterplot of the interaction between Age and Adverse Childhood Experiences (ACE_Age_Interaction) and Psychological Well-being (PWBScore).*

The partial regression plot shows a scattered distribution of data points, indicating a complex relationship between the ACE_Age_Interaction and PWB Score. The plot shows the distribution of psychological well-being scores across different levels of interaction between age and ACE scores. In conclusion, the analysis supports an interaction effect between age and ACE on psychological well-being.

Hypothesis four: Males will report higher adverse childhood experiences and psychological well-being than females.

Table 5: T-*test independent showing gender differences in psychological well-being*

	N	Mean	SD	T	df	p-value
Male	182	85.43	15.310			
				.091	333	.927
Female	153	85.27	16.675			

Table 6: T-*test independent showing gender differences in adverse childhood experiences*

	N	Mean	SD	T	df	p-value
Male	182	2.14	1.927			
				1.077	333	.282
Female	153	1.92	1.930			

To examine the effect of gender on psychological well-being and adverse childhood experiences, independent samples t-tests were conducted.

The results are presented in Table 6, which shows the mean psychological well-being scores for male (N = 182, Mean = 85.43, SD = 15.310) and female (N = 153, Mean = 85.27, SD = 16.675) participants. The t-test results indicate that there is no statistically significant difference in psychological well-being between males and females, (333) = 0.091, p = 0.927.

Table 7 presents the findings for adverse childhood experiences, with males (N = 182, Mean = 2.14, SD = 1.927) and females (N = 153, Mean = 1.92, SD = 1.930), the males score are slightly different, with males reporting higher ACE on average. The t-test revealed no statistically significant difference in adverse childhood experiences between males and females, (333) = 1.077, p = 0.282.

Thus, the analysis fails to support Hypothesis 4, which posited that males would report higher adverse childhood experiences and psychological well-being than females.

Discussion

Summary of Findings

Four hypotheses were formulated and tested; the findings of this study provide numerous important insights. The first hypothesis revealed that ACEs have a significantly negative impact on psychological well-being; this indicates that higher levels of ACEs result in lower psychological well-being. The second indicated that ACEs have a significant negative correlation with human flourishing; this shows that as ACEs increased, the level of flourishing decreased. For the third hypothesis, the interaction between age and ACEs demonstrated a significant negative influence on psychological well-being, which shows that age does have a significant influence on the impact of ACEs on psychological well-being with older students having higher psychological well-being. The fourth hypothesis reported that Males do not have higher ACEs and psychological well-being than Females. Presented below are the discussions the of findings.

Discussion of Findings

The transition to the university involves significant social, academic, personal and adjustment issues (Belleros et al., 2011). The first hypothesis in this study examined if ACEs would influence psychological well-being among Unilag students. It was predicted that ACEs will significantly influence psychological well-being among Unilag students. A significant negative influence was found on the influence of ACEs on psychological well-being. Students who experienced an increase in ACEs levels were likely to experience a decrease in their psychological well-being. This finding is consistent with previous research by Zhang et al. (2020) reported similar results among Chinese young

adults, where higher ACE scores were associated with poorer psychological functioning. It is also consistent with research by Felitti et al. (1998) who found that individuals with higher ACE scores were more likely to suffer from various psychological issues. Consistent with this study's findings are findings made by Anda et al. (2006) which highlighted that individuals with a history of childhood abuse or household dysfunction are predisposed to negative psychological consequences. Further supporting this finding is the study by Hughes et al. (2016) who carried out a meta-analysis that confirmed the strong relationship between ACEs and poor mental health outcomes. They highlighted the long-term psychological burdens experienced by persons with more ACEs. This study's result established that students who experience high level of adverse childhood experiences (ACEs) have a low psychological well-being. In a related study by Agbaje et al. (2021) their result which demonstrated ACEs are prevalent among young adults and are associates with psychological distress in adulthood, is in line with this study's findings. Furthermore, the significant negative influence of ACEs on psychological well-being can have long impacts on students that make it difficult to develop healthy coping strategies which can contribute to persistent mental health challenges.

The second hypothesis revealed that there will be a significant negative relationship between ACEs and human flourishing among Unilag students. This means that as ACE level of students' increases, the level of human flourishing decreases. The negative relationship between ACEs and human flourishing is consistent with the findings of Bellis et al. (2014) who reported that individuals with higher ACE scores are more likely to experience poorer overall well-being and lower levels of flourishing. A study by Bethell et al. (2019) found that individuals with higher ACE scores were associated with lower levels of flourishing. Also, a study by Keyes (2002) highlighted that adverse early life experiences can impede the development of essential components of flourishing such as social connectedness, happiness, life satisfaction and emotional stability. The findings of this study align with those of Eisenberg et al. (2007) who found that university students who had experienced childhood adversity were more likely to experience mental health issues and lower levels of flourishing (life satisfaction).

