ADVERSE CHILDHOOD EXPERIENCES, RESILIENCE AND MENTAL HEALTH PROBLEMS AMONG SECONDARY SCHOOL ADOLESCENTS IN IBADAN, SOUTH WEST NIGERIA

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DECLARATION

I hereby declare that this project is my original work and it has not been submitted anywhere else for diploma, fellowship or degree.

All the resources used have been duly indicated, acknowledged and referenced.

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CERTIFICATION BY SUPERVISORS

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DEDICATION

This research project is dedicated to God who led me and never left me throughout this masters' program.

To my loving mother, Dcns Omolara and the love of my life, Boluwatife, for their consistent love and support all through. Thank you, and I love you both with all my heart.

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ACRONYMS

ACE	Adverse Childhood Experiences
ACE-IQ	Adverse Childhood Experiences International Questionnaire
ARC	Action on Rights of the Child
BDI	Beck's Depression Inventory
BAI	Beck's Anxiety Inventory
CAMH	Child and Adolescent Mental Health
CEDC	Centres for Disease Control and Prevention
CD-RISC	Connor-Davidson Resilience Scale
LGA	Local Government Area
SDQ	Strength and Difficulties Questionnaire
SPSS	Statistical Package of Social Sciences
UNICEF	United Nations International Children Emergency Fund
WHO	World Health Organisation

ABSTRACT

Background: Children and adolescents as a vulnerable group are exposed to a wide range of adverse childhood experiences (ACEs), which significantly impact their mental health. Young people exposed to ACEs are more likely to develop mental health problems and have poorer academic outcomes compared to their counterparts. Resilient factors are protective factors such as problem solving skills, intelligence and optimism that help to buffer the effects of ACEs. Studies reveal that the presence of resilient factors can improve adolescent mental health outcomes in the presence of ACEs.

Objective: The aim of this study was to determine exposure to Adverse Childhood Experiences (ACE), resilience and mental health problems among secondary school adolescents in Ibadan, Nigeria. The study also sought to examine the relationship between ACE, resilience and mental health problems.

Methods: This study was a descriptive cross sectional study conducted in six public and private secondary schools in Ibadan, Oyo State. A Socio Demographic Questionnaire, the Adverse Childhood Experiences International Questionnaire (ACE-IQ), the Strengths and Difficulties Questionnaire (SDQ), the Becks Depression Inventory (BDI), the Becks Anxiety Inventory (BAI) and the 10-item Connor Davidson Resilience Scale (CD-RISC 10) were used to collect data on socio demographic information, adverse childhood experiences, mental health problems and resilience from 409 secondary school adolescents. Participants were randomly selected from secondary schools in Ibadan North Local Government Area of Ibadan. The number of participants chosen from each school was determined by proportional allocation based on the size of the school. The selection of participants from each class in each school was done using systematic random sampling technique.

Data was cleaned, coded and analysed using SPSS version 23. The socio demographic characteristics of respondents, ACE exposure, resilience and mental health problems were determined using frequency tables and percentage. Association between exposure to ACE and socio demographic variables were determined using Chi square. T-test and linear regression were used to examine the association between ACE and mental health problems, ACE and resilience scores, mental health problems and resilience scores. Level of significance was 5%.

Results: The mean age of respondents was 14 years (SD=1.7). Majority (72.6%) of the participants were from public schools, monogamous homes (84.8%) and were living with their parents as at the time of the study (81.2%). The average number of adverse childhood events experienced by secondary school adolescents in this study was 4 (SD=1.9). The most frequently reported ACEs were emotional neglect (91%), community violence (85.3%), peer violence/bullying (62.1%) and violent treatment of parent/household member (50.1%). Slightly over half (54.5%) of the respondents had abnormal scores on total difficulty SDQ subscale. Peer problems (75.1%) and conduct problems (41.1%) were the most commonly reported mental health problems and emotional problems (20%) were the least reported. The prevalence of depression and anxiety in this study were 17.8% and 55.7% respectively. Adolescents who had been emotionally abused ($p=0.006$), physically abused ($p=0.016$) and bullied ($p=0.014$) were significantly more likely to have higher SDQ scores than those who had not experienced these forms of abuse. Depression ($\beta=0.600$, $p=0.016$) and anxiety ($\beta=0.867$, $p<0.001$) were significantly associated with adverse childhood experience. Participants who reported physical neglect ($\beta=-4.104$, $p=0.001$) and violent treatment of parent/household member ($\beta=-4.480$, $p<0.001$) were less likely to report resilience than those that did not. Participants who reported difficulties on the SDQ scale were less likely to report resilience than those who did not ($\beta= -3.957$, $p=0.008$). The predominantly used method of

coping was emotion focused coping (53.1%), followed by problem focused coping (22.5%) and then avoidant coping strategy (11.3%). Majority of study participants suggested that good teachers and teaching methods (30.9%), extracurricular activities (26.9%) and counselling and social services (23.8%) would help improve coping skills among adolescents in schools.

Conclusion: Adverse Chilhood Experiences and mental health problems were prevalent in this study. Adolescents who had been exposed to ACE were more likely to report mental health problems and less likely to be resilient. There is need to focus on school mental health intervention services and strengthen resilient coping among adolescents who have been exposed to childhood adversities. There is also need to focus on assets and strengths of children and adolescents, enhance protective factors that can mitigate risks and exposures to adversities in order to regain mental health and thrive in the face of adversities.

Key Words: Adverse Childhood Experiences, Resilience, Mental Health Problems, Adolescents.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The World Health Organization (2003) defines adolescence as a life phase of developmental progression with changes in physical, cognitive, emotional and social spheres occurring between 10-19years. Adolescents constitute about 20% of the world's population and about 85% of them reside in low and middle income countries (WHO, 2011). They are a heterogeneous group of individuals who have physical, psychological and social needs throughout their stages of development (WHO, 2003), and depend on family and community for care, protection and guidance (Action for the Rights of Children, 2001).

Mental health and well-being is fundamental to good quality of life with implications on child and adolescent development, academic achievement, social participation and contribution, self-esteem and behaviour as well as future health and life chances (Rao, 2001). The World Health Organization (2001) defined mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community".

Adolescents are perceived as a healthy group, however, about 20% of them experience mental health problems commonly depression, anxiety, substance use disorder, conduct disorder, suicidal ideation and eating disorders (WHO, 2003; WHO, 2011). Furthermore, half of mental disorders begin before the age of 14 years and 75% before the age of 24 years (Kessler *et al.*, 2007).

Several factors predispose and perpetuate health problems among adolescents and although, the World Health Organisation, (2006) advocates the right of every child to health and a life free from

violence, it also recognises that each year, a high proportion of children around the world are victims and witnesses of physical, sexual and emotional violence. Bach and Louw, (2010) also reported that children and adolescents are exposed to a wide array of traumatic experiences such as political, community and familial adverse experiences. Reports from a National Survey of Children's Health (2012) in the United States indicated that over half adolescents had experienced four or more adverse childhood events in their lifetime (Bramlett *et al.,* 2017). In a descriptive cross-sectional study among 1,768 adolescents in urban and rural secondary schools in Southwest Nigeria, 34% reported experiencing a traumatic event (Omigbodun, Bakare and Yusuf, 2008).

Exposures to traumatic and adverse childhood experiences significantly impacts on young people's physical and mental health, well-being and development throughout their life span and by extension, on the society in its entirety (WHO, 2006 and Bach and Louw, 2010). Adverse childhood experiences have been reported to be associated with mental health problems (Edwards *et al.,* 2003; Oladeji, Makanjuola and Gureje, 2010; Ismayilova *et al.,* 2016). A South African study showed significant relationship between exposure to violence and depression among adolescents (Bach and Louw, 2010). In the Nigerian study among in-school adolescents, depressive symptoms were found in 50% of those who reported sexual assault, animal attack or physical abuse (Omigbodun, Bakare and Yusuf, 2008).

As early as the 1960s, research established direct link between childhood disadvantage and reduced academic outcomes (Burke *et al.,* 2011). Children and adolescents exposed to adverse childhood experiences may become laden with stress hormones diminishing their ability to form relationship, regulate emotions and cope with environmental and relational threats (Kahn and Vezzuto, 2015). This may result in difficulty concentrating on school work, consolidating new memories and learning at school (Burke *et al.,* 2011; Kahn and Vezzuto, 2015). A United States

study found that students who had experienced at least three childhood adversities were three times as likely to experience academic failure, six times as likely to have behavioural problems, and five times as likely to have attendance problems (Stevens, 2012).

Garmezy and Rutter (as cited in Fergusson and Horwood, 2003) stated that despite the often strong association between exposure to adversities and developmental outcomes, some children exposed to adversities may not develop problems later in life, this may be due to some form of resilience which protects or mitigates the effects of exposure to adversity. Research has yielded a range of individual, familial and peer factors that may confer resilience to children nurtured in high risk environments (WHO, 2002; Fergusson and Horwood, 2003).

1.2 Statement of Problem

The highest rates of childhood adversities are found in low and middle income countries (WHO, 2006) with reports of 15-98% in different African countries (Haileye, 2013; Raubenheimer et al, 2012; Bach and Louw, 2010) and 34-50% in Nigeria (Omigbodun, Bakare and Yusuf, 2008; Oladeji, Gureje and Makanjuola, 2010; Oladeji *et al.*, 2011). Although, adolescents are generally perceived as an healthy group, 1 in 5 have a diagnosable mental disorder (WHO, 2003; WHO, 2011) and half of mental disorders begin before the age of 14 years (Kessler *et al.*, 2007).

Adverse childhood experiences have been associated with mental health problems in childhood and early transition to adulthood (Schilling, Aseltine and Gore, 2007; Bach and Louw, 2010; Oladeji, Gureje and Makanjuola, 2010), this shows the public health impact of childhood adversity (Schilling, Aseltine and Gore, 2007). Childhood adversities can also lead to poor academic performance in children and adolescents which has grim implications on Nigerian educational

system (Escueta *et al.*, 2014 and Umobong, 2010) with many students going unrecognised and untreated in schools (Rossen and Cowan, 2014).

However, not all individuals exposed to adversities in childhood will experience mental health problems (Werner as cited in Beutel *et al.*, 2017), which leads one to ask why some individuals are relatively affected and others are not (Cortina *et al*., 2016). While adverse childhood experiences and resilience have gained renewed attention over the years (Fergusson and Horwood, 2003; Beutal *et al.*, 2017), there are very few studies, especially in sub Saharan Africa, that have explored the interactive association resilience plays in relation to adverse childhood experiences and mental health problems (Beutel *et al*., 2017).

1.3 Justification of Study

Although there has been well documented studies showing association between different types of adverse childhood adversities and mental health problems in developed countries, few studies have been carried out in Sub-Saharan Africa and fewer in Nigeria. Fewer studies have explored the relationship between adverse childhood experiences, resilience and mental health problems.

This study therefore, examined the association between multiple types of childhood adverse experiences, resilience and mental health problems among in-school adolescents in Ibadan, Nigeria.

Results from this study will add to the existing body of knowledge on adverse childhood experiences, resilience and impact on adolescent mental health. Consequently, findings can stimulate the interest of stakeholders and inform policy in providing enabling environments and services for adolescents to thrive.

1.4 Aim and Objectives of Study

This study aimed to examine the association between adverse childhood experiences, resilience and mental health problems among secondary school adolescents in Ibadan, Nigeria.

Specific Objectives

The specific objectives of this study are to;

1. Determine the prevalence of reported adverse childhood experiences in secondary school adolescents.
2. Determine the prevalence of mental health problems in secondary school adolescents.
3. Determine the socio-demographic correlates of adverse childhood experiences in secondary school adolescents.
4. Determine the relationship between reported adverse childhood experiences, resilience and mental health problems among secondary school adolescents.
5. Determine coping mechanisms reportedly used by in-school adolescents to deal with stressful events and adolescents' views on the role of schools in improving coping strategies.

1.5 Primary Outcome Measure

Prevalence of adverse childhood disorders and mental health problems among secondary school adolescents.

1.6 Secondary Outcome Measure

The association if any, among adverse childhood experiences, resilience and mental health problems among in-school adolescents.

CHAPTER TWO

LITERATURE REVIEW

2.1 Childhood and Adolescence

While there is no universal definition of who a child or adolescent is, it is common to define children by age (Action for the Rights of Children, 2001), level of psychological (Larson and Wilson, 2004) and biological development (Kail and Cavanaugh, 2010). The Convention on the Rights of the Child posits that "a child means every human being below the age of 18 years unless, under the law applicable to the child, majority is attained earlier". Culturally, factors other than age such as social status, gender and capacity to contribute economically play important role in determining who a child or adolescent is (Action for the Rights of Children, 2001). Different countries with different cultural, social and historical concepts set definitions for childhood differently (Action for the Rights of Children, 2001). Despite these differences, it is important to note that children and adolescents have needs and capacities which are different from those of adults, while they may be vulnerable in terms of need for care and protection, they are also resilient which are characteristics of growing up as human beings (Action for the Rights of Children, 2001).

Adolescence is a transitional stage of physical and psychological development between childhood and adulthood whose cultural purpose is the preparation for adult roles (Larson and Wilson, 2004). In many cultures, adolescents go through rites of passage which, once successfully completed, confer adult rights and responsibilities (Lerner *et al.*, 2001). During this phase of development, adolescents begin to transition from childhood to adulthood with issues of independence, identity, sexuality, and relationships defining this developmental stage.

Adolescent development can be defined biologically, marking the onset of puberty characterized by rapid physical growth and psychological changes, and termination of physical growth (Kail and Cavanaugh, 2010). It is a period marked by major pubertal and biological changes in sex organs, height, weight and muscle mass as well as changes in brain structure and organization. These changes are influenced by heredity and environmental factors such as exercise and diet (Kaplowitz *et al.*, 2001). Adolescence is also a period of rapid cognitive development, characterized by abstract thinking and development of executive functions (Smith and Handler, 2007). This stage is marked by improvement in cognitive ability occurring in areas of attention, memory, processing speed, organisation and metacognition (Keating, 2004; Kail and Cavanaugh, 2010). Adolescent psychological and social development relates to nature and nurture factors (Lerner and Steinberg, 2004), self-concept and self- awareness (Valkenburg and Peter, 2011) and acquisition of social roles and preparation for adult roles (Arnett, 2007).

The search for identity begins in adolescence (Steinberg, 2008). Developing and maintaining identity can be affected by family, environmental and social factors. Family dynamic is an important influence on adolescence, while a cohesive family can positively affect development, parental divorce can negatively affect adolescent development (Zeimer, 2012). Children's first relational experiences are interactions with their siblings which shape their social and self-understanding for life (Marano, 2010). Positive sibling relations can be helpful to adolescents as siblings are able to act as peers, and may increase one another's sociability and self-worth (Swanson, Edward and Spencer, 2010). Negative sibling relations such as conflicts and poor modelling can have negative impact on adolescent development (Swanson, Edward and Spencer, 2010). Peers pay major role in social and general development of adolescents, affecting decisions and choices made during this period as well as sources of coping with stress (Swanson, Edward

and Spencer, 2010). Interactions with family, social and cultural environments helps adolescents develop unique belief systems and how they view the world (Lerner *et al.*, 2001). Culture is learnt and socially shared, affecting the lifestyle of an adolescent based on the social roles and responsibilities he or she is expected to take on (Lerner *et al.*, 2001).

2.2 Adverse Childhood Experiences

Childhood experiences (positive and negative) have tremendous impact on health and lifestyle on a lifelong basis (Centers for Disease Control and Prevention, 2013). It has been difficult to assess childhood adversities or maltreatment. This may be due to cultural differences. For example, it may be difficult to separate sub-optimum parenting from maltreatment (Ritacco and Suffla, 2015). According to the World Health Organization (WHO) as cited in (Ritacco and Suffla, 2015), "child maltreatment refers to the physical and emotional mistreatment, sexual abuse, neglect and negligent treatment of children, as well as to their commercial or other exploitation".

Adverse childhood experiences encompass perpetration of sexual, physical, emotional abuse and emotional and physical neglect as well as experiencing intimate partner violence according to Gilbert *et al* and Schilling *et al* (as cited in Beutel *et al.*, 2017). Adverse childhood experiences also comprise familial and socio-environmental factors such as parental substance use, poverty, community and domestic violence (Peng *et al.*, 2015).

While children are not liable for the harm inflicted upon them, certain features have been found to increase their risk of being maltreated. A number of individual, relational, community and societal factors have been found to increase the risk of children being exposed to adversities such as abuse and neglect as well as maltreatment (Centres for Disease Control and Prevention, 2013).

Children are generally vulnerable and would naturally rely on caregivers for care and protection. This puts them at risk for childhood maltreatment and adversity. Vulnerability to child abuse (physical, sexual or neglect) depends partly on age (Dubowitz and Black, 2001). Fatal cases of physical abuse are found largely among young infants (Menick, 2000; Kirschner and Wilson, 2001) whereas sexual abuse occurs mostly in adolescents (Madu and Peltzer, 2000; Olsson *et al.*, 2000). Children with disability, chronic illnesses and mental disorders have been shown to be at risk for abuse and neglect (Dubowitz and Black, 2001). Another individual risk factor to consider is sex. In most countries, females are at higher risk of infanticide, sexual abuse, educational and nutritional neglect as well as forced prostitution while males are at greater risk for harsh physical punishment (Hunter, 2000; Hadi, 2000; Shumba, 2001).

Parental factors that pose risks for childhood adversity and maltreatment include parent's lack of understanding of the child's needs, parent's history of child maltreatment in the family, mental disorder such as substance abuse and depression in the family, adolescent parents, low education, low socio-economic status, large number of dependent children, parental beliefs that justify maltreatment and presence of non-biological or transient caregivers in the home (Centres for Disease Control and Prevention, 2013). Other family risk factors are family dysfunction, isolation, intimate partner violence, poor parent-child relationship and parenting stress (Centres for Disease Control and Prevention, 2013).

Studies have shown that physically abusive parents are more likely to be young, single, poor, unemployed and less educated than non-abusive parents (Straus *et al.*, 1998). Studies in the United States showed that single mothers are three times more likely to report using harsh physical discipline on their children than mothers in two-parent families (Straus *et al.*, 1998). Another study found that low education and lack of income increases the potential of physical violence towards

children (Sidebotham and Golding, 2001; Bardi and Borgognini-Tari, 2001; Lindell and Svedin, 2001; Isaranurug *et al.*, 2001,), while a study in Chile found that family size plays a major role in determining child exposure to violence in that families with four or more children were three times more likely to be violent towards their children than families with fewer children (Larrain, Vega and Delgado, 1997). Also, parents that were maltreated as children have been found to be more likely to abuse their children (Ertem, Leventhal and Dobbs, 2000; Klevens, Bayón and Sierra, 2000).

Community risk factors for childhood maltreatment include community violence, concentrated neighbourhood disadvantage, high level of poverty, residential instability, low social class and poor social connections (Centres for Disease Control and Prevention, 2013). Studies have shown that abuse is higher in communities with high poverty and unemployment rates (Gillham *et al*., 1998; Coulton, Korbin and Su, 1999). Poverty has been found to be strongly associated with child maltreatment (Hunter *et al.*, 2000; Hadi, 2000; Bagley and Mallick, 2000).

According to Teicher and Samson as cited in (Beutel *et al.*, 2017), "The experience of being harmed by persons who should provide support and protection leads to severe neurobiological, somatic and mental damage in the developing child, compromising the ability to cope with somatic and psychic stressors throughout lifespan".

There are factors that can attenuate and buffer the negative effects of maltreatment and adversities in children and adolescents. These are protective factors which exist at every level. Some of which include secure attachment of the infant to the adult family member, stable family relationships, supportive family environment and social networks, high levels of paternal care during childhood, nurturing parenting skills, household rules and child monitoring, lack of association with

delinquent or substance-abusing peers, a warm and supportive relationship with a non-offending parent, a lack of abuse-related stress, parental employment, adequate housing, access to health care and social services, caring adults outside the family who can serve as role models or mentors and communities that support parents and take responsibility for preventing abuse (WHO, 2002 and Centres for Disease Control and Prevention, 2013).

Adverse childhood experiences have been linked to risky health behaviours, chronic health conditions, low life potential, and early death. As the number of adverse childhood experiences increases, so does the risk for these outcomes (Centres for Disease Control and Prevention, 2013). Due to many different studies focusing on diverse indicators and descriptions of childhood adversities or maltreatment, it is difficult to generalize statistics as those represented maybe disjointed or under-representative of the true severity of the problem (Ritacco and Suffla, 2015). In a study carried out by Schilling, Aseltine and Gore, 2007 in North Carolina, United States of America among high school seniors, they reported prevalence figures for lifetime experience of the ten childhood adversities, broken down by gender (male and female) and race/ethnicity (Whites, Blacks and Hispanics) as parents separated (27.5%), sent away from home (5.1%), parent unemployed (17.6%), parent drink/drug problem (14.2%), witnessed injury/murder (16.6%), sex abuse/assault(6.8%), physically assaulted (7.5%), physical abuse (4.2%), seriously neglected (2.6%) and threatened captive (9.6%).

Another study carried out in Minnesota, United States among students in sixth, ninth and twelfth grade to examine the association between multiple types of adverse childhood experiences and adolescent violence-related behaviours showed that 29% of adolescents reported to have experienced at least one adverse childhood experience with alcohol abuse by family member

posing greater problem, girls commonly reported all types of adverse childhood experiences. Results showed that there was significant association between each type of adverse childhood experiences and adolescent interpersonal violence perpetration including delinquency, bullying, physical fighting, dating violence, weapon-carrying on school property and self-directed violence like suicidal thoughts and suicide attempt. Furthermore, for every additional type of adversity reported, the risk of violence-related behaviour by the adolescent increased by 35% to 44% (Duke *et al.*, 2010). "In Finland and Korea 5 -10% of children experience physical violence. Australia figures for domestic violence cases where children were present range from 85 - 90 %" (Bach and Louw, 2010).

Omigbodun, Bakare and Yusuf, 2008 reported that research in different western countries showed that 20 - 87% of young people are exposed to traumatic events before adulthood. High rates of traumatic experiences are also reported among young people in African countries. In a cross-sectional study of 379 students in Ethiopia, 16.6% reported child sexual abuse before the age of eighteen (Haileye, 2013) which is agreeable to prior research that showed 15-22% and 3-8% prevalence of child sexual abuse among females and males respectively according to Finkelhor, Elliot and Briere (as cited in Haileye, 2013). In Venda and Northern Sotho, South Africa, 98% of adolescents were reported to have witnessed violent events and 68% of them were victims of violent events (Bach and Louw, 2010).

In a study by Raubenheimer et al, 2012 to determine the profile of stress factors associated with mental disorders in children and adolescents, results showed 64.1% social stressors (domestic violence, family substance abuse, financial problems, lack of support, parents' divorce, problematic relations in the family, problems at school, and xenophobic attacks) and 19% psychological stressors (emotional abuse, physical abuse, sexual abuse, hopelessness, isolation,

low self- esteem, rape, rejection, worthlessness, nightmares, bereavement and behavioural problems) that play major roles in children and adolescents leading to emotional problems in them.

