

**EXTERNAL BUILT RESIDENTIAL
ENVIRONMENT CHARACTERISTICS AND
MENTAL HEALTH PROBLEMS AMONG
YOUNG PEOPLE LIVING IN AN URBAN
SLUM IN IBADAN**

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DECLARATION

I declare that this proposal was prepared by me and was submitted to the Centre for Child and Adolescent Mental Health, University of Ibadan. No part of this proposal has been previously presented or submitted anywhere else.

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CERTIFICATION

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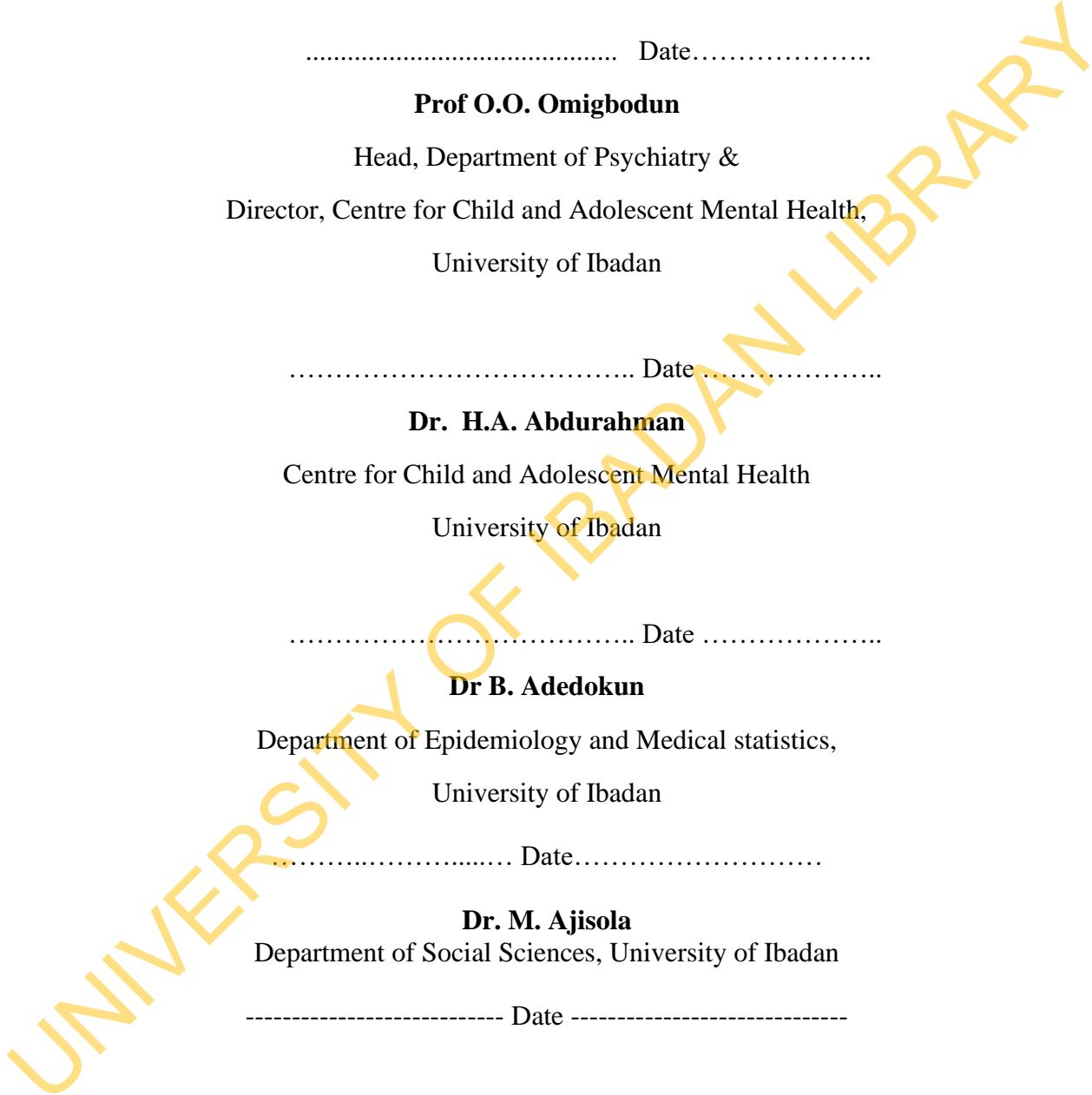
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DEDICATION