The testing of the third hypothesis revealed age did significantly influence the impact of ACEs on psychological well-being; older students might possess greater coping skills or life experiences that reduce the negative effects of ACEs. This means that the ability of students to cope with adversity is a function of their age. Particularly, the negative impact of ACEs on psychological well-being is less noticeable as age increases. These findings are consistent with previous research by Mosley-Johnson et al. (2019) which suggests that ACEs significantly affect various aspects of well-being in adulthood, and ACEs also have long-term impacts across different age groups, Mosley-Johnson et al. (2019) indicated that the effects of ACEs on psychological well-being became somewhat less pronounced as age increases. This study's findings are also consistent with the previous by Elder (1998) which found that age and developmental stage can influence how individuals process and are affected by traumatic experiences. This finding is however inconsistent with the research findings by Smith et al. (2016) who did not find a significant moderating effect of age on the long-term effect of childhood trauma; it was found that the impacts of ACEs on mental health outcomes were largely consistent across age groups, indicating that the influence of ACEs may be less likely altered by age. Further research into this area is recommended.

The testing of the fourth hypothesis revealed that males did not report higher ACEs and psychological well-being than females. This indicates that the ability of the student to cope with adverse experiences is not dependent on their sex. This finding is in contrast with previous research by Agbaje et al. (2021) that found that females reported higher numbers of ACEs than males among higher education students in Southeast Nigeria, indicating gender disparities in the prevalence of childhood adversities. The findings are also inconsistent with research by Turner et al. (2006) that suggests that gender moderates the effect of ACEs on psychological well-being. It was found that gender differences played a significant role in how ACE impacted psychological well-being, with females typically reporting worse outcomes than males. Similarly, a study by Afifi et al. (2008) suggested that because of the differences in coping mechanism, and social support systems, females might be more susceptible to the psychological consequences of ACEs. This study's finding aligns with a previous study by Anda et al. (2006) that did not find significant gender differences in the impact of ACEs on psychological well-being. According to Anda et al. (2006), although ACEs are highly linked to negative psychological outcomes, there was no discernible difference in the effect between males and females.

Conclusion

This research aimed to explore the role of Adverse Childhood Experiences (ACEs) on psychological well-being and human flourishing among students at the University of Lagos with particular emphasis on age and gender differences. The study concluded that ACEs have a negative influence on the

psychological well-being of students. The higher the ACEs level, the lower the psychological well-being of students. This study also concluded that there is a negative relationship between ACEs and psychological well-being among students. The study also concluded that age has a significant influence on the impact of ACEs on psychological well-being, with older students having higher psychological well-being than younger students. Older students are more likely to have greater coping skills and resilience to reduce the negative effects of ACEs on psychological well-being than younger students. Finally, the study concluded that males did not report higher adverse childhood experiences and psychological well-being than females, which indicated that gender differences did not influence ACEs and psychological well-being. These findings contribute to the advancement of knowledge of how early adverse experiences impact mental health in the university context.

Implication of Findings

The university's main objective is to educate students. It also marks a crucial point in students' lives which can involve significant social, academic and personal obstacles made more difficult by adverse childhood experiences. The findings from this study have important implications for the university's management. Although the main purpose of the university is to provide learning, it also must provide accessible mental health services to help students manage their past traumas and enhance their present well-being. There should also be provision for tailored support programs, treatments should be inclusive for all students rather than targeted at groups (age and sex). Lack of adequate resources affects the well-being and mental health of students. It is therefore important for academic institutions to put in place preventive measures for the early identification of students with high ACEs. Stress management and resilience development programs may be helpful for students. Given the effects of ACEs on the student population, university management should consider including mental health care as a part of their student services, all of which is meant to foster a welcoming academic environment for students with high ACEs. Based on the findings of this research, increasing awareness of the consequences of ACEs can foster a more supportive environment. University personnel can be trained to recognize and support students who may have difficulties due to their past experiences.

Limitations of Study

While this research provides valuable insights, no study is without limitations. This study utilized students from the University of Lagos, thereby affecting the generalizability of the study to a larger population. The sample size of the study may not have been large enough to detect subtle differences, particularly about the effect of age and gender. The second limitation is that the study focused on a limited number of variables. Including additional variables such as socioeconomic status, academic performance, stress, personality traits and coping strategies and social support could provide a thorough understanding of the impact of ACEs. This study also limits the generalizability of the findings to another cultural or geographic setting because it is carried out within a specific cultural context.

Recommendations for Future Study

1. Future research could look at including larger and more diverse samples beyond the sample used in the study to improve the generalizability of findings.

2. Future studies could look at including additional moderating factors such as socioeconomic status, academic performance, coping mechanism and social support to better understand the complex interaction between ACEs, psychological well-being and human flourishing.

3. Future research could look at using qualitative approaches such as interviews in addition to quantitative measures which could provide a comprehensive understanding of how ACEs impact psychological well-being and human flourishing.

In conclusion, this study contributes to the understanding of how ACEs affect psychological well-being and human flourishing in a Nigerian University context. It contributes to the body of literature by emphasizing the negative impact and relationship of ACEs on the psychological well-being and human flourishing of undergraduate students, also considering gender and age as moderating factors. The findings of this study along with those of existing literature provide a foundation for creating targeted interventions and support systems to mitigate the long-term effects of ACEs on an individual's psychological well-being and overall life satisfaction.

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