In a study in Nigeria, about 50% of respondents reported exposure to at least one adverse childhood experience occurring within the family context and about a third had been exposed to multiple adverse childhood experiences (Oladeji, Makanjuola and Gureje, 2010).

2.3 Mental Health Problems in Children and Adolescents

Mental health in childhood refers to attaining developmental and emotional milestones, and learning healthy social skills and how to cope when there are problems (Centre for Disease Control and Prevention, 2013). Mental health is important to overall health (Centre for Disease Control and Prevention, 2013) and child and adolescent mental health is an essential part of overall health (WHO 2003).

Mental and emotional health and wellbeing have significant effects on self-esteem, behaviour, school attendance, educational achievement, social cohesion and quality of life (Rao, 2001). Children and adolescents with positive mental wellbeing possess assets such as problem solving skills, social competence and positive sense of self which helps them thrive in face of difficulties, bounce back after setbacks and stay productive in life (Scales, 1999 and Morgan, 2007). However, there are factors that impact the ability of the child and adolescent to maintain a state of complete wellbeing. These factors include risk and protective factors occurring at certain levels such as individual, family and environment (including schools, community and broader society) (Morgan *et al.*, 2008 and Pinto *et al.*, 2014).

Risk factors for mental health problems at the individual level include genetic inheritance (Kendler *et al.,* 1995), temperament and attitude (like pessimism) (Pinto *et al.,* 2014), risk taking behaviours and emotional instability (Morgan *et al.,* 2008) Studies have shown that children and adolescents of depressed mothers are at risk of developing depression through genetic inheritance than children and adolescents of non-depressed mothers (O'Connell *et al.,* 2009 and Sellers *et al.,* 2012). Temperament and pessimistic attitude are also risk factors for anxiety disorders along with positive family history (Pillemer *et al.*, 2010).

Familial risk factors for child and adolescent mental health problems include lack of family support, family dysfunction, parental rejection (Morgan *et al.,* 2008), domestic violence and family financial problems (Pinto *et al.*, 2014). Parental risk factors such as rejection, high hostility, harsh discipline, lack of family cohesion, parental unequal treatment, separation from family, neglect and child abuse in all its forms have been associated with depression (Pillemer *et al.*, 2010) and anxiety disorders later in life (O'Connell *et al.*, 2009).

Environmental risk factors in schools include bullying (Pinto *et al.*, 2014), peer rejection or discrimination (Morgan *et al.*, 2008 and Pinto *et al.,* 2014); in the community, they include violence, low socio-economic status, isolation, abuse, neglect, traumatic events, childhood adversities and social stress (Morgan *et al.*, 2008 and Miklowitz and Change, 2008); and in wider communities, they include lack of social cohesion, economic inequality, migration and other cultural factors in different societies (Krabbendam and Van Os, 2005). Urban city, migration, childhood trauma, bereavement and separation from family as well as abuse of drugs including cannabis have been found to be associated with schizophrenia and psychosis in adolescents and young adults (Krabbendam and Van Os, 2005), while childhood adversity places vulnerable

children and adolescents at risk of severe course of bipolar disorder (Miklowitz and Chang, 2008). The more the risks children and adolescents experience, the higher their chances of experiencing psychological distress and developing mental disorders (WHO, 2004).

Protective factors for promoting mental wellbeing are associated with good personality traits and temperament, family wellbeing, cohesion and family and community level, access to adolescent-friendly services which include health services and macro-policies (WHO, 2004). Experience and accumulation of positive effects of protective factors by children and adolescents over negative factors are helpful in maintaining and sustaining mental health and wellbeing later in life (Sameroff, Gutman and Peck, 2003). It is therefore important to strengthen protective factors in the individual, family, school and wider community as well as provision of adequate mental health care to vulnerable groups.

Mental health problems in adults are also common in children and adolescents such as anxiety disorder, depression, substance abuse, sleep disorder, eating disorder, gender identity disorder, somatoform and dissociating disorders according to Holford, Ziervogel and Smith (as cited in Heckler *et al.*, 2012). Common mental health disorders in children and adolescents include neurodevelopmental disorders (such as Autism, Attention Deficit Hyperactivity Disorder, Intellectual Disability, Tics and Tourette syndrome), depressive disorder, anxiety disorder, conduct disorder, oppositional defiant disorder, post-traumatic stress disorder, substance misuse disorder, suicide and self-harm, eating and feeding disorders, psychosis, mood disorder, personality disorder, somatoform disorder and Elimination disorders (such as enuresis and encopresis) (National Collaborating Centre for Mental Health, 2011).

In a National Morbidity Survey in the United States of America on the prevalence of DSM-IV mental disorders and presence or absence of severe impairment, anxiety disorder was the most commonly reported condition (31.9%) followed by behavioural disorders (19.1%), mood disorders (14.3%), and substance use disorders (11.4%) with approximately 40% of participants with one class of disorder also meeting criteria for another class of lifetime disorder (Merikangas *et al.*, 2010). There was an overall prevalence of 22.2% for disorders with severe impairment, that is, 11.2% had mood disorders, 8.3% had anxiety disorders, and 9.6% had behavioural disorders) (Merikangas *et al.*, 2010). The earliest median age of onset of disorders was anxiety disorder (6years), 11 years for behavioural disorder, 13 years for mood disorder and 15 years for substance use disorder (Merikangas *et al.*, 2010).

In a study carried out in Western Cape, South Africa, there was an overall prevalence of mental disorders in children and adolescents set at 17% with the generalized anxiety disorder being the most reported (11%), followed by posttraumatic stress disorder (8%) and major depressive disorder (8%) (Kleintjes *et al.*, 2006). Another South African study involving 669 children and adolescent screened for mental disorders reported that 30% were diagnosed with attention deficit and disruptive behaviour disorder, 22.7% with major depressive disorder, 18.5% with anxiety disorder, 16% with conduct disorder, 15.7% with mild intellectual disability, 9.6% with adjustment disorder, 8.8% elimination disorder, 7.6% with developmental disorders and 7% with bereavement (Heckler *et al.*, 2012).

In Nairobi, Kenya, the prevalence of depressive symptoms among public secondary adolescents was 26.4%, suicidal behaviours was higher 31.1% with girl showing more significant symptoms than boys in both areas (Khasakhala *et al.*, 2012). In a study carried out in South-west Nigeria to examine the rates of self-reported suicidal ideation and suicidal attempt and psychosocial factors

that are related to them among adolescents residing urban and rural areas, it was found that one in five adolescents had experienced suicidal ideation in the previous year and one in ten had attempted suicide in the past year (Omigbodun *et al.*, 2008).

In a study carried out in South-South Nigeria, it was reported that the overall prevalence of behavioural problems in school children was 18.8% and more common in males (60.6%) (Akpan, Ojinnaka and Ekanem 2010). Another study in South-South, Nigeria on conduct disorder in urban schools recorded a prevalence of 15.82% (Frank-briggs and Alikor 2008).

2.4 Adverse Childhood Experiences and Mental Health Outcomes in Children and Adolescents

Adverse childhood experiences have been consistently linked to a host of mental health problems in children, adolescents and adults such as depression (Schilling, Aseltine and Gore, 2007; Omigbodun, Bakare and Yusuf, 2008; Bach and Louw, 2010; Khasakhala *et al.*, 2012), suicidal behaviour (Omigbodun *et al.*, 2008; Duke *et al.*, 2010; Khasakhala e*t al.*, 2012) antisocial behaviour (Schilling, Aseltine and Gore, 2007; Duke *et al.*, 2010), substance use (Schilling, Aseltine and Gore, 2007; Oladeji, Makanjuola and Gureje, 2010), post-traumatic stress disorder (Ismayilova *et al.*, 2016).

Shonkoff and Garner, Brodsky (as cited in Beutel *et al.*, 2017) noted that the resultant effects of adverse childhood experiences depend on the stage of development, more severe effects of adverse childhood experiences are more likely to be present during early childhood foundational years of biological and psychological development due to limited coping and resilient strategies at this stage. This is in agreement with Butcher *et al* as cited in (Bach and Louw, 2010) that posited that a vulnerable child is more prone to adverse severe effects than adults.

According to Bach and Louw (2010), severe stress elicited by distressing events has been associated with greater likelihoods of children and adolescents developing psychological problems like depression and post-traumatic stress disorder, and emotional problems (Raubenheimer *et al.*, 2012). History of childhood adversity like sexual abuse has an effect on depression, anxiety and post-traumatic stress disorder especially among females (Haileye, 2013).

Adverse childhood experiences have been related to a range of mental health problems later in life (Oladeji, Makanjuola and Gureje, 2010 and Beutel *et al.*, 2017), maladjustment and unhealthy living later in life (Beutel *et al.*, 2017). In a cross-sectional study involving 273 students in Ethiopia, 42.9% were reportedly involved in risky sexual behaviours, 30.8% had two or more sexual partners in their lifetime and 37% used substance (alcohol). Results from this study showed that higher level of risky sexual behaviours was associated with emotional problems (Abebe, Tsion and Netsanet, 2013).

In a study that examined the association between the family-related adverse childhood experiences as predictors for mental disorder, it was found that substance use disorders were more likely to occur among individuals who had experienced family violence, neglect or abuse at a younger age and despite that anxiety disorders were not significantly related to any specific childhood adversity in this study, it was reported that individuals who have experienced at least three forms of family-related childhood adversities were at greater risks for anxiety disorders than those without such experiences (Oladeji, Makanjuola and Gureje, 2010).

There is an association between family-related adverse childhood experiences and development and persistence of a mental disorder later in life (Oladeji, Makanjuola and Gureje, 2010). This is consistent with existing literature that identified key family factors as relevant for the Nigerian

adolescent as parental divorce or separation, coming from a polygamous family, lack of family cohesion and other forms of family disruption signified higher rates of suicidal ideation among adolescents and those living in urban areas showed higher rates of suicidal behaviours (Omigbodun *et al.*, 2008). So also, neglect by parents and no emotional attachment are associated with depressive symptoms and suicidal behaviours among adolescents (Khasakhala *et al.*, 2012). Rossman *et al* (as cited in Heckler *et al.*, 2012) also reported that 13-50% of youths exposed to inter-parental violence show post-traumatic stress symptoms and are therefore eligible to be diagnosed for the disorder. Duke *et al.*, (2010) found that multiple types of childhood adversities, including abuse and household dysfunction are associated with increased risk for suicidality in adolescence. A Kenyan study among 1,276 urban secondary school students also showed 31.1% and 26.4% prevalence of suicidal behaviour and clinically significant depressive symptoms respectively (Khasakhala *et al.*, 2012). Other predictors of suicidal behaviour as reported by Omigbodun *et al.*, (2008) are sexual abuse, poverty, physical attack and involvement in violent activities like physical fights.

2.5 Resilience

While there is no universally accepted scientific definition of resilience (Wald *et al.*, 2006), several researchers have sort to define the term. Resilience refers to the capability to sustain or regain mental health amidst adversity (Wald, *et al.*, 2006). Resilience also refers to positive outcomes after adversity or a process that mediates response to stress and trauma (Mancini and Bonanno, 2009). Resilience is also described as a psychological process that is developed in response to intense life stressors which aids healthy functioning (Wagnild, 2009).

Krugler and Prinsloo, (2008) encapsulated the definition of resilience as a dynamic developmental process, disposition or capability to cope or bounce back in the face of significant adversity resulting in a sustained positive outcome. Despite the lack of consensus on a universal definition of resilience in use, various researchers explain the concept similarly (Hermman *et al.*, 2011).

Resilience is an interactive concept and there are different factors associated with its development (Hermman *et al.*, 2011). There are personal factors including personality traits (openness to experience, adaptability, flexibility), intelligence, problem-focused coping strategies, ego resilience, autonomy, empathy, sense of self-identity, self-esteem, self-efficacy, optimism, internal locus of control (Wald *et al.*, 2006; Krugler and Prinsloo, 2008; Hermman *et al.*, 2011). There is also variable relationship between resilience and some demographic factors such as age, sex, and gender (Fergusson and Horwood, 2003; Hermman *et al.*, 2011).

Familial factors like social support from families, good parenting qualities, and community factors which include good learning environment, community services, sports and artistic opportunities, cultural factors, spirituality and religion, and lack of exposure to violence (Wald, *et al.*, 2006; Hermman *et al*., 2011; Cortina *et al*., 2016).

According to Wagnild (2009), resilience consists of essential features of meaningful life or purpose, perseverance, self-reliance, equanimity and existential aloneness (coming home to one's self). In addition, it is measured based on ability to withstand life stressors, to thrive and to make meaning of life challenges and also in terms of personal competence and acceptance of self (Wagnild, 2009) and problem solving abilities (Connor and Davidson, 2003).

According to Fergusson and Horwood (2003), two processes may lead to resilience in the face of exposure to adversity which are the protective and compensatory processes. The protective

processes occur when the presence of resilience is beneficial to those exposed to adversity but not to those that are not exposed to adversity (Fergusson and Horwood, 2003). The compensatory processes occur when there are equal beneficial effects of resilience to those exposed and those that are not exposed to adversity (Fergusson and Horwood, 2003).

2.6 Adverse Childhood Experiences, Resilience and Mental health Outcomes in Children and Adolescents

Mental disorders can have extensive effects on the functioning, adjustment, interpersonal and psychosocial difficulties in children and adolescents (Heckler *et al*., 2012). Study has shown that emotional difficulties are indicative of exposure to childhood experiences and even though exposure to childhood adversities did not significantly predict cognitive development, there was an association between emotional problems and cognitive development (Escueta *et al.*, 2014).

A vital factor in defining resilience is expected to be the cognitive style through which children make meaning of events around them (Cortina *et al*., 2016). Becks *et al* (1997) stated that negative cognitive and interpretation style have been association with depression and dysfunctional attitudes while individuals who do not display negative cognitive style are more protected from emotional and behavioural problems following stressful events (Cortina *et al*., 2016).

In a study that aimed to determine the association between resilient coping and distress in the face of adversity, mental health problems were reported in participants with high adverse childhood experiences score, resilient participants reported less depression, anxiety and somatic symptoms (Beutal *et al.*, 2017) while poor resilience predicted development of psychological symptoms including depression and anxiety (Runkewitz, Kirchmann and Strauss, 2006). Also, participants who sustained childhood adversities but had developed resilience coping reported less mental

health problems (Beutal *et al*., 2017). Anxiety and depression were individually predictive of resilience (Runkewitz, Kirchmann and Strauss, 2006).

While examining the relationship of resilience to personality, coping, and psychiatric symptoms, results showed that resilience moderated the relationship between a form of childhood adversity (emotional neglect) and present psychiatric symptoms (Campbell-Sills, Cohan and Stein, 2006).

In another study that examined resilience to childhood adversity, result revealed that despite the fact that those that had high exposure to adverse childhood experiences had more externalising and internalising disorders than those with low exposure, some individuals at high exposure did not develop any problems which may be suggestive of resilience which buffered the risks of adversities (Fergusson and Horwood, 2003).

A core of resiliency is to reduce the influence of risk factors like stressful life events and adverse experiences and promote the protective factors like optimism, social support and active coping, (Abiola and Udofia, 2011). Various factors contribute to the processes that increase resilience in the presence of adversity (Hermman *et al*., 2011).

There are factors that confer resilience on children in high risk environments and they include; intelligence and problem solving abilities, gender, external interests and affiliations, parental attachment and bonding, easy temperament and behaviour and peer factors (Fergusson and Horwood, 2003). Also, secure attachment to mother, safe relationship with a non-abusive parent, good parenting skills, family coherence and absence of maternal depression or substance abuse are associated with fewer behavioural problems and better psychological well-being in maltreated children (Hermman *et al*., 2011).

The school environment can also play a vital role in helping children living with high levels of adversity to shape and influence their view of the world, improve their sense of self and cope through support from school staff, positive relationship within the school, interaction with teachers and peers as well as good educational opportunities (Cortina *et al*., 2016).

2.7 Relevance of the Study to Child and Adolescent Mental Health

Childhood experiences, both positive and negative, have great effect on future violence, victimization and perpetration (Duke *et al.*, 2010), and lifelong health and opportunity (Bach and Louw, 2010; Ismayilova *et al.*, 2016). As such, early experiences are an important mental health concern (Oladeji, Makanjuola and Gureje, 2010; Bach and Louw, 2010; Ismayilova *et al.*, 2016). Studies have shown that effects of adverse childhood experiences like mental health problems and emotional problems are buffered by resilience (Fergusson and Horwood, 2003), adolescents who indicated higher resilience had lesser depressive symptomatology and emotional problems (Ziaian *et al.*, 2012).

While adverse childhood experiences and resilience have gained renewed interest over the past years, fewer studies have set out to determine the interactive effect of adverse childhood experience and resilience on mental health outcomes (Beutal *et al.*, 2017) or relationship between resilience and mental health outcomes (Campbell-Sills, Cohan and Stein, 2006). It is therefore important to explore the relationship of resilience with adverse childhood experiences and mental health problems.

Result from relationship of resilience with adverse childhood experiences and mental health outcomes will help design necessary and efficient interventions for adolescents that have been exposed to adversities thus reducing their risks of developing mental health problems and also

coping in the face of adversities (Campbell-Sills, Cohan and Stein, 2006; Ziaian, *et al.*, 2012 and Beutal *et al.*, 2017).

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CHAPTER THREE

METHODOLOGY

3.1 Study Location

This study was carried out in Ibadan, the capital of Oyo State in South-west Nigeria. Ibadan is the third largest populated city in Nigeria and is the most populous town in Oyo State with an estimated population of over 3 million people (Demographia, 2015). It is the largest city in Nigeria by geographical area. The metropolis consists of eleven local government areas (five urban and six rural local government areas) out of the thirty three local government areas in Oyo State.

This study was carried out in Ibadan North Local Government area. Ibadan North Local Government is one of the five local government that makes up Ibadan, the capital city of Ibadan. The Local government covers an area of 145.58 km^2 (the largest land mass among the urban local government areas in Ibadan metropolis). The estimation from the 2006 census and estimated annual growth rate of 3.27% is about 387,053 inhabitants (National Population Census, 2006). Ibadan North Local Government is subdivided into 12 wards and the administrative headquarters is located at Agodi. The ethnic group consists of multi-ethnic nationalities predominantly the Yoruba, with smaller numbers of Igbo, Edos, Urhobos, Itsekiris, Ijaws, Hausas and Fulanis.

Within Ibadan metropolis, there are primary, secondary and tertiary institutions that cater for the educational needs of the populace. The study was carried out in six secondary schools within Ibadan North Local Government out of a total of 42 public and 24 private secondary schools in the Local Government area. They were three private schools and three public schools. The public schools are run by the state government and mostly tuition free while the private schools are run

by private individuals or organisations and fees are charged which vary based on parents' ability to pay.

3.2 Study Design

This study used a cross-sectional design.

3.3 Study Population

The study population included adolescents in junior (JS1-JS3) (7-9 years equivalence of formal education) and senior classes (SS1-SS3) (10-12 years equivalence of formal education) attending secondary schools in Ibadan North Local Government Area of Ibadan, Oyo State, South-West Nigeria.

Inclusion criteria

Individuals included in the study were;

1. Adolescents who gave verbal assent and whose parents gave informed consent to participate in the study.

Exclusion criteria

Individuals who were excluded from the study were;

1 Adolescents who were too ill to participate in the study.

3.4 Sample Size

The sample size estimation was done using a prevalence of lifetime exposure to adverse events among adolescents in Southwest Nigeria set at 34% (Omigbodun *et al.*, 2008). The sample size formula for the estimation of a single proportion is;

$$n = \frac{Z\alpha^2\, pq}{d^2}$$

n = minimum sample size calculated

p = prevalence of adverse childhood experiences = 0.34

q = 1-p = 1 – 0.34 = 0.66

d = degree of precision

Zα = standard normal deviate corresponding to level of significance = 1.96

$$n = \frac{1.96^2 \times 0.34 \times 0.66}{0.05^2}$$

n = 345

Using a 10% non-response rate, minimum sample size was increased to 380.

3.5 Sampling Technique

Three private schools and three public school were randomly selected among the list of public and private secondary schools in Ibadan North Local Government area of Ibadan, Oyo State which was obtained from the Local Inspector of Education office.

The number of students chosen from each school was determined by proportional allocation based on the size of the school.

From each class (senior secondary 1-3 in senior schools, junior secondary 1 -3 in junior schools and junior and secondary 1-3 in both junior and senior schools) in a school, the number of students selected from each class was determined by dividing the number of students in each class by the total number of students in the school multiplied by the population sample to be studied.

In determining the sample interval, the number of students in each class was divided by the sample size allocated to each class to participate in the study.

In selecting the first participant, based on the interval number, papers containing numbers of students as they appear on the attendance roster from the list of students in each class were rolled and one was randomly selected and subsequent participants were selected based on the sampling interval.

Table 3.1 Sampling Technique

School	Total Population	Sample
Public Schools		
School 1 (Senior)	500	90
SS 1	250	45
SS 2	150	27
SS 3	100	18
School 2 (Junior)	311	56
JS 1	100	18
JS 2	121	22
JS 3	90	16
School 3 (Junior and Senior)	810	146
JS 1	150	27
JS 2	200	36
JS 3	150	27
SS 1	100	18
SS 2	120	22
SS3	90	16
Private Schools		
School 4 (Junior and Senior)	250	45
JS 1	40	7
JS 2	42	8
JS 3	40	7
SS 1	45	8
SS 2	43	8
SS 3	40	7
School 5 (Junior and Senior)	240	44
JS 1	38	7
JS 2	40	7
JS 3	40	7
SS 1	42	8
SS 2	44	8
SS 3	36	7
School 6 (Junior and Senior)	150	28
JS 1	25	5
JS 2	28	5
JS 3	24	4
SS 1	28	5
SS 2	25	5
SS 3	20	4
Total	2261	409

3.6 Study Instruments

A total of six instruments were used for this study. These consisted of a Socio Demographic Questionnaire, a modified Adverse Childhood Experiences International Questionnaire (ACE-IQ), the Strengths and Difficulties Questionnaire (SDQ), the Becks Depression Inventory (BDI), the Becks Anxiety Inventory (BAI), and the 10-Item Connor-Davidson Resilience Scale (CD-RISC). Details about the content of each instrument are provided below. All instruments were translated to the local language of the research population (Yoruba).

3.6.1. Socio Demographic Questionnaire

The Socio Demographic Questionnaire (Appendix two) which consists of 40 questions concerning socio demographic characteristics was adapted from a previous study on adolescents in rural and urban areas (Omigbodun *et al.*, 2008). It consists of variables relating to age, gender, religion, family type, family and school related questions. The Socio Demographic Questionnaire is semi-structured and was self-administered. Two open ended questions were added to assess coping methods in adolescents which are; "How do you cope with stress?" and "How can your school help improve coping skills among students?".