This work is dedicated to God Almighty for the grace he granted unto me to embark on this journey and finish it.

I am also dedicating this project to my husband (Mr Gabriel Abinye Pollyn-Alabi) for his support, understanding, encouragement and resources, may God bless him.

This also goes to my children (Tobi and Gabriella) for their understanding and holding on for me to finish, may your days be long.

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ABSTRACT

Background: External built residential environment is defined here as the external physical condition of the home, infrastructural resources created or modified by people.

External built residential environment characteristics include aspects of building designs such as type of building, walls, doors and windows, density of houses, green spaces, garbage and waste disposal facilities, street lighting, access pathways etc.

The residential environment is a critical component of the built environment and this can impact an individual either positively or negatively.

The optimal functioning of a person depends on some vital factors such as good nutrition, quality education and decent environment amongst others.

Young people are people in the age group of 10 – 24 years which constitute a vital part of all community, they are vulnerable and as such needs physical, social and psychological support for proper development and optimal functioning.

The type of neighbourhood people dwell in is characterised by their socio economic status and the socio- physical environment of slums is diverse and can compromise in a variety of ways. Built environment with good design enhances physical, social and mental well-being while residents that are continuously exposed to poor quality external built environment characteristics are likely to experience psychosocial stress which increase the likelihood to developing mental health problems or disorders.

More studies have focused on the built environment and mental health but very few studies have considered the impact of the built environment on mental health.

Objective: This study aims at determining the association between external built residential environment characteristics and mental health problems among young people in an urban slum in Ibadan.

Method: This was a community based cross sectional study in which young people between the ages 10 to 24 years and who had lived in the area for at least one year were recruited from each household through a two stage sampling techniques. The Beck's depression inventory (BDI) was used to screen for depression and the strength and difficulties questionnaire was used to screen for other mental health problems. A self- designed checklist was used to get the pattern of the external built residential environment characteristics. Data was analysed using the Statistical Package for Social Sciences (SPSS), percentages and frequencies were used to describe the socio- demographic characteristics of the respondents as well as the prevalence of MHP among the respondents. Chi-square was used to investigate the association between external built environment characteristics and MHP.

Result: A total of 305 participants aged 10 to 24 years, with 166 (54.6%) being females. Depression was reported to be 30.2% and the score for total difficulty for the SDQ was 15.1%. Findings from this study revealed a greater percent (64.3%) of the respondents living in mud houses, more than

three quarter of their windows are wooden with all the doors being wooden too. 195 of the 305 respondents live in house whose doors and windows (64.6%) below the standard recommended sizes. Furthermore, 92 (30.2%) of the 305 (100%) live in houses with dilapidated walls, the respondents whose floor type are made of wood plank and mud are 121 (39.7%) and 107 (35.1%) respectively. Note worthily, 93 (30.5%) of the 305 (100%) of the respondents do not have bathrooms and nearly a half of them 149 (48.9%) had their bathrooms made of wood detached from their building. The type of sewage facility in use here is predominately pit latrine with slab as a greater percentage 228 (74.8%) accounts for it, also 4.9% of the 305% use bucket and open field in place of toilets. About 198 (64.9%) of the 305 respondents dispose their waste by burning while 25.2% of them use the open dumpsite system. Sex, family type and religion were significantly associated with depression. Also, building type, type and state of doors and windows, floor type, sewage and garbage disposal facilities were all significantly associated with conduct related, peer related, emotional and hyperactivity related problems among young people in the study area.