3.6.2. Modified Adverse Childhood Experiences International Questionnaire (ACE IQ)

The Adverse Childhood Experiences International Questionnaire (ACE-IQ) (Appendix three) was developed by the World Health Organization (WHO) as an objective measure for Adverse Childhood Experiences on a broad scope that allows for a representation of association between childhood adversities and consequent health outcomes and health risk behaviours in individuals. It measures childhood abuse or trauma, physical, emotional and sexual abuse, household or family

dysfunction, neglect by parents or caregivers, peer violence, exposure to community violence and collective violence. The questions have been sorted into 13 categories which include; emotional abuse, physical abuse, sexual abuse, violence against household members, living with household members who were substance abusers, living with household members who were mentally ill or suicidal, living with household members who were imprisoned, one or no parents, parental separation or divorce, emotional neglect, physical neglect, bullying, community violence and collective violence (WHO). The ACE-IQ was designed to be administered to individuals aged 18years and older but had been adopted for use among adolescents in Zambia (Kayola, 2017 unpublished MSc thesis). Questions were sorted into 11 categories which include; emotional neglect, physical neglect, alcohol/drug abuser in the household, someone ill/depressed/suicidal in the household, incarcerated household member, one or more parents dead/divorced or separated, parent/household member treated violently, emotional abuse, physical abuse, peer violence/bullying and community violence.

The World Health Organization developed two methods of analysis of the instrument, the binary version and the frequency version. The binary version was used to calculate the ACE score in this study. A score of 1 was given if a participant answered a question on exposure in the affirmative (whether once, a few times or many times in each category). Once completed, the individual category scores were summed for a total ACE score with minimum score set at 0 and maximum score set at 11. Participants who scored above the mean were regarded as having high ACE scores. The ACE-IQ has been validated for use in Nigeria (Kazeem 2015).

3.6.3. Strengths and Difficulties Questionnaire (SDQ)

The Strengths and Difficulties Questionnaire (SDQ) is a brief behavioural screening questionnaire for children and adolescents (Goodman, 2001) (Appendix four). It is a 25-item screening questionnaire that is split into 5 subscales with 5 items in each which include; emotional symptoms, conduct problems, Hyperactivity/inattention, peer relationship problems and pro-social behaviour. The Strength and Difficulties Questionnaire is used to assess emotional and behavioural problems children and adolescents (Goodman, 2001). The scales can be scored to get an overall score that indicates whether the participant is likely to have a significant problem. Each item is scored 0, 1 or 2 depending on whether the statement question is not true, somewhat true and certainly true. A summation of the four difficulty scales generates a total difficulty score with the minimum score set at 0 and the maximum score set at 40. The self-completed SDQ scoring was employed as the questionnaire was self-administered. Scores above the normal cut off shows presence of significant symptoms. The instrument has been used in Nigeria (Bakare *et al.*, 2010). A detail of the SDQ score interpretation is given in Table 1 below. Scores from 6 and above showed presence of emotional problems, scores of 4 and above showed presence of conduct problems, score of 6 and above showed presence of hyperactivity problem, scores of 5 and above showed presence of peer problems and scores of 16 and above showed presence of total difficulties on the SDQ.

Table 3.2 SDQ score range

Subscales	Normal score	Borderline score	Abnormal score
Emotional problems score	0-5	6	7-10
Conduct problems score	0-3	4	5-10
Hyperactivity problems score	0-5	6	7-10
Peer problem score	0-3	4-5	6-10
Total difficulties score	0-15	16-19	20-40

3.6.4. Beck's Depression Inventory (BDI)

The Beck's Depression Inventory (BDI) (Appendix five) is a 21 item self-report questionnaire for measuring presence and severity of depressive symptoms over the past two weeks which can be used among adolescents (Beck, Steer and Brown 1996). The Beck's Depression Inventory requires 5th to 6th grade reading level to comprehend (Groth-Marnat, 1990) which is equal to 5 to 6 years of formal education and takes approximately 10 minutes to complete. Items are rated on a 4 point Likert scale ranging from 0-3 giving a maximum score of 63. For the purpose of this study, the scoring of depression are broken down in table 3 below. The Beck's Depression Inventory has been validated for use in Nigeria and has been used to screen for depression in adolescents with a standard cut off point of 18 and above (Adewuya *et al.*, 2007 and Bella-Awusah *et al.*, 2016). Scores from 18 and above showed that a participant was depressed and scores below 18 showed not depressed.

Table 3.3 Depression Score range

Score	Interpretation
18-20	Mild depression
21-30	Moderate depression
Above 30	Severe depression

3.6.5. Beck's Anxiety Inventory (BAI)

The Beck's Anxiety Inventory (BAI) is a 21 item measure of anxiety symptoms over the past week (Beck, *et al.,* 1988) and takes about 5 to 10 minutes to complete (Appendix six). It can be used among adolescents. Items are rated on a scale value of 0 (not at all) to 3 (severely). Scores of 10 – 18 indicates mild to moderate anxiety, 19 – 29 indicates moderate to severe anxiety and 30 – 63 indicates severe anxiety (Beck, *et al.,* 1988). It has been used in Ghana with cut-off point set at 10 and above (Addom, 2015 unpublished MSc thesis) and Nigeria (Ejike, 2013). Scores of 10 and above showed that participant had anxiety while scores of 9 and below showed that participant did not have anxiety.

3.6.6. The 10-Item Connor-Davidson Resilience Scale (CD-RISC 10)

The 10-Item Connor Davidson Resilience Scale (CD-RISC) (Appendix seven) is a shortened version of the 25-item Connor Davidson Resilience Scale Questionnaire which measures personal competence and problem solving abilities and produces five factor analysis which include; personal competence, high standards, and tenacity, trust in one's instincts, tolerance of negative affect, and strengthening effects of stress, positive acceptance of change and secure relationships,

control and spiritual influences (Connor and Davidson, 2003 and Campbell-Sills and Stein, 2007). The CD-RISC 10 is a unidimensional self-reported scale which assesses areas of personality and also, stress and coping among adolescents and adults. It consists of 10 items (1, 4, 6, 7, 8, 11, 14, 16, 17 and 19) from the original scale which are evaluated on a five point Likert scale ranging from 0-4; not true at all (0), rarely true (1), sometimes (2), often true (3), and true nearly all of the time (4) with scores ranging from 0 (minimum) to 40 (maximum), total scores were calculated by summing all 10 items where higher scores indicate high resilience (Campbell-Sills and Stein, 2007). The 10-Item Connor Davidson Resilience Scale has been validated for use in Nigeria (Aloba, Olabisi and Aloba, 2016). Scores above the mean showed high resilience score and scores below the mean showed low resilience scores.

3.7 Data Collection Procedure

Questionnaires and consent forms were translated to the local language (Yoruba). Questionnaires were distributed to the participants and self administered. Questions were read out and participants were allowed to ask questions for clarifications in their classrooms. Data was collected during break and extracurricular activities period in the schools.

3.8 Data Analysis

Data that was acquired was cleaned, coded and analysed using the Statistical Package for the Social Sciences (SPSS) version 23. The socio demographic characteristics of respondents, ACE exposure and mental health problems (determined by SDQ, BDI and BAI) were described using frequency tables and percentage. ACE, SDQ, BDI, BAI and resilience scores were described using the measures of central tendency such as means and standard deviation. Association between ACEs and socio demographic variables were determined using Chi square.

Student t-tests and linear regression were used to examine the association between ACE and mental health problems (using SDQ, BDI and BAI scores).

Resilience of adolescents was described using frequency distribution. Association between ACEs and resilience scores among study participants were determined using t-test and linear regression. Association between mental health problems and resilience scores were determined using t-test and linear regression. Level of significance was 5%.

3.9 Ethical Consideration

Approval was received from the Oyo State Review Committee (Appendix eight) and official permission was obtained from the Oyo State Ministry of Education through the Office of the Head of Service, Oyo State. Students were given informed consent forms to take home to their parents. Assent was also obtained from the students. Students whose parents or guardians signed their consent forms participated in the study.

Voluntariness

Participation in the study was completely voluntary and participants were granted the liberty to decide whether to participate in the study or not. Vivid explanation of the purpose of the study sufficient enough to give informed consent was provided in simple and clear language and collected using informed consent forms.

Confidentiality of Data

Participants' data were kept confidential. No names were used in the questionnaire as each one was coded using identification codes. Participants' identity and the codes were kept secure separately.

Beneficence

At the end of the first stage of data collection, participants were given a talk about awareness of mental health problems and how they can cope in the face of adversities.

Non-maleficence

Participants were not exposed to any harm beyond what was generally encountered in normal day-to-day classroom environment. Also, data collection from the participants did not involve any invasive process.

Justice

The methods of selection of research participants were scientifically objective and fair to all secondary school adolescents within the sample frame. All were offered the opportunity to participate in the study and would also benefit from intervention programmes.

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CHAPTER FOUR

RESULTS

This study aimed to determine adolescents' exposure to adverse childhood experiences (ACEs), resilience and mental health problems in Ibadan North LGA, Southwest Nigeria. A total of 430 adolescents were recruited into the study and 409 returned completed questionnaires giving a response rate of 95.1%. The analyses of the findings are presented as follows:

1 Socio-demographic characteristics of study participants
2 Prevalence of reported adverse childhood experiences in secondary school adolescents.
3 Socio-demographic correlates of adverse childhood experiences in secondary school adolescents.
4 Prevalence of mental health problems in secondary school adolescents.
5 Relationship between reported adverse childhood experiences, resilience and mental health problems among secondary school adolescents.
6 Coping mechanisms reportedly used by in-school adolescents to deal with stressful events
7 Adolescents' views on the role of schools in improving coping strategies.

4.1. Socio Demographic Characteristics of Study Participants

4.1.1 Personal Characteristics of Study Participants

The participants ranged in age from 10 – 19 years (Mean = 14.00 years, SD = 1.74). One hundred and eighty six (45.5%) were males and 223 (54.4%) were females. Three-quarters (72.6%, n=297) were from public schools and 112 (27.4%) were private school students. Two hundred and three (49.6%) were junior students (JS1-3) and 206 (50.4%) were senior students (SS1-3). See Table 4.1.1 below.

Table 4.1.1 Personal Characteristics of Study Participants (N=409)

Variables	n	%
Age group (in years)		
10 – 14 (Younger Adolescents)	262	64.1
15 – 19 (Older Adolescents)	147	35.9
Total	409	100
Gender		
Male	186	45.5
Female	223	54.5
Total	409	100
Type of school		
Public	297	72.6
Private	112	27.4
Total	409	100
Class		
Junior (JS1-3)	203	49.6
Senior (SS1-3)	206	50.4
Total	409	100
Religion		
Islam	139	34.0
Orthodox Christian	59	14.4
Pentecostal Christian	206	50.4
Traditional	5	1.2
Total	409	100
Extent to which religion guide behaviour		
Very much	347	84.8
Much	44	10.8
Just a little	11	2.7
Not at all	7	1.7
Total	409	100
Do you do any work to earn money?		
Yes	60	14.7
No	349	85.3
Total	409	100
If yes, please describe		
Housework	11	2.6
Apprenticeship	35	8.6
Hawking	6	1.5
Trading	8	2.0
Total	60	14.7

4.1.2 Family Charateristics of Study Participants

Participants from monogamous and polygamous homes were 84.4% (345) and 15.6% (64) respectively. Three hundred and sixty eight (90%) of the participants reported that their parents were married, 332 (81.2%) were living with their parents at the time of the study and 348 (85.1%) were brought up by both parents. Seventy-four (18.1%) had lived with one person aside their parents, 16 (3.9%) with two persons and 19 (4.6%) with three persons aside their parents. Results showed that 226 (55.3%) of the participants' fathers and 213 (52.1%) of their mothers had a university degree and above. See Table 4.1.2 below.

Table 4.1.2 Family Charateristics of Study Participants (N=409)

Variables	n	%
Family type		
Monogamous	345	84.4
Polygamous	64	15.6
Number of mother's children		
0 – 4	283	69.2
5 and above	126	30.8
Number of father's children		
0 – 4	269	65.8
5 and above	140	34.2
Marital status of parents		
Married	368	90.0
Separated/Divorced	21	5.1
Father is dead	11	2.7
Mother is dead	5	1.2
Mother and father are dead	4	1.0
Who do you live with currently?		
Parents	332	81.2
Mother	36	8.8
Father	9	2.2
Grandparents	23	5.6
Others	9	2.2
Who brought you up from childhood?		
Parents	348	85.1
Mother	40	9.8
Father	5	1.2
Grandparents	16	3.9
Number of people you have lived with asides parents		
None	300	73.3
One	74	18.1
Two	16	3.9
Three	19	4.7

Table 4.1.2 Family Characteristics of Study Participants Continued (N=409)

Variables	n	%
Highest level of father's education		
No formal/koranic/primary education	30	7.3
Secondary school	83	20.3
University degree	226	55.3
Don't know	70	17.1
Highest level of mother's education		
No formal/koranic/primary education	28	6.8
Secondary school	107	26.2
University degree	213	52.1
Don't know	61	14.9

4.1.3. School-Related Characteristics of Study Participants

School related demographics of the study participants are summarized in Table 4.1.3 below. Three hundred and fifty six (87%) participants had a school guidance counsellor and 122 (29.8%) had gone to see the guidance counsellor at one point or the other.

Table 4.1.3 School-Related Characteristics of Study Participants (N=409)

Variables	n	%
Do you like your school?		
Yes	379	92.7
No	30	7.3
Total	409	100
Do you do well academically?		
Yes	402	98.3
No	7	1.7
Total	409	100
Difficulties with teacher(s)		
Yes	70	17.1
No	339	82.9
Total	409	100
Do you have guidance counsellors?		
Yes	356	87.0
No	53	13.0
Total	409	100
Have you ever gone to see them?		
Yes	122	29.8
No	287	70.2
Total	409	100

4.2. Prevalence of Adverse Childhood Experiences among Secondary School Adolescents

Adverse childhood experiences were categorized into eleven categories namely:

1. Emotional neglect
2. Physical neglect
3. Alcohol and/or drug abuse in household
4. Someone chronically depressed/mentally ill or suicidal
5. Incarcerated household member
6. One or both parents dead/parental separation/divorce
7. Parent/household member treated violently
8. Emotional abuse
9. Physical abuse
10. Peer violence/bullying
11. Community violence

Three hundred and seventy two (91%) participants had experienced emotional neglect, 104 (25.4%) physical neglect, 29 (7.1%) had an alcohol/drug abuser in the household. Fifty two participants (12.7%) reported that their parents were either divorced, separated or that one or both parents were dead. Two hundred and five (50.1%) had seen or heard a parent or household member being treated violently, 143 (35%) reported they had been emotionally abused, 164 (40.1%) reported physical abuse and 254 (62.1%) had experienced bullying/peer violence.

These are summarized in Table 4.2.1 below.

Table 4.2.1a Prevalence of Adverse Childhood Experiences among Study Participants by Category (N=409)

Category	Yes n (%)	No n (%)	Total n (%)
Emotional Neglect*			
Did your parents/guardians understand your problems and worries?	37 (9.0)	372 (91.0)	409 (100)
Did your parents/guardians really know what you were doing with your free time when you were not at school or work			
Physical Neglect			
Did your parents/guardians not give you food when they could easily have done so	104 (25.4)	305 (74.6)	409 (100)
Were your parents/guardians ever too drunk or intoxicated by drugs to take care of you			
Did your parents/guardians not send you to school even when it was available			
Alcohol/drug abuser in household			
Did you live with a household member who was a problem drinker or alcoholic, or misused drugs	29 (7.1)	380 (92.9)	409 (100)
Someone chronically depressed, mentally ill or suicidal			
Did you live with a household member who was depressed, mentally ill or suicidal	22 (5.4)	387 (94.6)	409 (100)
Incarcerated household member			
Did you live with a household member who was ever sent to jail or prison	17 (4.2)	392 (95.8)	409 (100)
One or no parents/parental divorce or separation			
Were your parents ever separated or divorced	52 (12.7)	357 (87.3)	409 (100)
Did your mother, father or guardian die			
Parent/household member treated violently			
Did you see or hear a parent or household member in your home being screamed at, insulted or humiliated	205 (50.1)	204 (49.9)	409 (100)
Did you see or hear a parent or household member in your home being slapped, kicked, punched or beaten up			
Did you see or hear a parent or household member in your home being hit or cut with an object such as a stick (or cane), bottle, club, knife, whip, etc.			

***Answering no means exposure to ACE**

Table 4.2.1b Prevalence of Adverse Childhood Experiences among Study Participants by Category Continued (N=409)

Category	Yes n (%)	No n (%)	Total n (%)
Emotional Abuse			
Did a parent, guardian or other household member yell, scream or swear at you, insult or humiliate you Did a parent, guardian or other household member threaten to, or actually abandon you or throw you out of the house	143 (35.0)	266 (65.0)	409 (100)
Physical Abuse			
Did a parent, guardian or other household member spank, slap, kick, punch or beat you Did a parent, guardian or other household member hit or cut you with an object such as stick (cane), bottle, club, knife, whip, etc	164 (40.1)	245 (59.9)	409 (100)
Peer Violence/bullying			
Were you ever bullied Were you ever in a physical fight	254 (62.1)	155 (37.9)	409 (100)
Community Violence			
Did you see or hear someone being beaten up in real life Did you see or hear someone being stabbed or shot in real life Did you see or hear someone being threatened with a bottle, knife or gun in real life	349 (85.3)	60 (14.7)	409 (100)

4.2.1 Frequency of Adverse Childhood Events Reported among Study Participants

The distribution of total reported adverse childhood events is indicated in table 4.2.2 below. One (0.2%) participant reported no adverse childhood event. See Table 4.2.2 below.

Table 4.2.2 Frequency of Adverse Childhood Events Reported among Study Participants (N=409)

Reported Events	N	%
No events	1	0.2
1	17	4.2
2	62	15.2
3	92	22.5
4	63	15.4
5	81	19.8
6	53	13.0
7	23	5.6
8	5	1.2
9	4	1.0
10	6	1.5
11	2	0.5
Total	409	100.0

4.2.2 Scores of Reported Adverse Childhood Experiences among Study Participants

The mean ACE score was 4.0 (SD=1.91). One hundred and seventy four (42.6%) of the respondents had an ACE score equal to or greater than 5.

4.3 Association between Socio Demographic Characteristics and Adverse Childhood Experiences of Study Participants

Adverse childhood experiences were cross-tabulated with socio demographic variables; age, gender and type of school using Chi square.

4.3.1 Association between Adverse Childhood Experiences and Age of Study Participants

Two hundred and forty four out of 262 (93.1%) younger adolescents and 128/147 (87.1%) older adolescents reported emotional neglect; this difference was statistically significant (p=0.044). Sixteen (10.9%) (n=147) older adolescents and 13 (5%) (n=262) younger adolescents reported presence of alcohol/drug abuser in household; this difference was statistically significant (p=0.025). One hundred and one (68.7%) (n=147) older adolescents and 153 (58.4%) (n=262) younger adolescents reported they had experienced peer violence/bullying; this difference was statistically significant (p=0.039). See Table 4.3.1 below.

Table 4.3.1 Association between Adverse Childhood Experiences and Age of Study Participants (N=409)

Adverse Childhood Experiences	Age in years				χ^2	p
	10-14		15-19			
	n	%	n	%		
Emotional Neglect						
Yes	244	93.1	128	87.1	4.196	0.044*
No	18	6.9	19	12.9		
Physical Neglect						
Yes	68	26	36	24.5	0.106	0.744
No	194	74	111	75.5		
Alcohol/drug abuser in household						
Yes	13	5	16	10.9	5.014	0.025*
No	249	95	131	89.1		
Someone ill/depressed/suicidal in the household						
Yes	11	4.2	11	7.5	1.996	0.158
No	251	95.8	136	92.5		
Incarcerated Household member						
Yes	8	3.1	9	6.1	2.226	0.136
No	254	96.9	138	93.9		
One or both parents dead/parental separation/divorce						
Yes	33	12.6	19	12.9	0.009	0.923
No	229	87.4	128	87.1		
Parent/household member treated violently						
Yes	134	51.1	71	48.3	0.305	0.581
No	128	48.9	76	51.7		
Emotional abuse						
Yes	88	33.6	55	37.4	0.607	0.436
No	174	66.4	92	62.6		
Physical abuse						
Yes	103	39.3	61	41.5	0.187	0.665
No	159	60.7	86	58.5		
Peer violence/bullying						
Yes	153	58.4	101	68.7	4.253	0.039*
No	109	41.6	46	31.3		
Community violence						
Yes	223	85.1	126	85.7	0.027	0.869
No	39	14.9	21	14.3		

*significant at p<0.05

4.3.2 Association between Adverse Childhood Experiences and Gender of Study Participants

Twenty (10.8%) (n=186) males and 9 (4.0%) (n=223) females reported the presence of an alcohol/drug abuser in household; this difference was statistically significant (p=0.008). One hundred and thirty eight males (74.2%) (n=186) and 116 (52%) (n=223) females reported peer violence/bullying; this difference was statistically significant (p<0.001). This is summarised is Tables 4.3.2 below.

Table 4.3.2 Association between Adverse Childhood Experiences and Gender of Study Participants (N=409)

Adverse Childhood Experiences	Gender				χ^2	p
	Male		Female			
	n	%	n	%		
Emotional Neglect						
Yes	173	93	199	89.2	1.755	0.185
No	13	7	24	10.8		
Physical Neglect						
Yes	48	25.8	56	25.1	0.026	0.872
No	138	74.2	167	74.9		
Alcohol/drug abuser in household						
Yes	20	10.8	9	4	6.945	0.008*
No	166	89.2	214	96		
Someone ill/depressed/suicidal in the household						
Yes	13	7	9	4	1.738	0.187
No	173	93	214	96		
Incarcerated Household member						
Yes	11	5.9	6	3	2.645	0.104
No	175	94.1	217	97		
Peer violence/bullying						
Yes	138	74.2	116	52	21.190	<0.001*
No	48	25.8	107	48		
Community violence						
Yes	164	88.2	185	83	2.201	0.138
No	22	11.8	38	17		
One or both parents dead/parental separation/divorce						
Yes	21	11.3	31	13.9	0.623	0.430
No	165	88.7	192	86.1		
Parent/household member treated violently						
Yes	98	52.7	107	48	0.898	0.343
No	88	47.3	116	52		
Emotional abuse						
Yes	66	35.5	77	34.5	0.041	0.840
No	120	64.5	146	65.4		
Physical abuse						
Yes	76	40.9	88	39.5	0.083	0.774
No	110	59.1	135	60.5		

*** significant at p<0.05**

4.3.3. Association betweeen Adverse Childhood Experiences and Type of School of Study Participants

Twenty two (19.6%) (n=112) participants from private schools and 10 (10.1%) (n=297) participants from public schools reported parental divorce/separation/death; this difference was significant (p=0.010). Fifty-five (49.1%) (n=112) participants from private schools and 109 (36.7%) (n=297) participants from public school reported physical abuse; this difference was significant (p=0.022). There was no significant difference in reports of bullying or exposure to community violence. See Table 4.3.3 below.

Table 4.3.3 Association between Adverse Childhood Experiences and Type of School of Study Participants

N=409

Adverse Childhood Experiences	Type of School				χ^2	p
	Public School		Private School			
	n	%	n	%		
Emotional Neglect						
Yes	266	89.6	106	94.6	2.551	0.110
No	31	10.4	6	5.4		
Physical Neglect						
Yes	69	23.3	35	31.3	2.727	0.097
No	228	76.8	77	68.8		
Alcohol/drug abuser in household						
Yes	21	7.1	104	92.9	0.001	0.980
No	276	92.9	8	7.1		
Someone ill/depressed/suicidal in the household						
Yes	12	4	10	8.9	3.818	0.051
No	285	96	102	91.1		
Incarcerated Household member						
Yes	14	4.7	3	2.7	0.846	0.358
No	283	95.3	109	97.3		
One or both parents dead/parental separation/divorce						
Yes	30	10.1	22	19.6	6.673	0.010*
No	267	89.9	90	80.4		
Parent/household member treated violently						
Yes	144	48.5	61	54.5	1.163	0.281
No	153	51.5	51	45.5		
Emotional abuse						
Yes	100	33.7	43	38.4	0.798	0.372
No	197	66.3	69	61.6		
Physical abuse						
Yes	109	36.7	55	49.1	5.212	0.022*
No	188	63.3	57	50.9		
Peer violence/bullying						
Yes	176	59.3	78	69.6	3.726	0.054
No	121	40.7	34	30.4		
Community violence						
Yes	251	84.5	98	87.5	0.580	0.446
No	46	15.5	14	12.5		

*** significant difference at p<0.05**

4.4 Prevalence of Mental health Problems among Study Participants

Mental health problems were categorized using Strengths and Difficulties Questionnaire (SDQ), Beck's Depression inventory and Beck's anxiety inventory.

4.4.1 Prevalence of Mental Health Problems on SDQ subscales among Study Participants

The mean total SDQ score for respondents in this study was 9.97 (SD=10.01). Table 4.4.1 shows the prevalence of difficulties on the SDQ subscales among secondary school adolescents. Three hundred and seven (75.1%) of the respondents had scores indicative of peer problems, 168 (41.1%) had scores indicative of conduct problems and emotional problems were reported in 82 (20%). Two hundred and twenty three (54.5%) had scores above the cut off on the total scale.

See table 4.4.1 below.

Table 4.4.1 Prevalence of Mental Health Problems on SDQ subscales among Study Participants

N=409

SDQ Subscales	Yes (%)	No (%)	Total (%)
Emotional Problems	82 (20)	327 (80)	409 (100)
Conduct Problems	168 (41.1)	241 (58.9)	409 (100)
Hyperactivity	165 (40.3)	244 (59.7)	409 (100)
Peer problems	307 (75.1)	102 (24.9)	409 (100)
Total difficulty	223 (54.5)	186 (45.5)	409 (100)

4.4.2. Prevalence of Depression among Study Participants

The mean score of the respondents on the Beck's Depression Inventory (BDI) scale was 9.97 (SD=10.01). Using a cut off point of 18 on the BDI, 74 (18.1%) of the respondents met the cut off for depressive symptoms.

Results also showed that 17 (4.1%) of respondents had scores in mild depression range, 31 (7.6%) in moderate depression range and 26 (6.4%) in the severe depression range.

4.4.3. Prevalence of Anxiety among Study Participants

Using a cut-off point of 10 on the Beck's Anxiety Inventory, 228 (55.7%) met the cut off for significant anxiety symptoms. Ninety-nine (24.1%) of respondents had mild to moderate anxiety, 85 (20.8%) had moderate to severe anxiety and 44 (10.8%) had severe anxiety.

4.5 Association between Socio Demographic Characteristics of Study Participants and Mental Health Problems

Mental health problems were cross-tabulated with socio demographic characteristics; age, gender and type of school using Chi square.

4.5.1 Association between Mental Health Problems and Age of Study Participants

There was no significant association between mental health problems and age of study participants. See Table 4.5.1 below.

Table 4.5.1 Association between Mental Health Problems and Age of Study Participants

N=409

Mental Health Problems	Age in years				χ^2	p
	10-14		15-20			
	n	%	n	%		
Emotional Problems						
Yes	55	67.1	27	32.9	0.405	0.525
No	207	63.3	120	36.7		
Conduct Problems						
Yes	99	58.9	69	41.1	3.259	0.071
No	163	67.6	78	32.4		
Hyperactivity						
Yes	99	60	66	40	1.979	0.160
No	163	66.8	81	33.2		
Peer Problems						
Yes	195	63.5	112	36.5	0.156	0.693
No	67	65.7	35	34.3		
Total Difficulty						
Yes	141	63.2	82	36.8	0.147	0.702
No	121	65.1	65	34.9		
Depression						
Yes	42	56.8	32	43.2	2.092	0.148
No	220	65.7	115	34.3		
Anxiety						
Yes	142	62.3	86	37.7	0.707	0.400
No	120	66.3	61	33.7		

*** significant difference at p<0.05**

4.5.2 Association between Mental Health Problems and Gender of Study Participants

Twenty seven (32.9%) (n=186) males and 55 (67.1%) (n=223) females reported emotional problems; this difference was statistically significant (p=0.011). See Table 4.5.2.

Table 4.5.2 Association between Mental Health Problems and Gender of Study Participants

N=409

Mental Health Problems	Gender				χ^2	p
	Male (N=186)		Female (N=223)			
	n	%	n	%		
Emotional Problems						
Yes	27	32.9	55	67.1	6.515	0.011*
No	159	48.6	168	51.4		
Conduct Problems						
Yes	76	45.2	92	54.8	0.007	0.935
No	110	45.6	131	54.4		
Hyperactivity						
Yes	66	40	99	60	3.346	0.067
No	120	49.2	124	50.8		
Peer Problems						
Yes	132	43	175	57	3.054	0.081
No	54	52.9	48	47.1		
Total Difficulty						
Yes	93	41.7	130	58.3	2.815	0.093
No	93	50	93	50		
Depression						
Yes	31	41.9	43	58.1	0.468	0.494
No	155	46.3	180	53.7		
Anxiety						
Yes	101	44.3	127	55.7	0.289	0591
No	85	47	96	53		

*** significant difference at p<0.05**

4.5.3 Association between Mental health Problems and Type of School of Study Participants

One hundred and fifty two (66.7%) (n=297) public schools participants and 76 (33.3%) (n=112) private school participants reported anxiety; this difference was statistically significant (p=0.002).

See Table 4.5.3 below.

Table 4.5.3 Association between Mental Health Problems and Type of School of Study Participants

N=409

Mental Health Problems	Type of School				χ^2	p
	Public (N=297)		Private (N=112)			
	n	%	n	%		
Emotional Problems						
Yes	57	69.5	25	30.5	0.497	0.481
No	240	73.4	87	26.6		
Conduct Problems						
Yes	122	72.6	46	27.4	<0.001	0.999
No	175	72.6	66	27.4		
Hyperactivity						
Yes	123	74.5	42	25.5	0.518	0.472
No	175	71.3	70	28.7		
Peer Problems						
Yes	222	72.3	85	27.7	0.057	0.811
No	75	73.5	27	26.5		
Total Difficulty						
Yes	161	72.2	62	27.8	0.043	0.835
No	136	73.1	50	26.9		
Depression						
Yes	53	71.6	21	28.4	0.045	0.832
No	244	72.8	91	27.2		
Anxiety						
Yes	152	66.7	76	33.3	9.171	0.002*
No	145	80.1	36	19.9		

*** significant difference at p<0.05**

4.6 Association between Adverse Childhood Experiences and Mental Health Problems among Study Participants

Mental health problems are categorized using SDQ, BDI and BAI.

4.6.1 Association between adverse childhood experiences and difficulties on SDQ among study participants

Adolescents who had been emotionally abused (p=0.006), physically abused (p=0.016) and bullied (p=0.014) had higher SDQ mean scores than those who had not experienced these forms of abuse; these differences were statistically significant. See Table 4.6.1 below.

Table 4.6.1 Association between Adverse Childhood Experiences and Difficulties (SDQ) Mean Scores among Study Participants

N=409

Variable	Mean SDQ Scores	t	p
Emotional Neglect			
Yes	16.68	0.405	0.525
No	16.08		
Physical Neglect			
Yes	16.68	1.428	0.233
No	15.94		
Alcohol/drug abuser in the household			
Yes	15.24	0.835	0.361
No	16.20		
Depressed/mentally ill or suicidal person in household			
Yes	16.55	0.134	0.715
No	16.11		
Incarcerated household member			
Yes	16.82	0.286	0.593
No	16.10		
One or more parents dead/Parental separation/divorce			
Yes	16.35	0.092	0.762
No	16.10		
Parent/household member treated violently			
Yes	16.24	0.173	0.678
No	16.02		
Emotional abuse			
Yes	17.14	7.654	0.006*
No	15.59		
Physical abuse			
Yes	16.93	5.902	0.016*
No	15.60		
Peer violence/bullying			
Yes	16.65	6.131	0.014*
No	15.28		
Community violence			
Yes	16.25	1.158	0.283
No	15.43		

*significant difference at p<0.05

4.6.2 Association between Adverse Childhood Experiences and Depression among Study Participants

Participants who reported emotional neglect had higher scores on the BDI (15.11) than those who did not report emotional neglect (9.46). This was statistically significant (p=0.001). Participants who reported physical neglect, an incarcerated household member, death/divorce of a parent, parent/household member being treated violently, emotional abuse, physical abuse and peer violence/bullying had higher mean depressive scores than those that did not report these events; these differences were statistically significant (p<0.001). See Table 4.6.2 below.

Table 4.6.2 Association between Adverse Childhood Experiences and Depression among Study Participants

N=409

Variable	Mean BDI Scores	t	p
Emotional Neglect			
Yes	15.11	10.958	0.001*
No	9.46		
Physical Neglect			
Yes	12.41	8.439	0.004*
No	9.14		
Alcohol/drug abuser in the household			
Yes	13.41	3.709	0.055
No	9.71		
Depressed/mentally ill or suicidal person in household			
Yes	13.41	2.749	0.098
No	9.78		
Incarcerated household member			
Yes	16.24	7.038	0.008*
No	9.70		
One or more parents dead/Parental separation/divorce			
Yes	12.75	4.503	0.034*
No	9.58		
Parent/household member treated violently			
Yes	11.63	11.629	0.001*
No	8.30		
Emotional abuse			
Yes	12.40	13.187	<0.001*
No	8.68		
Physical abuse			
Yes	12.35	15.981	<0.001*
No	8.38		
Peer violence/bullying			
Yes	11.39	13.891	<0.001*
No	7.64		
Community violence			
Yes	9.75	1.205	0.273
No	11.28		

*significant difference at <0.05

4.6.3 Association between Adverse Childhood Experiences and Anxiety among Study Participants

Respondents who reported experiences of emotional neglect, physical neglect, incarcerated household member, parent/household member being treated violently, emotional abuse, physical abuse and peer violence/bullying had higher mean anxiety scores than those who reported having no exposure to these events. See Table 4.6.3 below.

Table 4.6.3 Association between Adverse Childhood Experiences and Anxiety among Study Participants

N=409

Variable	Mean BAI Scores	T	p
Emotional Neglect			
Yes	17.95	5.395	0.021*
No	13.25		
Physical Neglect			
Yes	15.72	4.239	0.040*
No	12.97		
Alcohol/drug abuser in the household			
Yes	17.66	3.579	0.059
No	13.37		
Depressed/mentally ill or suicidal person in household			
Yes	17.14	2.009	0.157
No	13.48		
Incarcerated household member			
Yes	21.06	7.055	0.008*
No	13.35		
One or more parents dead/Parental separation/divorce			
Yes	16.19	2.729	0.099
No	13.31		
Parent/household member treated violently			
Yes	15.73	12.886	<0.001*
No	11.60		
Emotional abuse			
Yes	17.35	22.483	<0.001*
No	11.70		
Physical abuse			
Yes	18.33	47.514	<0.001*
No	10.56		
Peer violence/bullying			
Yes	15.59	18.474	<0.001*
No	10.53		
Community violence			
Yes	13.78	0.185	0.667
No	13.07		

*significant difference at <0.05

4.6.4 Association between Adverse Childhood Experiences and Mental health Problems Continued

Table 4.6.3b below shows the linear regression for association between adverse childhood experiences scores and mental health problems. Depression (β=0.600, p=0.016) and anxiety (β =0.867, p<0.001) had a significant association with ACE. See Table 4.6.4 below.

Table 4.6.4 Association between Adverse Childhood Experiences and Mental Health Problems using linear regression

N=409

Variable	β	CI	Std. Error	T	p
Emotional problems	-0.058	-0.559 - 0.442	0.255	-0.229	0.819
Conduct problems	0.022	-0.388 - 0.433	0.209	0.108	0.914
Hyperactivity	0.091	-0.316 - 0.498	0.207	0.439	0.661
Peer Problems	-0.114	-0.574 - 0.346	0.234	-0.488	0.626
Total Difficulty	0.186	-0.320 - 0.693	0.258	0.723	0.470
Depression	0.600	0.111 - 1.089	0.249	2.414	0.016*
Anxiety	0.867	0.478 - 1.257	0.198	4.376	<0.001*
(Constant)	1.946	0.809 - 3.084	0.579	3.363	0.001

R= 0.299, R^2 = 8.9%, F= 5.617, p (0.000 < 0.05)

4.7 Prevalence of Resilience among Study Participants

The mean resilience score of study participants was 20 (SD=10.70). One hundred and eighty five participants (45.2%) scored above the mean. See Table 4.7 below.

Table 4.7 Prevalence of resilience among study participants

N=409

Level of resilience	N	%
Low resilience	224	54.8
High resilience	185	45.2
Total	409	100.0

4.8 Resilience and Socio Demographic Characteristics of Study Participants

Resilience was cross-tabulated with socio demographic characteristics; age, gender and type of school using Chi square. The difference in proportion of participants from private schools (53.6%, n=60) and participants from public schools (42.2%, n= 125) who had high resilience was statistically significant (p=0.040). See Table 4.8 below.

Table 4.8 Resilience and socio demographic characteristics of Study participants

N=409

Variables	Resilience					
	Low Resilience		High Resilience		χ^2	p
	n	%	N	%		
Age						
10-14	146	55.7	116	44.3	0.337	0.561
15-19	77	52.7	69	47.3		
Gender						
Male	103	55.4	83	44.6	0.071	0.789
Female	120	54.1	102	45.9		
Type of school						
Public	171	57.8	125	42.2	4.217	0.040*
Private	52	46.4	60	53.6		

*significant at <0.05

4.9 Association between Adverse Childhood Experiences and Resilience among Study Participants

Findings show a statistically significant difference in the mean resilience scores between respondents who reported physical neglect ($p=0.001$) and violent treatment of parent/household member ($p<0.001$) and those who did not report these events. See Table 4.9a below.

Table 4.9a Association between Adverse Childhood Experiences and Resilience among Study Participants

N=409

Variable	Mean Resilience Scores	t	p
Emotional Neglect			
Yes	22.43	1.739	0.188
No	20.00		
Physical Neglect			
Yes	17.20	11.399	0.001*
No	21.25		
Alcohol/drug abuser in the household			
Yes	18.69	0.640	0.424
No	20.34		
Depressed/mentally ill or suicidal person in household			
Yes	16.55	2.758	0.098
No	20.43		
Incarcerated household member			
Yes	16.59	2.052	0.153
No	20.38		
One or more parents dead/Parental separation/divorce			
Yes	19.88	0.059	0.808
No	20.27		
Parent/household member treated violently			
Yes	18.08	17.085	<0.001*
No	22.37		
Emotional abuse			
Yes	21.32	2.328	0.128
No	19.63		
Physical abuse			
Yes	20.63	0.393	0.531
No	19.95		
Peer violence/bullying			
Yes	20.86	2.404	0.122
No	19.17		
Community violence			
Yes	20.12	0.216	0.642
No	20.82		

*significant difference at <0.05

4.9 Association between Adverse Childhood Experiences and Resilience among Study Participants Continued

Table 4.9b shows linear regression for association between adverse childhood experiences and resilience. Physical neglect (β =-4.104, p=0.001) was negatively associated with resilience and violent treatment of parent/household member (β =-4.480, p<0.001) was negatively associated with resilience. See Table 4.9b below.

Table 4.9b Association between Adverse Childhood Experiences and Resilience using Linear Regression

N=409

ACE	B	CI	Std. Error	t	P
Emotional neglect	-1.220	-4.776 - 2.336	1.809	-0.675	0.500
Physical neglect	-4.104	-6.533 - -1.675	1.235	-3.322	0.001*
Alcohol/drug abuser in household	0.975	-3.375 - 5.326	2.213	0.441	0.660
Depressed/mental illness/suicidal household member	-2.217	-7.346 - 2.911	2.609	-0.850	0.396
Incarcerated household member	-2.727	-8.488 - 3.034	2.930	-0.930	0.353
Parental death/separation/divorce	1.260	-2.201 - 4.721	1.761	0.716	0.475
Parent/household member treated violently	-4.480	-6.619 - -2.341	1.088	-4.117	<0.001*
Emotional abuse	2.406	-0.133 - 4.946	1.292	1.863	0.063
Physical abuse	0.630	-1.910 - 3.171	1.292	0.488	0.626
Peer Violence/Bullying	1.749	-0.476 - 3.974	1.132	1.545	0.123
Community violence	-1.090	-4.008 - 1.827	1.484	-0.735	0.463
(Constant)	23.375	18.999 - 27.851	2.277	10.266	0.000*

R= 0.306, R^2 = 9.4%, F= 3.735, p (0.000, <0.05)

4.10 Association between Resilience and Mental Health Problems among Study Participants

Findings show that the difference in mean resilience scores among participants who reported peer problems and those that did not was statistically significant (0.003). See Table 4.10a below.

Table 4.10a Association between Resilience and Mental Health Problems among Study Participants

N=409

Variable	Mean Resilience Scores	t	p
Emotional Problems			
Yes	20.80	0.303	0.582
No	20.08		
Conduct Problems			
Yes	20.72	0.617	0.433
No	19.88		
Hyperactivity			
Yes	20.35	0.036	0.849
No	20.14		
Peer problems			
Yes	21.11	8.709	0.003*
No	17.54		
Total difficulty			
Yes	19.98	0.247	0.619
No	20.51		
Depression			
Yes	18.76	1.699	0.193
No	20.55		
Anxiety			
Yes	20.87	1.882	0.171
No	19.41		

*significant difference at <0.05

4.10 Association between Resilience and Mental Health Problems among Study Participants Continued

Table 4.10b shows linear regression showing the association between mental health problems and resilience. Peer problems (β=3.750, p=<0.001) and total difficulty (β= -3.957, p=0.008) were significantly associated with mental health problems (β=3.452, p=0.020).

Table 4.10b Association between Mental Health Problems and Resilience among Study Participants

N=409

Variable	B	CI	Std. Error	t	P
Emotional problems	1.480	-1.385 - 4.346	1.458	1.016	0.310
Conduct problems	1.077	-1.273 - 3.428	1.196	0.901	0.368
Hyperactivity	1.259	-1.071 - 3.588	1.185	1.062	0.289
Peer problems	4.750	2.118 - 7.381	1.339	3.548	<0.001*
Total Difficulty	-3.957	-6.856 - -1.058	1.474	-2.684	0.008*
Depression	-2.508	-5.305 - 0.288	1.423	-1.763	0.079
Anxiety	2.026	-0.204 - 4.257	1.135	1.786	0.075
(Constant)	12.765	6.253 - 19.276	3.312	3.854	<0.001

R= 0.220, R^2 = 4.9%, F= 2.925, p=0.005

4.11 Participants Responses to How They Cope with Stress

Out of 409 study participants, 275 (67%) responded to the question. Their responses are presented using thematic analysis. One hundred and forty six (53.1%) of the study participants employed emotion focused coping strategy, 62 (22.5%) employed problem focused coping strategy, 31 (11.3%) employed avoidant coping strategy and 13 (4.7%) reported that they had never been stressed out. See Table 4.11 below.

Table 4.11 Participants Responses to How They Cope with Stress (N=275)

	Coping methods	n	%
1.	**Emotion focused coping**	146	53.1
	"by taking an exercise or take a rest"		
	"sometimes I sing and sometimes I think of funny things in my head"		
	"God helps me"		
2.	**Problem focused coping**	62	22.5
	"hard work, not minding the situation"		
	"call for help"		
	"by achieving what I want to achieve"		
3.	**Avoidant coping**	31	11.3
	"I always forget my stress"		
	"I am used to it"		
	"by not thinking"		
4.	**Never been stressed**	13	4.7
	"I have never been stressed"		
	"I have never been stressed and I will never be stressed"		
5.	**Don't know**	23	8.4
	"I don't know"		
	Total	275	100

4.12 Participants Suggestions on How Schools Can Help Improve Coping Skills among Students

Out of the 409 study participants, 223 (54.5) suggested ways by which schools can help improve coping skills among students. Their responses are presented using thematic analysis. Sixty-nine (30.9%) mentioned that there should be efficient teachers and improved methods of teaching, 60 (26.9%) suggested there should be more extracurricular activities for students and 53 (23.8%) suggested that there should be provision of counselling and social services to assist students.

See Table 4.12 below.

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Table 4.12 Participants Responses to How Schools Can Help Improve Coping Skills among Students (N=223)

	Themes	n	%
1.	**Efficient teachers and teaching methods** *"By teaching well, good morals and give good training and helping develop skills"* *"adding interesting things to school curriculum"*	69	30.9
2.	**Extracurricular activities** *"skill acquisition for students"* *"talent show case"* *"reading clubs"*	60	26.9
3.	**Providing counselling and social services** *"by counselling, encouraging students and doing their best to makes students brave and standout"* *"help of social workers"*	53	23.8
4.	**Financial assistance** *"help us through financial assistance"*	8	3.6
5.	**Improved School facilities** *"providing with necessary materials that make learning easy"* *Provision of books in the library"*	30	13.5
6.	**Orientation** *"orientation"*	3	1.3
	Total	223	100

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Discussion

5.1.1 Socio Demographic Characteristics of Secondary School Adolescents

A total of 409 secondary school adolescents in six secondary schools in Ibadan North LGA participated in this study. The mean age of participants was 14 years (SD=1.74), lower than what was obtained in the Omigbodun *et al* (2008) study among rural and urban in-school adolescents in Ibadan. A possible reason for this could be that rural children start school at a later age than urban children. There were fewer (45.5%) boys than girls (54.4%) in this study. This is in variance to the study by Omigbodun *et al* (2008) among secondary students in rural and urban Ibadan, which obtained a proportion of 52.8% males and 48.2% females. The Omigbodun *et al* (2008) study was carried in 2004 just after the United Nations Convention of the Rights of the Child was domesticated in Oyo state (UNICEF, 2011). The increase in girls accessing school may be a reflection of efforts by the government to ensure equal access to school for boys and girls. On the other hand, could this mean that more boys are dropping out of secondary school to earn a living? This requires more study. The finding that majority of the students were Christians living with parents in married monogamous home settings is similar to findings from previous studies among secondary school adolescents Ibadan (Omigbodun, 2006; Omigbodun *et al*., 2010; Bella-Awusah *et al*., 2016).