Conclusion: This study was able to reveal that people's built environment and neighborhood can affect their health both physically as well as mentally. Young and growing people need a decent and comfortable environment to thrive and function optimally. Government and town planners should employ the use of available resources to upgrade the built residential environment through modification of available residential structures to protect the residents from factors that can affect them socially, psychologically and mentally.

CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND

External built residential environment entails the human-made surroundings that provide the settings for human activities such as places and spaces created or modified by people. This includes buildings such as schools, workplace, recreation areas, business areas, parks and transportation systems. It encompasses places and spaces in which people live, work and operate on a daily basis.

The World Health Organization (WHO 2007) defines Mental Health as a state of wellbeing in which every individual realizes his or her own potential, can cope with normal stresses of life, can work productively and fruitfully, and is able to make contribution to his or her community and not just the absence of mental disorder.

Characteristics of external built residential environment includes building design (type of walls, doors and windows), density of houses (overcrowded housing), waste disposal facilities (garbage and sewage), green spaces, street lighting etc. (Charles Ochodo , D.D. Ndetei, W. N. Moturi and J. O . Otieno 2014). It is universally accepted that housing is the second most important need of man after food. (Gambo, Y. L, Idowu, O. B. Anaykora. I. M (2012). Currently, every seventh person worldwide lives in an informal urban settlement summing up to 850 million people globally. (Nora sticzay and Larissa Koch, Wageningen 2015).

Built environments with good designs can reduce anxiety, pains and lower blood pressure while negative effects such as depression, delirium, increased need for pain medication are associated with psychologically unsupportive surroundings. Residents who are continuously exposed to poor external built environment characteristics are likely to experience psychosocial stress that would in turn increase their likelihood of developing mental health disorders. (Ochodo et al 2014)

Houses with leaking roofs and pipes, broken ceilings, cracked walls, peeling paint, broken doors and windows, are stressors that can affect mental health adversely. Haphazardly built and low income housing with poor maintenance result in insufficient housing, poor quality housing, overcrowding, higher levels of population density, and health problems. Standard and good housing designs that provides its occupants with spacious veranda, confidentiality, convenience, maintenance and prevention of physical hazards promotes good mental health. Residents appreciate good quality design as it makes them to be more relaxed. Relocation from low income neighborhoods to middle income areas is associated with enhanced mental health for both adults and children. (Ochodo *et al* 2014). The most frequently mentioned positive garden qualities are visual nature elements especially trees, greenery, flowers, and water.

Green spaces can have a positive impact on mental health through providing places for meetings and social interaction and places for exercise and relaxation. They provide pleasant visual experiences and improve air quality and, if occupied by trees, act as barriers for reduction of environmental noise and screen off particulate pollutants apart from absorbing carbon dioxide that is responsible for global warming. Encouraging green space development promotes a sense of community, reduces violence, and improves mental health. (Ochodo *et al* 2014) Living in and experiencing both the urban and rural environments can negatively impact learning and mental well-being throughout one's life. Dwelling characteristics of one's resident such as high-rise, low-rise, semi-detached, detached, single occupancy, multiple occupancy in relation with the type of floor and density of their houses impact learning and mental capacity.

Another important determinant that impact mental health is the quality of residential units is often related to the neighborhood in which they are situated. Poor quality housing is often located in neighborhoods with multiple indicators of urban decay such as dilapidated roads, vandalized utilities, graffiti, and garbage that can be harmful to health. In most cases, overcrowding is a major

problem of the built environment especially in slums and squalid environments. Overcrowded housing conditions contribute to higher mortality rates, stress, infectious disease risk, and poor childhood development which arises from poverty, overpopulation, and inefficient accommodation (Ochodo et al 2014). It is a problem that has social and health effects.