One in ten of the study participants reported that they worked to earn money before or after school. This proportion of working students is lower than reports from studies done among secondary

school adolescents in Ibadan where about 20-25% of the school children hawked after school hours (Ebigbo, 2003; Omigbodun *et al*, 2008). The reason for the lower prevalence in this study may be because this study included both public and private school students and was conducted in Ibadan North, a relatively affluent LGA.

5.1.2 Prevalence of Adverse Childhood Experiences among Secondary School Adolescents

Children and adolescents are generally a vulnerable group and have high chances of being exposed to adverse experiences partly because of their age (Dubowitz and Black, 2001).

The average number of ACEs reported by secondary school adolescents in this study was 4. This average is higher than that found in previous community based studies in Nigeria (Oladeji, Makanjuola & Gureje, 2010) and a United States study where the average mean ACE score was 2.2 (Olson, 2013). The difference in average mean scores may be because each study assessed different categories of ACE and number of ACE categories. This study focused on wider categories of ACEs. The study by Oladeji, Makanjuola & Gureje (2010) focused on family related categories of adverse childhood experiences and the population interviewed were adults so there could have been a recall bias.

In this study, emotional neglect, violent treatment of parent/household member, peer violence or bullying and community violence were the most reported ACE types. Similar studies also found emotional neglect, domestic violence (parent/household member treated violently) (Soares *et al.*, 2016) as the most reported ACE categories among high school adolescents in Brazil. Many children and adolescents are being emotionally neglected in recent times, which may be due to busy schedules of parents and lack of supervision. Due to the recent entry of women into the labour market, many parents are jointly involved in working to make ends meet and may not have

sufficient time to watch over their children. Witnessing injury or murder, witnessing community violence, peer violence and bullying were the most commonly reported ACE types among children and adolescents referred to a child and adolescent unit at Free State Psychiatric Complex in South Africa (Heckler *et al.,* 2010). South Africans like Nigerians have witnessed community riots and violence. Even though such experiences are not common in the region this study was carried out, there are still reports of community vices and urban violence committed in all the six geo political zones of Nigeria which children and adolescents are exposed to (Akinwale and Aderinto, 2012).

Results from this study showed that four out of every ten participants had above 5 or more exposures to adverse childhood events, 4 being the mean ACE score among the study sample. This reported frequency of exposure is higher than findings from the Oladeji, Makanjuola & Gureje (2010) study were about half of the participants had been exposed to at least one childhood adversity. The higher frequency of exposure in this study maybe because this study assessed wider categories of adverse childhood experiences than the Oladeji, Makanjuola & Gureje (2010) study, which focused only on family related adverse childhood experiences. Other studies on traumatic experiences among school adolescents in Ibadan did not report frequency of exposure but found that between 34-43% of public and private secondary school adolescents had at least one exposure (Omigbodun *et al.,* 2008; Oladeji *et al.,* 2011)., It should be noted that different instruments were used to assess traumatic experiences in these studies. In the study by Oladeji *et al* (2011), the trauma focused checklist was used to assess exposure to traumatic events and in the study by Omigbodun *et al* (2008), the World Health Organisation, Street Children Project, Major Life Events Questionnaire was used and the study was carried out among 2000 adolescents in rural and urban areas of Ibadan.

5.1.3 Socio Demographic Correlates of Adverse Childhood Experiences

In this study, older adolescents were significantly more likely to report adverse childhood experiences such as peer violence/bullying and drug or alcohol abuse by a household member. A national study in the United States on the prevalence of ACEs also showed that older adolescents reported being victims of violence and living with someone with alcohol or drug problems than younger adolescents (Bethel *et al.,* 2017). Emotional neglect was more likely to be reported by younger adolescents than older adolescents. Children and adolescents are generally vulnerable and depend on parents or caregivers for care and protection. Younger adolescents are more likely to be dependent on caregivers and parents for care and protection than older adolescents and are therefore more likely to report when they are not being cared for or neglected. Many previous studies on adverse childhood experiences focused on adult samples and older adolescents in order to identify the impact of ACEs later in life (Oladeji, Makanjuola & Guereje, 2010; Soares *et al*., 2015; Duke *et al*., 2010; Schilling, Aseltine and Gore, 2007; Beutel *et al.,* 2017) and emotional neglect was reported twice as much in younger adults than older adults (Beutel *et a*l., 2010).

Males were significantly more likely to report peer violence, bullying and the presence of a household member who abused drugs than females in this study. This is similar to findings from a cross sectional study among young Tunisian students where more males reported more exposure to peer, community and collective violence than females (El Mhamdi *et al*., 2017). Similarly, in a study among 1,093 public high school adolescent from different socioeconomic backgrounds in the United States more males reported witnessing injury or violence than females (Schilling, Aseltine and Gore, 2007).

Surprisingly students in private schools were more likely to report parental divorce, separation or

death and being physically abused than in those attending public schools. Studies have shown that physically abusive parents are more likely to be young, single, poor, unemployed, lack regular source of income and less educated than non-abusive parents (Straus *et al.,* 1998; Sidebotham and Golding, 2001; Bardi and Borgognini-Tari, 2001; Lindell and Svedin, 2001; Isaranurug *et al.*, 2001). Hence, this is an unexpected finding, as one would expect that parents of private school students are less likely to be poor, unemployed or less educated than the parents of their public school counterparts. In recent years in Nigeria, private education is considered to be of more quality and of a higher cost than public education. Hence, parents who are financially buoyant are more likely to enrol their children in private schools. However, due to the rapid deterioration of public school education in Nigeria and the incessant strikes of government workers, more families including the less financially buoyant, are accessing private education. It is possible that this may even be a source of additional stress on families leading to more separations and family discord.

5.1.4 Prevalence and Correlates of Mental Health Problems among Secondary School Adolescents

The mean SDQ score for respondents in this study was 9.97 (SD=10.01). More than half of the respondents in this study had abnormal scores overall on the SDQ. The most commonly reported problems were peer problems found in three quarters, conduct problems in four fifths and emotional problems occurred in 1 in 5 was the least reported. Over half of the participants (54.5%) scored above the threshold for Total Difficulty. Although this appears high, the SDQ is just a screening instrument and several of the high scorers may be false positives. It is also similar to findings from a Mongolian study among adolescents where 81.4% reported peer problems, 28.2% conduct disorders, 27.4% emotional symptoms, and 43.3% scored above the threshold for total difficulty (Bayarmaa *et al.*, 2017). Reports from a study among school adolescents in India showed

that the most commonly reported problems were peer problems, conduct problems and emotional problems (Nair *et al.*, 2017).

There was no significant association between mental health problems and age of study of the participants. More females reported emotional problems on the SDQ than males and this is to be expected. Similar findings among school adolescents in Sweden reported that more females significantly reported emotional problems on the SDQ subscale than males (Gallanti *et al*., 2016). Another similar study among adolescent school children in India also revealed that more females reported emotional problems on the SDQ subscale than males (Nair *et al*., 2017). Internalising problems such as depression and anxiety are commoner in females than males (Ara, 2016).

Approximately one in five (18.1%) of the participants screened positive for depression on the Beck's Depression Inventory. This is slightly lower than reports from South Africa and Kenya, which showed 22.7% (Heckler *et al*., 2012), and 26.4% (Khasakhala *et al.*, 2012) respectively. In the South African study by Heckler *et al* (2012) participants were children and adolescents referred to the children and adolescents unit at Free State Psychiatric Complex in South Africa and thus, more likely to be diagnosed with mental health problems than participants from a general population of secondary school adolescents who participated in this study. In the study by Khasakhala *et al* (2012), a larger sample size was used, participants were from public secondary schools in Nairobi, Kenya and the instrument used to assess for depression was The Children Depression Inventory as opposed to the Beck's Depression Inventory used in this study. This prevalence obtained in this study is higher than that reported by most studies in this region such as 6.7% (Adewuya *et al.*, 2007), 11.6% (Bella-Awusah *et al.*, 2016) and 12% (Omigbodun *et al.*, 2008) among school-going adolescents. These differences may be attributed to differences in instruments used (that is, diagnostic versus screening instruments), and sample population.

Over half (55.7%) of the participants had significant anxiety symptoms as rated on the Beck's Anxiety Inventory. This is slightly higher than reports from similar studies among public and private secondary school adolescents using the Beck's Anxiety Inventory in Nepal where prevalence of anxiety was 46.5% (Bhandari and Adhikari, 2015). Findings from a study by Lasebikan *et al.,* (2012) obtained a prevalence of anxiety of 49.3% among adolescents and adult population in this region. The study by Lasebikan *et al* (2012) included adolescents and adults selected from semi urban primary care centres in Lagos Island using the General Health Questionnaire. The prevalence of anxiety disorders ranged between 6.8% to 85% in a meta-analysis study among children and adolescents living in various states in Iran (Zarafshan *et al.,* 2015).

Although findings from this study showed high prevalence of anxiety, this result could be attributed to the fact that secondary school students are exposed to risk factors for anxiety such as bullying and peer victimization in schools (Rivers *et al*, 2009). Also, corporal punishments, pressure to do well in school and teaching styles may be attributed to anxiety among secondary school adolescents.

Respondents from public schools (66.7%) reported significantly more anxiety symptoms than those in private schools (33.3%). Studies have shown that traumatic experiences disturbed family environment, rejection, high hostility, and harsh discipline are associated with anxiety (O'Connell *et al*., 2009 and Blanco *et al.*, 2014). In Nigeria, public schools are mostly attended by individuals from low socio economic classes who often live in at risk environments. Moreover, corporal punishment is still very much and openly practiced in most public schools and can be used on students at the slightest provocation. Hence, pupils are likely to be in constant fear and worry to avoid corporal punishment.

5.1.5 Association between Adverse Childhood Experiences and Mental Health Problems

Adolescents who had been emotionally abused, physically abused and bullied were more likely to have difficulties on the SDQ subscales in this study sample. This is similar to findings of Escueta *et al.,* (2014) in a sub Saharan African study among orphans and abandoned children, which reported that emotional difficulties were indicative of exposure to childhood adversities. This is similar to findings from a study by Ismayilova *et al.,* (2016) among adolescents from poor families in Burkina Faso, which found that an accumulation of adverse experiences in childhood is strongly associated with poor mental health outcomes.

Depression was found to be associated with adverse childhood experiences including emotional neglect, physical neglect, emotional abuse, physical abuse, presence of incarcerated household member, parental divorce/separation/death, witnessing violence treatment of parent and bullying/peer violence among adolescents. Similar findings were reported by Schilling, Aseltine and Gore (2007) where almost all the categories of ACEs were associated with high depressive symptoms. Similar studies among secondary school adolescents in rural and urban areas in Ibadan, Nigeria reported that exposure to traumatic events, especially physical abuse, was associated with depression (Omigbodun *et al.,* 2008). Also, neglect by parents and no emotional attachment are associated with depressive symptoms and suicidal behaviours among public school adolescents in Nairobi, Kenya (Khasakhala *et al.*, 2012).

Respondents who had been exposed to adverse childhood experiences under the categories of emotional neglect, physical neglect, incarcerated household member, parent/household member being treated violently, emotional abuse, physical abuse and peer violence/bullying are more likely to have anxiety. Similar findings were reported by Bielas *et al.,* (2016) where ACEs predicted

anxiety disorders among adolescents. It was also reported that individuals who have experienced at least three forms of family-related childhood adversities were at greater risks for anxiety disorders than those without such experiences (Oladeji, Makanjuola and Gureje, 2010).

The significant association between depression, anxiety and ACEs is in keeping with results from studies in the United States which showed that a history of adverse childhood experiences was associated with a greater likelihoods of children and adolescents developing depression, anxiety, and emotional problems (Heckler *et al.*, 2012; Haileye, 2013; Bueler *et al.*, 2017). There is therefore need to create interventions for children and adolescents who have been exposed to adversities and also, mental health prevention, promotion, treatment and recovery should be ensured.

5.1.6 Prevalence and Correlates of Resilience among Secondary School Adolescents

The mean resilience score in this study was 20. Four out of 10 participants had scores above the mean, indicative of high resilience. Participants from private schools had higher mean resilience scores than public school participants. Several factors account for resilience and they include familial factors like social support from families, good parenting qualities, and community factors which include good learning environment (this plays important role in a child's life as he or she gains experiences, good sense of self and self-efficacy by interacting with teachers and peers as well as educational opportunities), community services, sports and artistic opportunities, cultural factors, spirituality and religion, and lack of exposure to violence (Wald *et al.*, 2006; Hermman *et al*., 2011; Cortina *et al*., 2016). It is generally believed that private schools in Nigeria provide higher quality education and more conducive learning environments compared to their public counterparts and thus may contribute to the observed adolescents' resiliency.

5.1.7 Relationship among Adverse Childhood Experiences, Resilience and Mental Health Problems

Participants who were exposed to ACEs such as exposure to physical neglect and parental violence reported lower mean resilience scores. Participants who reported exposure to these adversities were less likely to be resilient than those who did not report exposure. This is consistent with findings that report that adverse childhood experiences are linked to low resilience among children and adolescents from a large representative sample in the United States (Bethell *et al.*, 2017) and adolescent and adult samples in Germany (Beutel *et al.*, 2017). Due to their vulnerability and reliance on adults for care and support, children and adolescents are at risk of being exposed to adverse childhood experience (Dubowitz and Black, 2001). While they are not liable for the adversities they experience, due to their vulnerability, they may be unable to defend themselves or cope with certain stressors which may be due to absence of protective factors such as stable family relationship and social support (Centres for Disease Control and Prevention, 2013), which may explain low resilience reports in this study.

Participants who reported peer problems had significantly higher resilience. This is a surprising finding, as it would be expected that the presence of peer problems would be associated with low resilience. However, resilience can be described as ability to cope or bounce back from stressful events (Krugler and Prinsloo, 2008), presence of high resilience may be a form of defence and moderation against the effects of peer problems on adolescents. The high resilience score may signify forms of coping with peer problems among adolescents. This calls for attention to examine how teaching of resilience can be integrated to treatment or management plans for children and adolescents with mental health problems. Participants who screened positive on the SDQ total difficulty scale were less likely to be resilient. A meta-analysis study in Iran revealed that high

resilience was associated with decrease in emotional problems (Mortazavi and Yarolahi, 2015). It is also expected that participants who reported mental health problems will be less likely to be resilient as resilience refers to the ability to maintain or regain mental health in the face of adversity (Wald *et al.*, 2006). Hence, those who reported mental health problems probably did not develop forms of resilience to maintain or regain mental health.

5.1.8 Adolescents' Methods of Coping with Stress

Majority of the adolescents who reported exposure to stressful circumstances in this study had developed a form of coping strategy to help them deal with stress. Over half (53.1%) of the study participants employed emotion focused coping strategy which included praying to God, singing and exercising, 1 in 4-5 (22.5%) employed problem focused coping strategy and 1 in 10 (11.3%) employed avoidant coping strategy. This is similar to findings from studies conducted among medical students in Malaysia and school children in Spain where the highest coping strategy reported was turning to emotion focused coping strategy, especially religion and avoidant coping which included self-distraction was least employed (Yussof *et al.*, 2011; Morales Rodriquez *et al.*, 2016). Similarly, a previous study among university students in Ghana reported that more students employed emotion focused coping strategies than problem focused coping strategy (Esia-Donkoh *et al.*, 2011). Another possible reason for the finding in this study is the fact that Nigeria is a highly religious country (World Values Survey Association, 2014) that upholds communal living, cordial interactions with others and religious attachment (Ajayi and Owumi, 2013; Yesufu, 2016).

5.1.9 How Schools Can Improve Coping Skills among Students Based on Participants' Suggestions

Children and adolescents are confronted with daily stressors and their competence in dealing with these stressors is significantly associated with their psychological adjustment (Pincus *et al.*, 2004). It is therefore necessary to improve coping skills among school children and adolescents. The most common suggestions from participants were that there should be good teachers to teach coping skills using improved curriculum, extracurricular activities and counsel and social services. Studies have shown that the school environment plays a vital role in helping children living with high levels of adversity to shape and influence their view of the world, to improve their sense of self and to cope through support from school staff, positive relationship within the school, interaction with teachers and peers as well as good educational opportunities (Cortina *et al.*, 2016). Teaching resilience and fostering good family communication and interaction, routines and habits for children can serve as protective and coping factors for children with ACEs (Bethel *et al.*, 2017). Access to health care and social services can also help reduce the negative effects of maltreatment and adversities in children and adolescents (Centres for Disease Control and Prevention, 2013).

5.1.10 Limitations of the Study

The following limitations should be noted about the study.

1. To begin with, this study followed a cross-sectional study design which means that inferences about causality and temporal precedence cannot be made.
2. Study participants were school adolescents and adolescents who were out of school were not included in this study hence, generalization of findings to all adolescents is limited.
3. Adverse childhood experiences were obtained through reflection of past events, which is

unavoidable and similar to the approach of other studies. Recalling past events makes room for limitations of human memory and can be prone to errors.

5.1.11 Strength of the Study

This study is one of the few studies in sub Saharan Africa that has examined the association between adverse childhood experiences, resilience and mental health problems. This study is also one of the few studies in Nigeria that examined the association between adverse childhood experiences and mental health problems in an adolescent population.

This study also found the coping strategies employed by secondary school adolescents and also found out in-school adolescents' opinions on how coping skills can be improved in schools.

5.2 Conclusion

This study explored the relationship between adverse childhood experiences, resilience and mental health problems in a sample of secondary school adolescents in Ibadan, Nigeria. Some studies have found association between adverse childhood experiences and mental health problems in at risk populations such as orphans and abandoned children (Khasakhala *et al.,* 2012) and adult samples (Oladeji, Makanjuola & Gureje, 2010).

High rates of exposure to adverse childhood experiences and mental health problems were reported in this study. School mental health programmes including promotion of mental health, prevention and treatment of mental disorders and recovery should be integrated into the school activities. From participants' responses to coping mechanisms, about 9 in 10 of participants who responded to the question were able to cope with stressful events using different mechanisms such as emotion focused, problem focused and avoidant coping strategies. More than half of the study participants

also gave different suggestions on how to improve coping skills among students in schools. It is therefore important to teach coping skills, improve on them and integrate these skills into management and treatment plan for children and adolescents.

This study has been able to examine the relationship between adverse childhood experiences and mental health problems among secondary school adolescents where results showed significant association between these variables. Furthermore, this study explored the relationship among resilience and mental health problems and also, resilience and adverse childhood experiences. Participants who were exposed to adverse childhood experiences and mental health problems had low resilience scores. It is important to improve resilient coping strategies among children and adolescents who have been exposed to adversities and who have mental health problems. There is need to focus on the assets and strengths of children and adolescents, enhance protective factors that can mitigate risks and exposure to adversity in order to regain mental health and thrive in the face of adversity.

5.3 Recommendations

1. There is need for further screening, intervention and follow up for children and adolescents who have been exposed to childhood adversities.
2. There is need to focus on mental health intervention services in schools to help adolescents with mental health problems. Schools and communities have important roles to play in creating strategies to combat these problems in school adolescents.
3. Brief screening for students upon enrolment into school and at fixed periods for mental health problems and integration of counselling and social services for secondary school adolescents in their schools can facilitate early identification and management of mental

health problems and also, prevention of mental disorders.

4. There is also need to strengthen resilient coping systems among adolescents who have been exposed to childhood adversities. There is need to integrate resilient coping measures into the school mental health system.

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Total = 15, 588

REFERENCES

Abebe, M., Tsion, A. and Netsanet, F. (2013) 'Living with parents and risky sexual behaviors among preparatory school students in Jimma zone, South west Ethiopia', *African Health Sciences,* 13(2), pp. 498–506. doi: 10.4314/ahs.v13i2.42.

Abiola, T. and Udofia, O. (2011) 'Psychometric assessment of the Wagnild and Young's resilience scale in Kano, Nigeria', *Biomedcentral research notes,* 4, pp. 509. doi: 10.1186/1756-0500-4-509.

Action for the Right of Children 2001, *Child and Adolescent Development - Revised Version,* pp. 1-154.

Adewuya, A. O., Ola, B. A. and Aloba, O. O. (2007) 'Prevalence of major depressive disorders and a validation of the Beck Depression Inventory among Nigerian adolescent', *European Child and Adolescent Psychiatry,* 16(5) pp. 287-292.

Ajayi, J. O. and Owumi, B. (2013) 'Socialisation and Child Rearing Practices Among Nigerian Ethnic Groups', *Academic Journal of Interdisciplinary Studies,* 2(2):249-256. doi: 10.5901/ajis.2013.v2n2p249.

Akinwale, A. A. and Aderinto. A. A. (2012) 'Crisis of Governance and Urban Violence in Nigeria', *African Journal of Criminology and Justice Studies,* 5(1&2) pp. 49-77.

Akpan, M. U, Ojinnaka, N. C. and Ekanem, C. (2010) 'Behavioural problems among school children in Nigeria', *South African Journal of Psychiatry,* 16(2), pp. 50–55.

Aloba, O., Olabisi, O. and Aloba T., (2016) 'The 10-item Connor-Davidson Resilience Scale: Factorial Structure, Reliability, Validity and correlates among student nurses in Southwestern Nigeria', *Journal of the American Academy of Psychiatric Nurses Association,* 22(1), pp. 43-51

Ara, E. (2016) 'The Internalizing and Externalizing Problems in Adolescents: Analysing the Gender Difference', *International Journal of Research in Social Sciences,* 6(1):328-337.

Arnett, J. J. (2006) 'G. Stanley Hall's Adolescence: Brilliance and Nonsense', *Journal of the American Psychological Association,* 9(3) pp. 186-197.

Arnett, J. J. (2007), 'Emerging Adulthood: What Is It, and What Is It Good For?', *Child Development Perspective,* 1, pp. 68-73. doi:10.1111/j.1750-8606.2007.00016.x

Bach, J. M. and Louw, D. (2010) 'Depression and exposure to violence among Venda and Northern Sotho adolescents in South Africa', *African Journal of Psychiatry,* 13 pp. 25–35.

Bagley, C. and Mallick, K. (2000) 'Prediction of sexual, emotional and physical maltreatment and mental health out-comes in a longitudinal study of 290 adolescent women', *Child Maltreatment*, 5 pp. 218–226.

Bakare, M. O., Ubochi, V.N., Ebigbo, P. O. and Orovwigho, A. O. (2010) 'Problem and pro-social behaviour among Nigerian children with intellectual disability: the implication for developing policy for school based mental health problems', *Italian Journal of Pediatrics,* 36(37).

Bardi, M. and Borgognini-Tari, S. M. (2001) 'A survey of parent–child conflict resolution: intra family violence in Italy', *Child Abuse & Neglect*, 25 pp. 839–853.

Bayarmaa, V., Tuya, N., Batzorig, B., Guljariat, Y., Altanzul, N., Soyolmaa, B., Chimedsuren, O. & Nasantsengel, L. (2017) 'Using the Strength and Difficulties Questionnaire (SDQ) to screen for child mental health status in Mongolia', *Journal of Mental Disorders and Treatment*, 3(1):1-9. doi:10.4172/2471-271x.1000136.

Beck, A. T., Guth, D., Steer, R. A. & Ball, R. (1997) 'Screening of major depression disorders in medical inpatients with the Beck Depression Inventory for primary care', *Behaviour and Research Therapy* 35(8):785-791.

Beck, A. T., Steer, R. A. and Brown, G. K. 1996, *Manual for the Beck Depression Inventory – II*, San Antonio, TX: Psychological Cooperation.

Beck, A. T., Epstein, N., Brown, G. and Steer, R. A. (1988) 'An inventory for measuring clinical anxiety: psychometric properties', *Journal of Consulting and Clinical Psychology*, 56(6) pp. 893-897.

Bella-Awusah, T, Ani, C., Ajuwon, A. and Omigbodun, O. (2016) ' Effectiveness of brief school-based, group cognitive behavioural therapy for depressed adolescents in south west Nigeria', *Child and Adolescent Mental Health*, 21 (1):44-50. doi: 10.1111/camh.12104.

Bethell, C.D., Davis, M.B., Gombojav, N., Stumbo, S., Powers, K. (2017) 'A national and across state profile on adverse childhood experiences among children and possibilities to heal and thrive', *Johns Hopkins Bloomberg School of Public Health*, http://www.cahmi.org/projects/adverse-childhood-experiences-aces/

Bethell, C., Gombojav, N., Solloway, M., & Wissow, L. (2016). Adverse Childhood Experiences, Resilience and Mindfulness-Based Approaches: Common Denominator Issues for Children with Emotional, Mental, or Behavioral Problems. *Child and Adolescent Psychiatric Clinics of North America*, *25*(2), 139–156. http://doi.org/10.1016/j.chc.2015.12.001

Beutel, M. E., Tibubos A. N., Klein, E. M., Schmutzer G., Reimer, I., Kocalevent, R. and Brahler, E. (2017) 'Childhood adversities and distress - The role of resilience in a representative sample', *PLoS ONE*, 12(3), pp. 1–14. doi: 10.1371/journal.pone.0173826.

Blanco, C., Rubio, J., Wall, M., Wang, S., Jiu, C. J., & Kendler, K. S. (2014). 'Risk Factors for Anxiety Disorders: Common And Specific Effects in a National Sample'. *Depression and Anxiety*, 31(9), 756–764. http://doi.org/10.1002/da.22247

Bramlett, M. D., Blumberg, S. J., Zablotsky, B., *et al.*, (2017) 'Design and operation of the National Survey of Chldren's Health, 2011-2012', *National Center for Health Statistics.* Vital Health Stat 1(59).

Burke, J., Hellman, J., Scott, B., Weems, C. and Carrion, V. (2011) 'The impact of adverse childhood experiences on an urban pediatric population', *Child Abuse & Neglect*, 35(6) pp. 408-413.

Camardese, Giovanni & Leone, B & Serrani, R & Szczepanczyk, P & Walstra, Coco & Janiri, L. (2014). 'Resilience And Depression', *XVI World Congress of Psychiatry*, vol 4.

Campbell-Sills, L., Cohan, S. L. and Stein, M. B. (2006) 'Relationship of resilience to personality, coping, and psychiatric symptoms in young adults', *Behaviour Research and Therapy,* 44(4) pp. 585-599.

Campbell-Sills, L. and Stein, M. B. (2007) 'Psychometric analysis and refinement of the Connor-Davidson Resilience Scale (CD-RISC): validation of a 10-item measure of resilience', *Journal of Traumatic Stress.* 20 pp. 1019-1028.

Centers for Disease Control and Prevention (retrieved 2017) 'Violence Prevention' *National Center for Injury Prevention and Control, Division of Violence Prevention.* https://www.cdc.gov/violenceprevention/childmaltreatment/riskprotectivefacors.html

Connor, K. M. and Davidson, J. R. T. (2003) 'Development of a new resilience scale: the Connor-Davidson resilience scale (CD-RISC)', *Depression and Anxiety.* 18(2) pp. 76-82.

Cortina, M. A., Stein, A., Kahn, Kathleen., Hlungwani, T. M., Holmes, E. A. and Fazel, M. (2016) 'Cognitive styles and psychological functioning in rural South African school students: Understanding influences for riak and resilience in the face of chronic adversity', *Journal of Adolescence*, 49 pp. 38-46. http://dx.doi.org/10.1016/j.adolescence.2016.01.010.

Coulton, C. J., Korbin, J. E. and Su, M. (1999) 'Neighborhoods and child maltreatment: a multi-level study', *Child Abuse & Neglect*, 23 pp. 1019–1040.

Demographia 2015, *Demographia World Urban Areas*, 11th ed.

Dubowitz, H. and Black, M. B., (2001) 'Child neglect', In *Reece RM, Ludwig S, eds. Child abuse: medical diagnosis and management, 2nd ed*, Philadelphia, PA, Lippincott Williams & Wilkins. pp. 339–362

Duke, N. N., Pettingell S. L., McMorris B. J. and Borowsky I. W. (2010) 'Adolescent Violence Perpetration: Associations With Multiple Types of Adverse Childhood Experiences', *Pediatrics*, 125(4), pp. e778–e786. doi: 10.1542/peds.2009-0597.

Ebigbo, P. O. (2003) 'Street Children: The core of child abuse and neglect in Nigeria', *Children, youth and Environments,* 13:12-31.

Edwards Valerie J., Holden George W., Felitti Vincent J., Anda, R. F. (2003) 'Relationship Between Multiple Forms of Childhood Maltreatment and Adult Mental Health in Community Respondents: Results From the Adverse Childhood Experiences Study', *American Journal of Psychiatry*, (11), pp.1453-1460.

Ejike, E. C. (2013) 'Association between anxiety and obesty: A study of a young-adult Nigeriam population', *Journal of Neurosciences in Rural Practice,* 4(1):13-18. http://doi.org/10.4103/0976-3147.116429.

El Mhamdi, S., Lemieux, A., Bouanene, I., Ben Salah, A., Nakajima, M., Ben Salem, K. & al'Absi, M., (2017) 'Gender differences in adverse childhood experiences, collective violence and the risk for addictive behaviours among university students in Tunisia', *Journal of Preventive Medicine*, (99) pp. 99-104.

Ertem, I. O., Leventhal, J. M. and Dobbs, S. (2000) 'Intergenerational continuity of child physical abuse: how good is the evidence?', *Lancet*, 356 pp. 814–819.

Escueta, M., Whetten K., Ostermann J. and O'Donnell K. (2014) 'Adverse childhood experiences, psychosocial well-being and cognitive development among orphans and abandoned children in five low income countries.', *BMC International Health and Human Rights*, 14(1), p. 6. doi: 10.1186/1472-698X-14-6.

Esia-Donkoh, K., Yelkpieri, D. & Esia-Donkoh, K., (2011) 'Coping with stress: strategies adopted by students at the Winneba campus of University of Education, Winneba, Ghana', *US-China Education Review* 2: 290-299.

Fergusson D. M. and Horwood L. J. 2003, *Resilience to childhood adversitiy: results of a 21 year study*, Cambridge University Press, pp. 1-34

Frank-briggs, A. I. and Alikor, E. A. D. (2008) 'Conduct Disorder amongst Children in an Urban School in Nigeria Table II : Comorbid disorders associated Learning disability', *The Nigerian Health Journal* 8(3), pp. 44–47.

Galanti, M. R., Hultin, H., Dalman, C., Engström, K., Ferrer-Wreder, L., Forsell, Y. and Raffetti, E. (2016). School environment and mental health in early adolescence - a longitudinal study in Sweden (KUPOL). *BMC Psychiatry*, 16: 243. http://doi.org/10.1186/s12888-016-0919-1

Gillham, B., Tanner, G., Cheyne, B. and Lambie, A. (1998) 'Unemployment rates, single parent density, and indices of child poverty: their relationship to different categories of child abuse and neglect', *Child Abuse & Neglect*, 22(2) pp. 79–90.

Goodman, R. J. (2001) 'Psychometric properties of the strengths and difficulties questionnaire' *Journal of the American Academy of Child and Adolescent Psychiatry.* 40(11): 1337-1345.

Groth-Marnat, G. 1990, *The handbook of psychological assessment (2nd ed.)*, New York: John Wiley and Sons.

Hadi, A. (2000) 'Child abuse among working children in rural Bangladesh: prevalence and determinants' *Journal of Public Health*, 114 pp. 380–384.

Haileye, A. (2013) 'Psychopathological correlates of child sexual abuse: the case of female students in Jimma zone, South West Ethiopia.', *Ethiopian journal of health sciences*, 23(1), pp. 32–8.

Heckler, H., Taute, C. E., Krüger, G. H. J., de Wet, D., Calitz, F. J. W., van der Merwe, L. M. & Raubenheimer, J. E. (2012) 'Profile of stress factors associated with mental disorders in children and adolescents referred for evaluation and treatment to the Free State Psychiatric Complex , 2007', *South African Journal of Pyschiatry, 18(2), pp. 61–67.*

Herrman, H., Stewart, D. E., Diaz-Granados, N., Berger, E. L., Jackson, B. and Yuen, T. (2011) 'What is Resilience?', *Canadian Journal of Psychiatry*, 56(5) pp. 258-265.

Hunter, W. M., Jain, D., Sadowski, L. S. and Sanhueza, A. I. (2000) 'Risk factors for sever child discipline practices in rural India', *Journal of Pediatric Psychology,* 25(6) pp. 435-447.

Isaranurug, S., Nitirat, P., Chauytong, P. and Wongarsa, C. (2001) 'Factors relating to the aggressive behavior of primary caregiver toward a child', *Journal of the Medical Association of Thailand*, 84(10) pp. 1481–1489.

Ismayilova, L., Gaveras E., Blum A., To-Camier A. and Nanema R. (2016) 'Maltreatment and mental health outcomes among ultra-poor children in Burkina Faso: A latent class analysis', *PLoS ONE*, 11(10), pp. 1–25. doi: 10.1371/journal.pone.0164790.

Kahn, P. and Vezzuto, L. (2015) 'Understanding and Responding to Adverse Childhood Experiences in the School Setting', *Centre for Healthy Kids & Schools*, pp. 1-62.

Kail, R. V. and Cavanaugh, J. C., (2010). 'Human Development: A Lifespan View (5th ed.)'. *Cengage Learning*. pp. 296. ISBN 0495600377.

Kaplowitz, P. B., Slora, E. J., Wasserman, R. C., Pedlow, S. E., Herman-Giddens, M. E. (2001) 'Earlier onset of puberty in girls: relation to increased body mass index and race'. *Pediatrics*. 108 (2) pp. 347–53. PMID 11483799. doi:10.1542/peds.108.2.347

Kazeem, O. T. (2015) 'A validation of the Adverse Childhood Experiences Scale in Nigeria', *Research in Humanities and Social Sciences*. 5(11), pp. 18-23.

Keating, D. P. (2004) 'Cognitive and Brain Development', In *Handbook of Adolescent Psychology, Second Edition (eds R. M. Lerner and L. Steinberg)*, John Wiley & Sons, Inc., Hoboken, NJ, USA. doi: 10.1002/9780471726746.ch3.

Kendler, K. S., Walters, E. E., Neale, M. C., Kessler, R. C., Heath, A. C., Eaves, L. J. (1995) 'The Structure of the Genetic and Environmental Risk Factors for Six Major Psychiatric Disorders in Women Phobia, Generalized Anxiety Disorder, Panic Disorder, Bulimia, Major Depression, and Alcoholism' *Arch Gen Psychiatry* 52 (5):374–383. doi:10.1001/archpsyc.1995.03950170048007.

Kessler, R. C., Amminger, G. P., Aguilar-Gaxiola, S., Alonso, J., Lee, S., & Ustun, T. B. (2007). 'Age of onset of mental disorders: A review of recent literature' *Current Opinion in Psychiatry*, 20(4), 359–364. http://doi.org/10.1097/YCO.0b013e32816ebc8c.

Khasakhala, L., Ndetei, D.M., Mutiso, V. Mbwayo A.W. and Mathai, M. (2012) 'The prevalence of depressive symptoms among adolescents in Nairobi public secondary schools : association with perceived maladaptive parental behaviour', *African Journal of Psychiatry* 15 pp. 106–113.

Kirschner, R. H. and Wilson H. (2001) 'Pathology of fatal child abuse', *In: Reece RM, Ludwig S, eds. Child abuse: medical diagnosis and management, 2nd ed*, Philadelphia, PA, Lippincott Williams & Wilkins, pp. 467–516.

Kleintjes, S., Flisher, A. J., Fick, M., Railoun, A., Lund, C., Molteno, C. and Robertson, B. A. (2006) 'The prevalence of mental disorders among children , adolescents and adults in the western Cape ', (August), pp. 157–160.

Klevens, J., Bayón, M. C. and Sierra, M. (2000) 'Risk factors and the context of men who physically abuse in Bogotá, Colombia', *Child Abuse & Neglect*, 24 pp. 323–332.

Krabbendam, L. and Van Os, J. (2005) 'Schizophrenia and Urbanicity: A Major Environmental Influence - Conditional on Genetic Risk', *Schizophrenia Bulletin.* 31 (4) pp. 795–799. doi:10.1093/schbul/sbi060

Krugler, L. and Prinsloo, H. (2008) 'The appraisal and enhancement of resilience modalities in middle adolescents within the school context', *South African Journal of Education*, 28 pp. 241-259.

Larrain, S., Vega, J. and Delgado, I. 1997, *Family relations and child abuse*, Santiago, United Nations Children's Fund.

Larson, R. W. and Wilson, S. (2004) 'Adolescents across Place and Time: Globalization and the changing pathways to adulthood.', In *Handbook of adolescent psychology, Second Edition (eds R. M. Lerner and L. Steinberg)* pp. 299-330. New York: Wiley. doi: 10.1002/9780471726746.

Lasebikan, V. O., Ejidokun, A. and Coker, O. A. (2012) "Prevalence of Mental Disorders and Profile of Disablement among Primary Health Care Service Users in Lagos Island", *Epidemiology Research International*, vol. 2012, Article ID 357348, 6 pages, https://doi.org/10.1155/2012/357348.

Lerner, J. V., Lerner, R. M. and Finkelstein, J. (2001) 'Adolescence in America: an encyclopedia', *Santa Barbara.: ABC-CLIO*. pp. 807. ISBN 1576072053.

Lindell, C. and Svedin, C. G. (2001) 'Physical child abuse in Sweden: a study of police reports between 1986 and 1996', *Social Psychiatry and Psychiatric Epidemiology*, 36(3) pp. 150-157.

Madu, S. N., and Peltzer, K. (2000) 'Risk factors and child sexual abuse among secondary students in the Northern Province (South Africa)', *Child Abuse & Neglect*, 24 pp. 259–268.

Mancini, A. D. and Bonanno, G. A. (2009) 'Predictors and parameters of resilience to loss: toward an individual differences model', *Journal of Personality* 77(6) pp. 1805-1835. doi: https://doi.org/10.1111/j.1467-6494.2009.00601.x.

Marano, H. E. (2010) 'Oh, Brother!', *Psychology Today* 43(4) pp. 54-61. Retrieved 30th November, 2017.

Menick, D. M., (2000) 'The psychosocial features of infanticide in black Africa: the case of Senegal'. *Child Abuse & Neglect*, 24 pp. 1557–1565.

Miklowitz, D. J. and Chang, K. D., (2008) 'Prevention of bipolar disorder in at-risk children: Theoretical assumptions and empirical foundations', *Development and Psychopathology*. 20 (3) pp. 881–97. doi:10.1017/S0954579408000424.

Morales Rodriquez, F. M., Trianes Torres, M. V., Paez, J. M. & Ingles J. C (2016) 'Prevalence of startegies for coping with daily stress in children', *Psicothema* (28) 4: 370-376. doi: 10.7334?psicothema2015.10.

Morgan, A. and Ziglio E. (2007) 'Revitalising the evidence base for public health: an assets model', *Promotion & Education Supplement,* (2) pp. 17-22.

Mortazavi, N. S. and Yarolahi, N. A. (2015) 'Meta-analysis of the relationship between resilience

and mental health', *Journal of Fundamentals of Mental Health,* 17(3):103-108.

Nair, S., Ganjiwale, J., Kharod, N., Varma, J. & Nimbalker, S. M. (2017) 'Epidemiological Survey of Mental Health in Adolescents School Children of Gujarat, India', *British Medical Journal of Paediatrics.* pp.1-7 doi:10.1136/bmjpo-2017-000139.

National Collaborating Centre for Mental Health (UK). Common Mental Health Disorders: Identification and Pathways to Care. Leicester (UK): British Psychological Society; 2011. (NICE Clinical Guidelines, No. 123.) 2, Common Mental Health Disorders. Available from: https://www.ncbi.nlm.nih.gov/books/NBK92254/ Retrieved, 21st May, 2018.

National Population Census 2006, *Federal Republic of Nigeria: 2006 Population Census,* Web.archive.org.

O'Connell, M. E., Boat, T. and Warner, K. E. 2009, *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities,* pp. 1-592. National Academies Press, Washington, D. C.

Oladeji, B. D., Makanjuola, V. A. and Gureje, O. (2010) 'Family-related adverse childhood experiences as risk factors for psychiatric disorders in Nigeria', pp. 186–191. doi: 10.1192/bjp.bp.109.063677.

Oladeji, B. D., Morakinyo, J. J. and Gureje, O (2011) 'Traumatic events and posttraumatic stress symptoms among adolescents in Ibadan' *African Journal of Medicine and medical science.* 40.

Olsson, A., Ellsberg, M., Berglund, S., Herrera, A., Zelaya, E., Pena, R., Zelaya, F. and Persson L. A. (2000) 'Sexual abuse during childhood and adolescence among Nicaraguan men and women: a population-based anonymous survey', *Child Abuse and Neglect,* 24(12) pp. 1579-1589.

Omigbodun, O. O., (2006) 'Psychosocial Attributes of Orphaned Youths in Ibadan Metropolis: Implications for Reproductive Health, *Tropical Journal of Obstetrics Gynaecology,* 23:1.

Omigbodun, O. O., Adediran, K. I., Akinyemi, J. O., Omigbodun, A. O., Adedokun, B. O. & Esan, O. (2010) 'Gender and Rural-Urban differences in nutritious status of in-school adolescents in South Western Nigeria', *Journal of Biosocial Science,* 42:653-676. doi:10.1017150021193201000234.

Omigbodun, O., Bakare, K. and Yusuf, B. (2008) 'Traumatic events and depressive symptoms among youth in Southwest Nigeria*:* A qualitative analysis', *International Journal of Adolescent Medicine and Health*. doi: 10.1515/IJAMH.2008.20.3.243.

Omigbodun, O. Dogra, N., Esan, O. and Adedokun, B. (2008) 'Prevalence and Correlates of

Suicidal Behaviour Among Adolescents in Southwest Nigeria', *International Journal of Social Psychiatry*, 54(1), pp. 34–46. doi: 10.1177/0020764007078360.

Peng, D., Shi, F., Li, G., Fralick, D., Shen, T., Qiu, M., Jun, L., Kaida, J., Dinggang, S. and Yiru, F. (2015) 'Correction: Surface Vulnerability of Cerebral Cortex to Major Depressive Disorder', *PLoS ONE*, 10(6): e 0128947 doi: 10.1371/journal.pone.0128947.

Pillemer, K, Suitor, J. J., Pardo, S. and Henderson, C. (2010). 'Mothers' Differentiation and Depressive Symptoms Among Adult Children', *Journal of Marriage and Family*. 72 (2) pp. 333–345. doi:10.1111/j.1741-3737.2010.00703.x

Pincus, D. B. & Friedman, A. G. (2004) 'Improving children's coping with everyday stress: transporting treatment interventions to the school setting', *Clinical Child and Family Psychiatry*, (7)4:223-240.

Pinto, A. C. S., Luna, I. T., Sivla, A. D., Pinheiro, P. N. D., Braga, V. A. B., & Souza, Â. M. A. (2014) 'Risk factors associated with mental health issues in adolescents: a integrative review' *Revista da Escola de Enfermagem da USP*, 48 (3):555-564. https://dx.doi.org/10.1590/S0080-623420140000300022.

Rao, M. (2001) 'Promoting children's emotional well-being: a book review', *Journal of Public Health Medicine*, 23(2) pp. 168.

Readings, F. (no date) 'Child and Adolescent Development', pp. 1–131.

Ritacco, G. and Suffla, S. (2015) 'A critical review of child maltreatment indices: Psychometric properties and application in the South African context', *African Safety Promotion: A Journal of Injury and Violence Prevention*, 10(2), pp. 3–17. doi: 10.4314/asp.v10i2.

Rivers, I., Poteat, V. P., Noet, N. and Ashurst, N. (2009) 'Observing Bullying At School: The Mental Health Implications of Witness Status', *American Psychological Association*, 24 (4): 211-223. doi: 10.1037/a0018164.

Rossen, E. and Cowan, K.C. (2014) 'Improving mental health in schools', *Phi Deta Kappan*, 96(4) pp. 8-13. https://doi.org/10.1177100317217145614 38.

Runkewitz, K., Kirchmann, H. and Strauss, B. (2006) 'Anxiety and depression in primary care patients: Predictors of symptom and severity and developmental correlates', *Journal of Psychosomatic Research*, 60(5) pp. 445-453.

Sameroff A., Gutman L.M., and Peck S.C. (2003), 'Adaptation among youth facing multiple risks', In *S.S. Luthar (Ed.), Resilience and Vulnerability: Adaptation in the Context of Childhood Adversities*. Cambridge, Cambridge University Press. pp. 364-391.

Scales, P. (1999) 'Reducing risks and building development assets: essential actions for promoting adolescent health'. *The Journal of School Health*, 69 (3) pp. 113-119.

Schilling, E., Aseltine, R. and Gore, S. (2007) 'Adverse childhood experiences and mental health in young adults: A longitudinal survey.', *BMC Public Health*. doi: 10.1186/1471-2458-7-30.

Sellers, R., Collishaw, S., Rice, F., Thapar, A. K., Potter, R., Mars, B., Harold, G. T., Smith, D. J., Owen, M. J., Craddock, N. and Thapar, A. (2012) 'Risk of psychopathology in adolescent offspring of mothers with psychopathology and recurrent depression'. *The British Journal of Psychiatry*, 202 (2): 108–14. doi:10.1192/bjp.bp.111.104984.

Shumba, A. (2001) 'Epidemiology and etiology of reported cases of child physical abuse in Zimbabwean primary schools', *Child Abuse & Neglect*, 25 pp. 265–277.

Sidebotham, P. and Golding, J. (2001) 'Child maltreatment in the ''Children of the Nineties'': a longitudinal study of parental risk factors', *Child Abuse & Neglect*, 25 pp. 1177–1200.

Smith, S. R. and Handler, L. 2007, *The Clinical Assessment of Children and Adolescents: A Practitioner's Handbook*, pp. 1-628 Lawrence Eribaum Associates.

Soares, A. L. G., Howe, L. D., Matijasevich, A., Wehrmeister, F. C., Menezes, A. M. B., & Gonçalves, H. (2016). 'Adverse childhood experiences: Prevalence and related factors in adolescents of a Brazilian birth cohort'. *Child Abuse & Neglect*, 51:21–30. http://doi.org/10.1016/j.chiabu.2015.11.017.