Literatures suggest that neighborhood quality has mental health impacts on children and their families, irrespective of household socioeconomic status and when individual occupy less than 8 to 10 meter square of space, they tend to have twice the amount of cases of physical illness and irregular behaviors as compared to those in less crowded homes. Low-cost housing in the developing countries has peculiar features that may impact more on mental health than those of similar houses in the developed world. These features include poor structural designs that often consist of mud, iron sheets, or cardboard walls; lack of access roads or poorly kept pathways; absence of sewerage facilities and uncontrolled garbage dumping; lack of electricity connections and inadequate water supply. All these attributes impact negatively on mental health. The socio-physical environment of slums is diverse and can compromise health in a variety of ways. (Ochodo et al)

Urban populations have greatly increased globally over the years and today they represent more than half of the world's populations. The growth has involved rural migration to informal settlements in and around cities commonly known as slums. (Benjamine .M, Thomas.S, and T avneet.S 2013)

Living in slums, which are characterized by lack of basic services, substandard housing, overcrowding and high density, unhealthy living condition and hazardous locations, insecure tenure, informal settlements, poverty and social exclusion, can be linked to increases related to negative social behaviors, child abuse and can directly affect children education (Adenike . E. Idowu, Emmanuel .O. Amoo, Idowu .I. Chiazor, Olujide Adekeye 2015). This is in agreement with Clarke , A 2010, that living and growing up in poverty is linked to lower life expectancy and chronic illnesses such as diabetes, mental illness, stroke, cardiovascular diseases, central nervous system

disease and injury. Life in the slum is not an easy one and it's often subsistence-level. Living in the slum areas is not always temporary phenomenon of migration to cities as they seem, millions of household find themselves trapped in slums for generations. (Benjamin, M et al 2013). There should be coordination among the various institutions which are responsible for the planning and management of the urban environment. Refuse collection, deforestation and flooding of the city has defied solution for almost a century now. (Olusola Oladapo Makinde, 2012).

1.2 PROBLEM STATEMENT

Young people are growing up in circumstances of limited resources and social disorganized neighborhood and this has affected their health (both physically and mentally), development, optimal functioning and their contribution to the society. Although, there is no precise data about mental health disorders in Nigeria, it is estimated that over 20 percent of Nigerians are believed to be suffering from one form of mental illness or another (1 one out of 5 young people). (WHO 2005)

This statistics depicts a rather high level of mental disorders in a country that pays little or no attention to persons suffering from this illness. While mental health problems are known to be caused by genetic and/or biological factors, drug and substance abuse, trauma and stress etc. The high burden of mental disorders has been attributed to inadequate attention paid to mental illnesses, misconceptions and lack of awareness on the part of the public. More people are likely to be disabled by psychological challenges than complications arising from HIV/AIDS, heart disease, accidents and wars combined by the year 2020. (Dauda Eneyamere Suleiman 2016)

However, the focus on mental health has been on rehabilitation than on prevention. Also, it has been observed from different literatures and researches that much attention have been focused on its causes, physical health than on the built environmental which is also an indicator of mental health problems, even researches on built environment focuses on its impacts on nutrition and physical activity with little or no consideration to mental health which is one of the most critical components

of a functional well-being. Hence, the type of built environment a person lives in impacts their lives either positively or negatively. This research intends to fill that gap by studying the external built residential environment characteristics and its association with mental health problems among young people living in an urban slum in Ibadan, make suggestions and referrals to the appropriate authorities where necessary.

1.3. JUSTIFICATION OF THE STUDY

Young people are asset in a society as they are the future of any nation. They are nation builders and their optimal functioning depend on some key factors such as quality education, good nutrition, decent environment, good physical and mental health among others. Studies have shown that the kind of environment children are raised impact on their lives as they progressed into adulthood and this has significant effect on their health and well-being as well as their mental health.