Steinberg, L. and Lerner, R.M. (2004) 'The Scientific Study of Adolescence: A Brief History', *The Journal of Early Adolescence*, 24(1), pp. 45-54. https://doi.org110.1177/0272431603260879.

Steinberg, L. (2008) 'A Social Neuroscience Perspective on Adolescent Risk-Taking', *Developmental Review*, 28(1) pp. 78-106. doi: 10.1016/j.dr.2007.08.002.

Stevens J. (2016) 'How Adverse Childhood Experiences and the Theory of Everything can help build healthy communities', *Glasgow Centre for Population Health*, 12(6).

Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W. and Runyan, D. (1998) ;Identification of child maltreatment with the Parent-Child Conflict Tactics Scales: development and psychometric data for a national sample of American parents', *Child Abuse and Neglect*, 22(4) pp. 249-270.

Swanson, D. P., Edwards, M. C., and Spencer, M. B. 2010, *Adolescence: Development during a global era*, Boston: Elsevier Academic Press

Umobong, M. E. (2010) 'Child Abuse and Its Implications for the Educational Sector in Nigeria',

OGIRISI: a New Journal of African Studies, 7 pp. 106-118.

UNICEF (2011) 'Child Rights Legislation in Nigeria', UNICEF NIGERIA - FACT SHEET, pp 1-2 https://www.unicef.org/nigeria/Child_rights_legislation_in_Nigeria.pdf Retrieved, 28th May, 2018.

Valkenburg, P. M. and Peter, J. (2011) 'Online communication among adolescents: an integrated model of its attraction, opportunities, and risks', *Journal of Adolescent Health,* 48(2) pp. 121-127. doi: 10.1016/j.jadohealth.2010.08.020.

Wald, J., Taylor, S., Asmundson, G. J. G., Jang, K. L. and Stapleton, J. 2006, *Literature review of concepts: Psychological Resiliency Final Report,* Defence R & D Canada - Toronto. pp. 1-112.

Wagnild, G. (2009) 'A review of the Resilience Scale', *Journal of Nursing Measurement,* 17(2) pp. 105-113.

Wagnild, G. M. and Young, H. M. (1993) 'Development and psychometric evaluation of the Resilience Scale', *Journal of Nursing Measurement* 1(2) pp. 165-178.

World Health Organization 2001, *Strenghtening Mental Health Promotion,* World Health Organization, Geneva.

World Health Organization 2002, *World report on violence and health,* World Health Organization, Geneva.

World Health Organization 2003, *Caring for children and adolescents with mental disorders: setting WHO directions,* World Health Organisation, Geneva.

World Health Organization 2004, *The World Health Report,* World Health Organization, Geneva.

World Health Organization 2006, *Preventing Child Maltreatment: a guide to taking action and generating evidence,* World Health Organization, Geneva.

World Health Organization (2011) 'World Health Organization United Nations Population Fund', *International Journal of Social Psychiatry,* 57(1) pp. 1-116. https://doi.org/10.1177/002076401105700101.

World Values Survey Association (2014). Wave 6 2010-2014 OFFICIAL AGGREGATE v.20150418. Aggregate File Producer: Asep/JDS. Madrid, Spain: World Values Survey Association.

Yahaya, N. A., Subrmanian, P., Bustan, A. Z., Yaib, N. A. (2015), 'Symptom Experiences and coping strategies among multiethnic Solid Tumor Patients Undergoing Chemotherapy in Malaysia', *Asian Pacific Journal of Cancer Prevention,* (16) 2: 723-730.

Yarolahi, N. A. & Mortazavi, S. N. (2015), 'Meta-analysis of the Relationship between Resilience and Mental Health', *Journal of Fundamentals of Mental Health*, 17(3):103-108.

Yesufu, M. L. (2016) 'The impact of religion on a secular state: the Nigerian experience', *Studia Historiae Ecclesiasticae*, 42(1), 1-11. https://dx.doi.org/10.17159/2412-4265/2016/255

Yussof, M. S.. B., Yee, L. Y., Wei, L. H., Siong, T. C., Meng, L. H., Bin, L. X. & Abdul Rahim, A. F., (2011) 'A study on stress, stressore and coping stretegies among Malaysian medical students', *International Journal of Student Research*, (1) 2: 45-50.

Zarafshan, H., Mohammadi, M. & Salmanian, M. (2015) 'Prevalence of Anxiety Disorders among Children and Adolescents in Iran: A systematic Review', *Iran Journal of Psychaitry*, (10)1:1-7.

Ziaian, T., de Anstiss, H., Antoniou, G., Baghurst, P. and Sawyer, M. (2012) 'Resilience and Its Association with Depression, Emotional and Behavioural Problems, and Mental Health Service Utilisation among Refugee Adolescents Living in South Australia' *International Journal of Population Research*, pp. 1-9. doi: 10.1155/2012/485956.

Ziemer, B. S. (2012) 'Epistemological Effects of Divorce During Adolecsence On Adult Conflict Behavior' *ProQuest LLC*, pp. 1-262.

APPENDICES

Appendix One

INFORMED CONSENT FORM

Project title: Adverse Childhood Experiences, Resilience and Mental Health Outcomes among Secondary School Adolescents in Southwest Nigeria.

I am a masters' student of the Centre for Child and Adolescent Mental Health, University of Ibadan, Ibadan. I am interviewing adolescent students in secondary schools in Ibadan North Local Government Area in order to find out if distress and harsh conditions in childhood are associated with emotional problems and to also find the role of resilience in this association.

I will ask you to provide answers to some questions through questionnaire that will be administered to you. Please note that your answers will be kept confidential and each questionnaire will be coded such that you would not need to write your name on it.

The information that will be received from you and other adolescents will help in order to procure solutions to childhood adversities and measures that can be taken to promote resilience.

During the period of this exercise, participants who have high exposure to childhood adversities will receive psychological intervention on how to cope, thrive and lead positive lives.

Note that you are free to refuse to take part in this study. You have the right to withdraw at any given time if you choose to. However, I will appreciate your assistance in responding and taking part in the study.

Consent: Now that the study has been well explained to me and I understand fully all that is written therein and the content of the process, I will be willing to participate in the study.

_____ _____

Signature of Participant Interview date

IWE IGBANILAAYE LATI SE IWADI

Akole Ise Akanse: Awon Iriri ti ko dara ti awon ewe n ni, ifarada ati abajade ilera opolo laarin awon omo ile eko giga ni guusu orile ede Naijiria.

Mo je akekoo gboye ninu eko imo onipele keji ni eka eko ewe ati odo nipa ilera opolo ni ifasiti ti ilu Ibadan. Mo n se iforowanilenuwo laarin awon odo ile iwe giga ni ijoba ibile ariwa ni ilu Ibadan lati le se iwadii boya inira ati ipo onroro ni kekere ni se pelu isoro opolo ati arodun okan ati ipa ti ifarada ko ninu ibasepo yi.

Maa fe ki o fi idahun si awon ibeere olokan-o-jokan wonyi. Jowo mo wi pe awon idahun re yoo wa ni ipamo ati wipe awon ibeere olokan-o-jokan naa yoo wa ninu apo asiri to bee ti o ko nilo lati ko oruko re sii.

Awon koko oro ti a o gba lenu re ati lenu awon odo miran yoo ran wa lowo lati ri iyanju si isoro awon ewe ati ona ti a le gba lati gbe ifarada ga.

Mo daju wipe o ni anfaani lati le ma kopa ninu eko yii. O ni anfaani lati yowo nigba-kugba ti o bayan lati se bee. Bakan naa, n o mo riri iranlowo re nipa didahun ati kikopa ninu eko yii.

Igbanilaaye: Nigba ti a ti se alaye eko yii fun mi lekunrere ti o si ti yemi yekeyeke gbogbo ohun ti a ko sinu re ati akoonu ilana re, n oo fe lati kopa ninu eko yii.

_____ _____

Ifowosi akopa Deeti Iforowanilenuwo

Appendix Two

Serial Number: __ __ __ __

Today's Date: __ __/__ __/__ __

SCHOOL HEALTH QUESTIONNAIRE IN ENGLISH

Please write the answers to the questions or draw a circle where it applies to you. This is not an examination it is only to find out about you and your health.

SECTION I

Personal Information

1. Name of School

2. Class

3. Where do you live? (Address of Present Abode):

4. What is your date of birth? Date of Birth: _____ _____ _____

Day Month Year

5. How old are you?

6. Are you a boy or a girl? (a) boy (b) girl

7. Do you practise any religion? No Yes

8. Please write down the exact place you attend for worship

_____

(a) Islam (b) Orthodox Christian (c) Pentecostal Christian (d) Traditional religion (e) Other

9. How much does the teaching of your religion guide your behaviour?

(a) Very much (b) much (c) Just a little (d) Not at all

10. How much does the teaching of your religion guide your family life?

(a) Very much (b) much (c) Just a little (d) Not at all

Family Information

11. Family Type:

(a) Monogamous (b) Polygamous

12. Number of Mother's Children:

13. Number of Father's Children:

14. What is your position among your father's children?

15. What is your position among your mother's children?

16. Marital Status of Parents:

(a) Married (b)Separated/Divorced (c) Father is dead (d) Mother is dead (e) Mother & Father are dead

17. How many husbands has your mother had?

18. Who do you live with presently?

(a) Parents (b) Mother (c) Father (d) Grandparents (e) Grandmother

(f) Grandfather (g) Other [please specify] _____

19. Who brought you up from your childhood?

(a) Parents (b) Mother (c) Father (d) Grandparents (e) Grandmother

(f) Grandfather (g) Other [please specify] _____

20. How many different people have you left your parents to live with from your childhood?____

21. If more than one person, list the people, time spent and whether experience was good or bad?

Person lived with	From which age to which age	Experience (good or bad)
_____	_____	_____
_____	_____	_____
_____	_____	_____

22. Do you do any kind of work to earn money before or after school? Yes No

23. If yes, please describe what you do _____

24. Level of Father's Education

(a) No Formal Education (b) Koranic School (c) Primary School (d) Secondary School

(e) Post Secondary (Non-University) (f) University Degree and above (e) I do not know

25. Occupation of Father: [Write the exact occupation] _____/ I do not know

26. Level of Mother's Education

(a) No Formal Education (b) Koranic School (c) Primary School (d) Secondary School

(e) Post Secondary (Non-University) (f) University Degree and above (e) I do not know

27. Occupation of Mother: [Write in the exact occupation] _____/ I do not know

28. Do you like your family? Yes No

29a. If Yes, Why? _____

29b. If No, Why? _____

School-Related Questions

30. Do you like your school? Yes/ No

31. How many children are there in your class?___

32. Do you do well academically? Yes No

33a. If Yes, explain_____

33b. If No, explain_____

34. Are you having difficulties with your teachers? Yes No

35. If yes, what sort of difficulties? _____

36. Do you have guidance counsellors in your school? Yes No

37. Have you ever gone to see them? Yes No

38. If yes, what did you go to see them for? _____

39. If you have a problem at school would you go to the guidance counsellor for help? Yes No

40a. If yes, why would you go?

40b. If no, why not?

41. How do you cope with stress?

_____

_____

_____

_____

42. What helps you to cope with the stress/challenges in your life?

_____
_____
_____
_____

43. How can your school help improve coping skills among students?

_____
_____
_____
_____

Nomba atelera: __ __ __ __

Deeti Ojoiforowanilenuwo: __ __/__ __/__ __

IWE IWADI NIPA ILERA NI ILE IWE

Jọwọ kọ idahun si awọn ibeere ti o jẹ mọ ọ, tabi ki o fa igi si abẹ eyi to o jẹ mọ ọ. Eleyii kii ṣe idanwo; a kan fẹ mọ nipa rẹ ati ilera rẹ ni.

IPELE KINI

Afidanimo

1. Orukọ ile-iwe:

2. Kilaasi:

3. Nibo ni o n gbe? (Ibugbe):

4. Kini ọjọ ibi rẹ? Ọjọ ibi _____ _____ _____
ọjọ oṣu ọdun

5. Ọmọ ọdun melo ni ọ? _____

6. Ṣe ọkunrin tabi obinrin? (a) Ọkunrin (b) Obinrin

7. Njẹ ẹ manse ẹsin kankan? Bẹẹkọ Bẹẹni

8. Kọ ibi ti o ti maa njọsin

(a) Musulumi (b) onigbagbo aye ati jo (c) Onigbagbo ti isin (d) Esin ibile (e) Omiran

9. Bawo ni igbagbọ rẹ ṣe ntọ ihuwasi rẹ?

(a) O ntọ ọ gan an (b) O ntọ ọ (c) O ntọ ọ diẹ (d) Ko tọ ọ rara

10. Bawo ni ẹsin naa se se pataki to ni ẹbi ẹ?

(a) O ṣe pataki gan-an (b) O ṣe pataki (c) O ṣe pataki diẹ (d) Ko ṣe pataki

Alaye nipa Molebi

11. Iru ẹbi: (a) Oniyawo kan (b) Oniyawo meji tabi ju bẹẹlọ

12. Ọmọ melo ni Iya rẹ ni? _____

13. Ọmọ melo ni Baba rẹ ni? _____

14. Ipo wo lo wa ninu awon ọmọ baba rẹ? _____

15. Ipo wo lo wa ninu awọn ọmọ iya rẹ? _____

16. Ibagbepọ awọn obi rẹ:

(a) Ṣe wọn gbe pọ? (b) Ṣe wọn ti kọ ra wọn silẹ? (c) Baba ti ku (d) Iya ti ku (e) Iya ati Baba ti ku

17. Ọkọ melo ni Iya rẹ ti ni ri? _____

18. Tani o n gbe pẹlu lọwọlọwọ?

(a) Awọn obi (b) Iya nikan (c) Baba nikan (d) Iya ati Baba Agba (e) Iya Agba nikan

(f) Baba Agba nikan (g) Awọn Iyoku [Jọwọ sọ nipato] _____

19. Talo tọ ẹ dagba lati kekere?

(a) Awọn obi (b) Iya nikan (c) Baba nikan (d) Iya ati Baba Agba (e) Iya Agba nikan

(f) Baba Agba nikan (g) Awọn Iyoku [Jọwọ sọ nipato] _____

20. Awon eniyan ọtọọtọ melo ni o fi awon obi rẹ silẹ lati lọ gbe pẹlu wọn? _____

21. Ti o ba ju ẹnikan lọ, ka wọn, akoko ti o lo lọdọ ẹnikọọkan ati bi o ba dara tabi ko dara**?**

Ẹni ti o ba gbe	Ọmọ ọdun melo ni ọ nigba naa	Iriri rẹ nibẹ (O dara tabi ko dara)
_____	_____	_____
_____	_____	_____
_____	_____	_____

22. Njẹ o maa nṣiṣẹ lati ri owo lẹhin tabi saaju ki o to lọ si ile iwe? (Bẹẹni tabi bẹẹkọ)

23. Ti o ba je bẹẹni, ṣe alaaye ohun ti o ṣe _____

24. Iwe melo ni baba rẹ ka?

(a) Ko kawe rara (b) Ile-keu (c) Ile-Iwe Alakọbẹrẹ (d) Ile iwe girama (e) Ile-iwe agba (Yatọ fun yunifasiti) (f) Yunifasiti ati ju bẹẹ lọ (e) Nko mo

25. Iṣẹ wo ni Baba rẹ n ṣe: [Kọ iṣẹ ti wọn nṣe pato lẹkunrẹrẹ] _____/Nko mo

26. Iwe melo ni iya re ka?

(a) Ko kawe rara (b) Ile-keu (c) Ile-Iwe Alakọbẹrẹ (d) Ile iwe girama (e) Ile-iwe agba (Yatọ fun yunifasiti) (f) Yunifasiti ati ju bẹẹ lọ (e) Nko mo

27. Isẹ wo ni iya rẹ nṣe: [Kọ iṣẹ ti wọn nṣe pato lẹkunrẹrẹ] _____

28. Ṣe o fẹran ẹbi rẹ? Bẹẹni/Bẹẹkọ

29a. Bẹẹni, Ṣe alaye? _____

29b. Bẹẹkọ, Ṣe alaye? _____

Ibeere to nise pelu Ile-iwe

30. Ṣe o fẹran ile-iwe rẹ? Bẹẹni / Bẹẹkọ

31. Akẹkọọ melo ni o wa ni kilaasi rẹ?_____

32. Njẹ o nṣe daada ninu ẹkọ rẹ? Bẹẹni/ Bẹẹkọ

33a. Bẹẹni, Ṣe alaye_____

33b. Bẹẹkọ, Ṣe alaye_____

34. Njẹ o ni iṣoro kankan pẹlu awọn olukọ rẹ? Bẹẹni Bẹẹkọ

35. Ti o ba jẹ bẹẹni, iru iṣoro wo ni? _____

36. Njẹ ẹ ni awon Oludamọran Atọnisọna ni ile-Ẹkọ rẹ? Bẹẹni Bẹẹkọ

37. Njẹ o ti lo sọdọ wọn ri? Bẹẹni Bẹẹkọ

38. Ti o ba jẹ bẹẹni, ki ni o lọ ri wọnfun? _____

39. Ti o ba ni idaamu ni Ile-Ẹkọ, njẹ iwọ o lọ ri Oludamọran Atọnisọna? Bẹẹni Bẹẹkọ

40a. Bẹẹni, Ṣe alaye_____

40b. Bẹẹkọ, Ṣe alaye_____

Ibeere nipa Ifarada

41. Bawo lo se n farada aniyan?

_____
_____
_____
_____

42. Kini awon ohun ti o ran o lowo lati farada awon aniyan tabi ipenija aye re?

_____
_____
_____
_____

43. Bawo ni ile iwe re se le gbe imose nini ifarada ga laarin awon akekoo?

_____
_____
_____
_____

Appendix Three

MODIFIED ACE INTERNATIONAL QUESTIONNAIRE (ACE-IQ)

Participant Identification Number:

2	**RELATIONSHIP WITH PARENTS/GUARDIANS**	
	When you were growing up,	
2.1 [P1]	Did your parents/guardians understand your problems and worries?	No Yes Refused
2.2 [P2]	Did your parents/guardians really know what you were doing with your free time when you were not at school or work?	No Yes Refused
3		
3.1 []	Did your parents/guardians not give you food when they could easily have done so?	No Yes Refused
3.2 [P4]	Were your parents/guardians ever too drunk or intoxicated by drugs to take care of you?	No Yes Refused
3.3 [P5]	Did your parents/guardians not send you to school even when it was available?	No Yes Refused
4	**FAMILY ENVIRONMENT**	
	When you were growing up,	
4.1 [F1]	Did you live with a household member who was a problem drinker or alcoholic, or misused drugs?	No Yes Refused
4.2 [F2]	Did you live a household member who was depressed, mentality	No Yes Refused
4.3	Did you live with a household member who was ever sent to jail or prison?	No Yes Refused
4.4 [F4]	Were your parents ever separated or divorced?	No Yes Refused
4.5 [F5]	Did your mother, father or guardian die?	No Yes Refused

These next questions are about certain things you may actually have heard or seen IN YOUR HOME. These are things that may have been done to another household member but not necessary to you.		
When you were growing up,		
4.6 [F6]	Did you see or hear a parent or household member in your home being screamed at, insulted or humiliated?	No Yes Refused
4.7 [F7]	Did you see or hear a parent ir household member in your being slapped, kicked, punched or beaten up?	No Yes Refused
4.8 [F8]	Did you see or hear a parent or household member in your home being hit or cut with an object such as a stick (or cane), bottle, club, knife, whip, etc.?	No Yes Refused
These next questions are about certain things you may have experienced.		
When you were growing up,		
5		
5.1 [A1]	Did a parent, guardian or other household member yell, scream or swear at you, insult or humiliate you?	No Yes Refused
5.2 [A2]	Did a parent, guardian or other household member threaten to, or actually abandon you or throw you out of the house?	No Yes Refused
5.3 [A3]	Did a parent, guardian or other household member spank, slap, kick, punch or beat you up?	No Yes Refused
5.4 [A4]	Did a parent, guardian or other household member hit or cut you with an object such as a stick (cane), bottle, club, knife, whip, etc.?	No Yes Refused
6	**PEER VIOLENCE**	
These next questions are about BEING BULLIED when you were growing up. Bullying is when a young person or group of young people say or do bad and unpleasant things to another young		

person. It is also bullying when a young person is teased a lot in an unpleasant way or when a young person is left out of things on purpose. It is not bullying when two young people of about the same strength or power argue or fight or when teasing is done in a friendly and fun way.		
6.1 [V1]	Were you ever bullied?	No
		Yes
		Refused
		Never (Go to Q. V3)
		Refused
6.2 [V2]	How were you bullied most often?	I was hit, kicked, pushed, shoved around or locked indoors
		I was made fun of because of my race, nationality or colour
		I was made fun of because of my religion
		I was made fun of with sexual jokes, comments or gestures
		I was left out of activities on purpose or completely ignored
		I was made fun of because of how my body or face looked
		I was bullied in some other way
		Refused
This next question is about PHYSICAL FIGHTS. A physical fight occurs when two young people of about the same strength or power choose to fight each other		
When you were growing up,		
6.3 [V3]	Were you ever in a physical fight?	No
		Yes
		Refused
7	**WITNESSING COMMUNITY VIOLENCE**	
These next questions are about how often, when you were a child, YOU may have seen or heard certain things in your NEIGHBOURHOOD OR COMMUNITY (not in your home o on TV, movies, or the radio)		
When you were growing up, during the first 18 years of your life…		
7.1 [V4]	Did you see or hear someone being beaten up in real life?	No
		Yes
		Refused
7.2 [V5]	Did you see or hear someone being stabbed or shot in real life?	No
		Yes
		Refused

7.3 [V6]	Did you see or hear someone being threatened with a bottle, knife or gun in real life?	No
		Yes
		Refused

ATUNSE IWE IWADII AKARIAYE LORI AWON IRIRI TI KO DARA TI AWON EWE RI

Nomba Idanimo Olukopa:

2	**IBASEPO PELU OBI/ALAGBATO**	
	Nigba ti o n da gba,	
2.1 [P1]	Nje awon obi tabi alagbato re ni oye nipa isoro ati aniyan re?	Beeko
		Beeni
		Ko
2.2 [P2]		Beeko
		Beeni

	Nje awon obi tabi alagbato re mo daju ohun ti o n se nigba ni akoko ti owo re dile ti o ko si ni ile iwe tabi ni enu ise?	Ko
3		
3.1 []	Nje awon obi tabi alagbato re ko fun o ni ounje nigba ti won le se lai nira fun won?	Beeko
		Beeni
		Ko
3.2 [P4]	Nje awon obi tabi alagbato re ti mu oti para tabi mu oogun oloro debi wi pe won o le se itoju re?	Beeko
		Beeni
		Ko
3.3 [P5]	Nje awon obi tabi alagbato re ko ran o lo si ile iwe nigba ti ile iwe wa lati ran o?	Beeko
		Beeni
		Ko
4	**IPO TI EBI WA**	
	Nigba ti o n dagba,	
4.1 [F1]	Nje o gbe pelu ara ile kan ti o mu oti lile tabi oogun oloro?	Beeko
		Beeni
		Ko
4.2 [F2]	Nje oti ba ara ile kan gbe to ni isoriko, arun opolo tabi ti o le se iku pa ara re?	Beeko
		Beeni
		Ko
4.3	Nje o ba ara ile kan gbe ti oti se ewon ri tabi wa ni atimole?	Beeko
		Beeni
		Ko
4.4 [F4]	Nje awon obi re ti ko ara won sile ri tabi ja iwe fun ara won ri?	Beeko
		Beeni
		Ko
4.5 [F5]	Nje iya, baba tabi alagbato re ti ku?	Beeko
		Beeni
		Ko
Awon ibeere wonyi wa nipa awon ohun kan kan ti o le ti ri tabi ti o ti gbo NI ILE RE. Awon ohun yi le ti sele si alabagbe re omiran lai se iwo.		
Nigba ti o n dagba,		
4.6 [F6]	Nje o ri tabi gbo ki won pariwo mo, bu tabi tabuku obi tabi alabagbe re?	Beeko
		Beeni
		Ko
4.7		Beeko

[F7]	Nje o ri tabi gbo pe won fun ni ifoti, gba, fi ese lu tabi na obi re tabi alabagbe re?	Beeni Ko
4.8 [F8]	Nje o ri tabi gbo pe won fi igi (egba), igo, kumo, obe, koboko ati beebeelo gba tabi ge obi re tabi alabagbe re?	Beeko Beeni Ko
Awon ibeere wonyi wa lati mo nipa awon ohun kan kan ti o le ti ni iriri re.		
Nigba ti o n dagba,		
5		
5.1 [A1]	Nje obi, alagbato tabi ara ile re miran pariwo, ki gbe tabi se pe fun o, bu o tabi tabuku lu o?	Beeko Beeni Ko
5.2 [A2]	Nje obi, alagbato tabi ara ile re miran deruba o lati fi o sile tabi le e kuro nile abi se won ti e se be e?	Beeko Beeni Ko
5.3 [A3]	Nje obi, alagbato tabi ara ile re miran na o, gba e leti, ta o nipa, bu ese lu o tabi lu o gan?	Beeko Beeni Ko
5.4 [A4]	Nje obi. Alagbato tabi alabagbeere fi ohun kan na o tabi ge o ri bi igi (egba), igo, kumo, obe tabi koboko ati beebeelo?	Beeko Beeni Ko
6	**IWA IPA OJUGBA**	
Awon ibeere ti o kan wonyi wa nipa IDUNKOKO MO NI nigba ti o n dagba. Idunkoko ni tumo si ki odomode kan tabi awon odomode so tabi se ohun ti ko dara si odomode miran. O tun tumo si ki a fi odomode se yeye lopolopo ni ona ti ko dara tabi ki won mo o mo deyesi. Kii se idunkoko nigba ti odomode meji ti won je iro tabi ogba ba n jiyan tabi ja tabi fi ara won se yeye ni ona apara tabi efe.		
6.1 [V1]	Nje enikeni ti dunkoko mo o ri?	Beeko Beeni Ko Lai lai (lo si Q. V3) Ko

6.2 [V2]	Bawo ni won se dunkoko mo o ni opo igba?	Won na mi, gba mi, ti mi,so mi kaakiri tabi ti mi mo le
		Won fi mi se yeye nitori eya, awo ati orile ede ti mo ti wa
		Won fi mi se yeye nitori esin mi
		Won fi mi se yeye pelu apara, oro ati ifarajuwe ibalopo
		Won moomo pamiti tabi deye si mi patapata
		Won fi mi se yeye nitori bi ara tabi oju mi se ri
		Won ti dunkoko mo mi ni ona miran
		Ko
Awon ibeere wonyi ni i se pelu IJAKADI. Ijakadi je ija ti o wa ye laarin awon eniyan meji ti won je egbe tabi ogba ti won si jo ni agbara kan naa ti won si pinu lati di jo ja		
Nigba ti o n dagba,		
6.3 [V3]	Nje o ti ba enikeni ja ijakadi ri?	Beeko
		Beeni
		Ko
7	**IRIRI IWA IPA NI AGBEBE**	
Awon ibeere wonyi wa lati mo iye igba, nigba ti o wa lomode, O le ti ri tabi gbo awon ohun kan kan ni AWUJO TABI AGBEGBE (lai se ni ile re, lori ero amohunmaworan, ere ori itage, tabi ero redio)		
Nigba ti o n dagba, laarin odun mejidin logun akoko ninu ojo aye re…		
7.1 [V4]	Nje o ri tabi gbo ki won lu eni kan ni oju aye?	Beeko
		Beeni
		Ko
7.2 [V5]	Nje o ri tabi gbo pe won gun tabi yin ibon lu eni kan ni oju aye?	Beeko
		Beeni
		Ko
7.3 [V6]	Nje o ri tabi gbo pe won fi igo, obe tabi ibon hale mo eni kan ni oju aye?	Beeko
		Beeni
		Ko

Appendix Four

STRENGTH AND DIFFICULTIES QUESTIONNAIRE

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help if you answered all items as best as you can even if you are not absolutely sure or the item seems daft!. Please give your answer on the basis of how things have been for you over the last six months.

Your name: _____ Male/Female

Date of Birth: _____

	Question	Not True	Somewhat True	Certainly True
1.	I try to be nice to other people, I care about their feelings			
2.	I am restless, I cannot stay still for long			
3.	I get a lot of headaches, stomach-aches or sickness			
4.	I easily share with others (food, games, pens, etc.)			
5.	I get very angry and often lose my temper			
6.	I am usually on my own, I generally play alone or keep to myself			
7.	I usually do as I am told			
8.	I worry a lot			
9.	I am helpful if someone is hurt, upset or feeling ill			
10.	I am constantly fidgeting or squirming			
11.	I have one good friend or more			
12.	I fight a lot, I can make other people do what I want			
13.	I am often unhappy, downhearted or tearful			
14.	Other people my age generally like me			
15.	I am easily distracted, I find it difficult to concentrate			
16.	I am nervous in new situations. I easily lose confidence			
17.	I am kind to younger children			
18.	I am often accused of lying or cheating			
19.	Other children or young people pick on me or bully me			
20.	I often volunteer to help others (parents, teachers, children)			
21.	I think before I do things			
22.	I take things that are not mine from home, school or elsewhere			
23.	I get on better with adults than with people my own age			
24.	I have many fears, I am easily scared			
25.	I finish the work I'm doing. My attention is good			

Your signature _____ Today's date _____

IWADI AGBARA ATI ISORO

Fun wunren kookan, jowo fi ami si apoti kii se otito tabi oda bi pe otito tabi otito ponbele ni. Yoo ranilowo ti o ba dahun gbogbo wunren bi o ti le se dara julo ti o ba ti e jepe ko da o loju tabi wunren o ni itumo si e. Jowo dahun ibeere re lori bi nnkan se ti ri fun o lati bi osu mefa seyin.

Oruko re: _____ Okunrin/Obinrin

Ojo Ibi re: _____

	Ibeere	Kii se otito	Odabi pe otito	Otito ponbele ni
1.	Mo n gbiyanju lati se daradara si elomiran, mo ma n bikita fun imolara won			
2.	Ara mi kii bale, mi o le farabale fun igba pipe			
3.	Mo maa n ni opolopo efori, inu rirun tabi aisan			
4.	O rorun fun mi lati pin pelu elomiran (ounje, isere ati gege ikowe ati beebeelo)			
5.	Inu maa n tete bimi, mo si maa n tete faraya			
6.	Mo maa n dawa nigba gbogbo, mo si maa n da sere funra mi			
7.	Mo maa n se bi won ba se so fun mi pe ki n se			
8.	Mo maa n se aniyan lopolopo			
9.	Mo maa n ran eniyan lowo ti a ba see, ti aba mu binu tabi ti ara re ko ba ya			
10.	Mo maa n be kiri tabi rapala nigbagbo			
11.	Mo ni ore pataki kan tabi ju bee			
12.	Mo maa n ja gan-an, mo si maa n mu ki awon eniyan se oun ti mo fe			
13.	Ni opo igba ni inu mi kii dun tabi ki okan mi teba tabi ki n kun fun ekun			
14.	Awon miran ti a jo je egbe maa n feran mi			
15.	O rorun fun mi lati tete si iye mi kuro ninu nnkan, ko rorun fun mi lati fiyesi nnkan			
16.	Inu mi maa n ru lori awon ohun isele titun, mo ma n tete so igboya mi nu			
17.	Mo maa n se daradara si awon omode			
18.	Won maa n fi esun kan mi wi pe mo n pa iro tabi mo n re eniyan je			
19.	Awon omode ati awon odo maa n yomi lenu tabi hale mo mi			
20.	Mo maa n fi ara mi ji lati ran elomiran lowo (obi, oluko ati omode)			
21.	Mo maa n ronu ki n to se nnkan			
22.	Mo maa n mu ohun ti kii se temi ni inu ile, ile iwe ati ibomiran			
23.	Mo maa n baa won agbalagba se daradara ju awon egbe mi lo			
24.	Mo ni ifoya pupo, mo tete maa n beru			
25.	Mo maa n pari ise ti mo ba n se. Mo maa n farabale daradara			

Ibuwoluwe: _____ Deeti: _____

Appendix Five

BECK'S DEPRESSION INVENTORY

Please choose one statement from among the groups of statements that best describe how you have been feeling over the past 2 weeks including today. Indicate your choice by circling the number next to the statement.

1.	0	I do not feel sad
	1	I feel sad
	2	I feel sad all the time and I can't snap out of it
	3	I am so sad and unhappy all the time
2.	0	I am not particularly discouraged about the future
	1	I feel discouraged about the future
	2	I have nothing to look forward to
	3	I feel the future is hopeless and things cannot improve
3.	0	I do not feel liked a failure
	1	I feel I have failed more than the average person
	2	As in look back on my life all I can see is a lot of failure
	3	I feel I am a complete failure as a person
4.	0	I get as much satisfaction out of things as I used to
	1	I don't enjoy things as much as I used to
	2	I don't get real satisfaction out of anything anymore
	3	I am dissatisfied or bored with everything
5.	0	I don't feel particularly guilty
	1	I feel guilty a good part of the time
	2	I feel quite guilty most of the time
	3	I feel guilty all the time
6.	0	I don't feel I am being punished
	1	I feel I may be punished
	2	I expect to be punished
	3	I feel I am being punished
7.	0	I don't feel disappointed in myself
	1	I am disappointed in myself
	2	I am disgusted with myself
	3	I hate myself
8.	0	I don't feel I am any worse than anybody else
	1	I am critical of myself for my weaknesses or mistakes
	2	I blame myself all the time for my faults
	3	I blame myself for everything bad that happens
9.	0	I don't have any thoughts of killing myself

	1	I have thoughts of killing myself but I would not carry them out
	2	I would like to kill myself
	3	I would kill myself if I had the chance
10.	0	I don't cry any more than usual
	1	I cry more now than I used to
	2	I cry at all time now
	3	I used to be able to cry but now I can't cry even if I want to
11.	0	I am no more easily angered or irritated by things than I ever was
	1	I am slightly more easily angered or irritated by things than usual
	2	I am quite annoyed or irritated a good deal of the time
	3	I feel annoyed or irritated all the time
12.	0	I have not lost interest in other people
	1	I am less interested in other people than I used to be
	2	I have lost most of my interest in other people
	3	I have lost all my interest in other people
13.	0	I make decisions as well as I ever could
	1	I put off making decisions more than I used to
	2	I have greater difficulty making decisions than I used to
	3	I can't make decisions at all anymore
14.	0	I don't feel I look any worse than I used to
	1	I am worried I am looking old or unattractive
	2	I feel there are permanent changes in my appearance that make me look unattractive
	3	I believe I look ugly
15.	0	I can work about as well as before
	1	It takes extra effort to get started at doing something
	2	I have to push myself very hard to do anything
	3	I can't do any work at all
16.	0	I can sleep as well as usual
	1	I don't sleep as well as I used to
	2	I wake up 1-2 hours earlier than usual and find it hard to go back to sleep
	3	I can't do any work at all
17.	0	I don't get more tired than usual
	1	I get tired more easily than I used to
	2	I am tired from doing almost anything
	3	I am all too tired to do anything
18.	0	My appetite is no worse than usual
	1	My appetite is not as good as it used to be
	2	My appetite is much worse now
	3	I have no appetite at all
19.	0	I have not lost much weight, if any, lately

	1 I have lost more than 2 kilos 2 I have lost more than 5 kilos 3 I have lost more than 7 kilos
20.	0 I am not more worried about my health as usual 1 I worried about physical problems such as pains, aches, stomach upset or constipation 2 I am very worried about my physical problems it's hard to think of much else 3 I am so worried about my physical problems that I cannot think of anything else
21.	0 I have not noticed any recent change in my interest in the opposite sex 1 I am less interested in the opposite sex than I used to be 2 I have almost no interest in the opposite sex 3 I have lost interest in the opposite sex completely

Jowo mu gbolohun kan ninu awon gbolohun wonyi lati le so bi imolara re se ri lati bi ose meji seyin ati ni oni. Yan eyi ti o bayan laayo nipa yiyi odo si nomba to tele gbolohun yii.

1.	0	Mi o kii banuje
	1	Inu mi maa n baje
	2	Inu mi maa n baje nigbogbo igba mi o kii le kuro ninu re
	3	Inu mi maa n baje inu mi kii dun nigba gbogbo
2.	0	Mi o kii so ireti nu nipa ojo ola
	1	Mo maa n so ireti nu nipa ojo ola
	2	Mi o ni ohun kan ti mo ri wo niwaju
	3	Mo lero pe ojo iwaju ko ni ireti ati wipe nnkan ko le dara sii
3.	0	Mi o kiironu bi eni to kuna
	1	Mo lero pe mo ti kuna ju opolopo eniyan lo
	2	Bi mo se n boju wo aye mi, mo ripe o kun fun opolopo ikuna
	3	Mo lero wi pe emi gan-an je eni ti o kuna raurau gege bi alara
4.	0	Mo maa n ni itelorun ninu ohun ti mo maa n se
	1	Mi o kii gbadun awon nnkan bi mo se maa n gbadun re tele mo
	2	Mi o ni itelorun tooto ninu ohunkohun mo
	3	Ohun gbogbo ko temilorun tabi ohun gbogbo lo maa n su mi
5.	0	Mi o n lero pe mo jebi
	1	Mo maa n lero pe mo jebi ni akoko ti o ju lo
	2	Mo maa n lero pe mo jebi ni opolopo igba
	3	Mo maa n lero pe mo jebi nigbagbogbo
6.	0	Mi o gba pe won fi iya je mi
	1	M o maa n lero wipe won le fiya je mi
	2	Mo maa n ni ireti pe won ma fiya je mi
	3	Mo gba pe won fi iya je mi
7.	0	N o ni ijakule ninu ara mi
	1	Mo ni ijakule ninu ara mi
	2	Mo korira ara mi
	3	Mi o feran ara mi
8.	0	Mi o lero wipe mo buru jai ju elomiran lo
	1	Mo maa n le koko mo ara mi fun asise mi ati aleebu mi
	2	Mo maa n da ara mi lebi fun gbogbo asise mi
	3	Mo maa n da ara mi lebi fun gbogbo ohun buruku to ba se le
9.	0	Mi o lero lati pa ara mi
	1	Mo lero lati pa ara mi, sugbon mi o ni gbe igbese yii
	2	Mo fe lati pa ara mi
	3	Maa pa ara mi ti n ba ni anfaani
10.	0	Mi o ki sunkun ju bo ti ye lo

	1	Mo maa n sunkun ju ti tele
	2	Mo maa n sunkun ni gbogbo igba
	3	Mo maa n le sunkun sugbon nisinyi mi o le sunkun bi mo ti e fe
11.	0	Mi o kii binu tabi ni irira si awon nnkan bi ti te le mo
	1	Mo maa n binu die tabi ni ikorira nnkan ju bo ti ye lo
	2	Mo maa n fere binu tabi ni ikorira ni igba gidi
	3	Mo maa binu tabi korira ni gbogbo igba
12.	0	Emi ko padanu anfani ninu awon eni miran
	1	Mi o nifee si awon eni miran to ti tele
	2	Mo ti padanu awon opolopo anfani ti mo ni ninu eniyan miran
	3	Mo ti padanu gbogbo ide mi si awon eniyan miran
13.	0	Mo se ipinnu bi mo ti le se e
	1	Mo pa sise ipinnu ti ju bi mo ti n se lo
	2	Mo ni isoro pupo lati se ipinnu ju ti tele lo
	3	Mi o le se ipinnu ni gbogbo igba mo
14.	0	Emi ko lero pe mo buru ju bi mo seri lo tele
	1	Mo n saniyan nitori oju mi o fanimora
	2	Mo lero pe awon iyipada kan sele ninu irisi mi ti o je ki ojumi maa fanimora
	3	Mo gbagbo pe oju mi ko rewa
15.	0	Mo le rin kaakiri bi mo se n rin tele
	1	Mo ni lati fi kun igbiyanju mi lati le gbese lati se nnkan
	2	Mo nilati fi ipa mu ara mi lati se ohun kan
	3	Emi ko le se ise kan kan
16.	0	Mo le sun bi mo se n sun tele
	1	Mi o ki n sun bi mo se n sun tele
	2	Mo maa n ji laarin wakati kan si meji ju bi mo se n ji tele lo ati wi pe kii rorun fun mi lati sun mo
	3	Emi ko le se ise kankan rara
17.	0	Kii re mi ju bi o se n re mi lo tele
	1	O maa n tete re mi ju ti tele lo
	2	O maa n remi lati se ohunkohun
	3	O maa n remi ni gbogbo igba lati se ohunkohun
18.	0	Bi mo se n jeun ko buru ju bo ti ye
	1	Bi mo se n jeun ko dara to ti tele
	2	Bi mo se n jeun ni isinyi buru jai
	3	Ounje kii wu mi je rara
19.	0	Mi o ti padanu iwon pupo, to ba je pe lai pe yi

	1	Mo ti padanu ju kilo meji lo
	2	Mo ti padanu ju kilo marun-un lo
	3	Mo ti padanu ju kilo meje lo
20.	0	Emi ko se aniyan ju nipa ilera mi bi mo se nse tele
	1	Mo n saniyan ni pa awon isoro ti ara mi bii irora, ikanra, inu rirun tabi inu kikun
	2	Mo n saniyan gan nipa isoro ti ara mi, o soro fun mi lati ronu opolopo nnkan miran
	3	Mo n saniyan gan-an nipa awon isoro ti ara mi de bi pe n kole ronu nipa ohun miran
21.	0	Mi o se akiyesi iyipada kankan ninu ero mi si eya keji
	1	Mi o fi bee ni ife si eya keji bi mo ti ni i tele
	2	Mi o fe nifesi eya keji mo
	3	Mi o nifesi eya keji mo rara

Appendix Six

BECK'S ANXIETY INVENTORY

Below is a list of common symptoms of anxiety. Please read each item carefully. Indicate how much you were bothered by each symptom in the last one month including today, marking an X in the degree of disturbance in the column of cells on the right.

No.	Symptoms	How much you were bothered			
		Not at all **0** **It did not bother at all.**	Mild **1** **It bothered a little.**	Moderate **2** **It bothered a lot but I could handle it.**	Severe **3** **I could almost not handle it.**
1.	Numbness or tingling				
2.	Feeling hot				
3.	Weakness in legs				
4.	Not able to relax				
5.	Fear of the worst happening				
6.	Dizzy				
7.	Heart beating fast or heart racing				
8.	Restless				
9.	Afraid or terrified				
10.	Worried or tense				
11.	Feeling of choking				
12.	Shaky or trembling hands				
13.	Trembling				
14.	Fear of losing control				
15.	Difficulty in breathing				
16.	Fear of dying				
17.	Fearful or frightened				
18.	Discomfort in the stomach or indigestion				
19.	Faint or weak				
20.	Feeling hot in the face				
21.	Sweat (not due to heat)				
	Column totals:				

AKOSILE BECK LORI ANIYAN SISE

Ni isale yii ni a ko awon ami aniyan sise. Jowo ka wunren kookan daradara. Toka si bi ami kookan ti se n je e lokan laarin osu kan seyin atu ni oni yii, fa ami X lori ipele idaamu ninu ila ti o wa ni owo otun.

Nomba	Awon Ami	Bawo ni ami wonyi se da o laamu			
		Kori bee rara 0 Ko daa laamu rara	Di e 1 O da laamu di e	Ni won ba 2 O da laamu pupo sugbon mo se ikapa re	Lopolopo 3 Mo feele maa le kapa re
1.	Ki ara/iye ku tabi imolara bii pe nnkan gun o				
2.	Ara gbigbona				
3.	Ailera ninu ese				
4.	Ai le sinmi				
5.	Iberu ohun to buru ju				
6.	Oyi kiko				
7.	Ki okan re maa yara sare Kikiki				
8.	Aini isinmi				
9.	Eru ati iberu nla				
10.	Idaamu ati inira				
11.	Nini imolara to ha gaga				
12.	Gbigbon ati mimi owo				
13.	Iwariri				
14.	Iberu aile kora eni-nijanu				
15.	Isoro lati mi				
16.	Iberu iku				
17.	Ijaya tabi ifoya				
18.	Irora ninu ikun tabi ki ounje ma lo geere ninu ikun				
19.	Daku tabi rire				
20.	Ki oju re maa gbona				
21.	Lilaagun (la i je pe ooru n mu)				
	Abajade				

Appendix Seven

THE 10-ITEM CONNOR-DAVIDSON RESILIENCE SCALE

Item	Description	Not true at all (0)	Rarely true (1)	Sometimes (2)	Often true (3)	True nearly all of the time (4)
1	I am able to adapt to change					
4	I can deal with whatever comes					
6	I try to see the funny side of problems					
7	I think coping with stress can strengthen me					
8	I tend to bounce back after an illness or hardship					
11	I can achieve my goals despite obstacles					
14	I can stay focused under pressure					
16	I am not easily discouraged by failure					
17	I think of myself as a strong person					
19	I can handle unfriendly feelings					

WUNREN MEWA OSUNWON IFARADA TI CONNOR-DAVIDSON

Wunren	**Apejuwe**	**Kii se otito rara** **0**	**Otito sowon** **1**	**Nigba miran** **2**	**Otito nigba miran** **3**	**Otito feree je ni gbogbo igba** **4**
1.	Mo nipa lati mu ara ba iyipada					
4.	Mo le koju ohunkohun ti o wa					
6.	Mo gbiyanju lati wo isoro ni ona ti o panilerin					
7.	Mo le ro pe ifarada iponju le fun mi okun					
8.	Mo maa n tete bori aisan tabi isoro					
11.	Mo le se aseyori awon afojusun mi bi o ti le je pe awon idiwo wa					
14.	Mo le pokan po nigba wahala					
16.	Mi o ki tete ni ijakule nipase ikuna					
17.	Mo maa n ri ara mi bii alagbara					
19.	Mo le se ikapa awon imolara ti ko dara					