It is also a fact that mental health is as important as physical health. Therefore, if there is an impairment in one's mental health, all other aspects will be greatly affected as the individual will not be able to make meaningful contributions to their selves as well as the community they live in. Studies have been done on environment and impart on physical health but very few studies have shown its associations with mental health.

Findings from this study intend to show how the external environment impart on the mental well-being of young people and can be used by researchers, government, non- governmental organizations, donor agencies, institutions and development partners to take action and help improve living conditions and mental health by providing basic social amenities for slum dwellers as well as poorly built residential areas through informed decision leading to proper urban planning and development.

1.4 RESEARCH QUESTION

- (1) What is the prevalence of mental health problems among young people living in an urban slum in Ibadan?
- (2) What is the pattern of external built residential environment characteristics among young living in an urban slum in Ibadan?
- (3) Is there an association between socio-demographic correlates and mental depression among young people living in an urban slum in Ibadan?
- (4) Is there an association between the external built residential environment characteristics and mental health problems among young people living in an urban slum in Ibadan?

1.5. AIM

The aim of this study is to determine association between the external built residential environment characteristics and mental health problems among young people living in an urban slum in Ibadan.

1.6. SPECIFIC OBJECTIVES

The objectives of this study are:

1. To determine the pattern of external built residential environmental characteristics among young people living in an urban slum in Ibadan.
2. To determine the prevalence of mental health problems among young people living in an urban slum in Ibadan.
3. To determine the socio-demographic correlates of depression among young people living in an urban slum in Ibadan.
4. To determine the association between the external built residential environment characteristics and mental health problems among young people living in an urban slum in Ibadan.

CHAPTER TWO

LITERATURE REVIEW

2.1. INTRODUCTION

Young people are persons that fall between the period of childhood and adulthood (maturity). They include persons between the ages of 10 to 24 years.

External built residential environment entails the human-made surroundings that provide the settings for human activities such as places and spaces created or modified by people. This includes buildings such as schools, workplace, recreation areas, business areas, parks and transportation systems. It encompasses places and spaces in which people live, work and operate on a daily basis.

Features of urban physical planning that enhance a sense of community include those which afford sufficient privacy, ensure residents have easier access to amenities, parks, recreation facilities, offer pedestrian friendly spaces, provide streetscapes so that houses have views of the surrounding neighborhood, encourage open verandas, and low fences and restrict motor traffic. The location of residential buildings in areas that limit availability and access to services can have adverse impacts on both physical and mental health. Seclusion has the potential of generating anxiety over accessibility to services. (Ochodo et al 2015)

In some mega cities of the low and middle income countries, about 80% of the total population lives in slums. (Sticzay et al 2015).

Lack of appropriate physical environment can stimulate the development of mental illness. This could have both positive and negative impacts on mentally ill individuals. Negative impacts are associated with increased levels of agitation and anxiety leading to social isolation or disengagement from communal, physical and educational activities. On the other hand, the positive impacts seem to be reduced agitation and anxiety, increasing the involvement of the patients within social and intellectual activities. The processes individual undergo to be better acquitted with their surrounding

and to gain cognitive and emotional resources of their environment is very much associated with the type of physical environment they live in. (Rachel Cooper, Christopher. B, Ricardo. C, 2014). Poor quality housing can lead to poor mental health (Evans et al 2003) this can enhance feelings of depression, excessive worrying and isolation. (Cooper et al 2014).

The prevalence of mental and behavioral disorders are common and affects more than 25% of all people at some time during their life. (Ritesh . U. Ruchi. S, R. R. Wavare, A, Desphapande, Thakar, A. Satyendra, Y. (2016).

It has also been stated that about half of all life time mental disorders (MDs) begin before the age of 14 years. (Savita Malhatra and Bichitra Nanda Patra 2014). A review by Sharan and Sagar states that worldwide prevalence rates for child and adolescent mental disorders are around 10% - 20%. Premarajan et al as cited by Ritesh, U 2016 stated that psychiatry morbidity increased with advancing age. Ramnath S et al 2012 also found out in their study that 59.7% of people within the age group 18 – 45 have MDs which increases with age.

However, there are some epidemiological evidence from a number of low and middle income countries showing the existence of mental and developmental disorders and the demonstration of their impact on health care seeking and other aspects of the lives of children and adolescents. There is prevalence of child and adolescents MDs to be 17.7% in Ethiopia, 15% in Bangladesh and 6.9% in Puerto Rico, (Malhatra et al 2014).

Galea et al also reported that living in neighborhood characterized by a poor quality built environment associated with a greater likelihood of depression. Prevalence for current depression was 6.0% and 19.9% for life time depression. . Kumar et al 2018 reported that females (19.1%) were more affected by depression compared to males (10.8%).

Some researcher found out that housing issues are involved in a person's mental condition, they said if a person is not happy at home or place of work, and it leads to anxiety and depression. Also, affordability of housing and the condition of the properties negatively impact their mental health. Physical consequences of bad housing have links to their mental health such as having respiratory conditions due to wet and moldy houses can result to asthma. (Shelter. Org. UK 2017).

The WHO global burden of disease survey estimates that depression and anxiety disorders, including stress related mental health conditions will become the second ranked cause of disease burden by the year 2020, accounting for 5.7% of Disability Adjusted Life Years (DALYs). (Monica. S, Jane. P, Rogers.k , and Nina. B 2016)

Overcrowding is aggravated by poor sanitation and poor access of water, majority of the slum dwellers do not have private latrine, some use open space and very inferior latrine types, and there is also no proper garbage collection which leaves garbage dumped in road side ditch or burnt next to household dwelling. (Benjamin M, Thomas S, and Tavneet S et al 2013).

In another study by Weich and Lewis as cited by Cooper et al 2014, individuals living in buildings with structural problems are 1.4 times at risk of developing mental disorders compared to those whose buildings do not have structural problems.

Stephens 2012, looked at the impact of the process of urban social, environment and health disservice and inequality on urban children and young people and he discovered that mental health problems among this current generation of urban children is a global problem and this tends to be challenging in very Inequitable urban settings where children may grow up in a very stressful, threatening, and disorienting environment with impacts on social coping, self-esteem, anxiety, and aggression. (Idowu et al 2015) A neighborhood where its residents are faced with daily stressors

such as high traffic density, poor quality housing and threats to safety etc. experience high level of strain associated with psychological distress. Standard and good housing designs provides its occupants with spacious veranda, confidentiality, convenience, maintenance and prevention of physical hazards promotes good mental health.

Areas without sidewalks, bike paths, and recreational centers reduce Physical activity and increases adverse mental health problems. Also lack of supermarket in a neighborhood restrict the access of its residents to healthy food which can affect them both physically and mentally. Stephens 2012, explores the impact of the process of urban social, environment and health inequality and inequity on urban children and young people and found that mental disability, or mental illness, is a global problem of current generation of urban children and may be particularly difficult in very inequitable urban settings where children may grow up in a very stressful, threatening, and disorienting environment with impacts on social coping, self-esteem, anxiety, and aggression. Dilapidated and poorly built houses exposes residents to environmental hazards and mental health stressors such as violence and social isolation. (Ernie Hood, May 2005).

Lack of street lighting or inadequate lighting system poses problems in residential areas. Pathways should be well lit at night so as to offer residents some form of security to avoid worrying when accessing dark pathways at night. Street lighting improvement show crime reduction effects and increase confidence of residents at night. (Ochodo et al 2014). As cited in a study by Conger,R. D, Conger , k. J. and Martha, M. J (2010), low social economics status in a child's family of origin predicts lower academic achievement and continuing life stress across the period of childhood and adolescence consistent with the idea of social causation while Ritesh et al 2016 is of the opinion that MDs are higher in nuclear families than in joint (extended) and also highest in those without any schooling experience.

Overcrowded housing conditions contribute to higher mortality rates, stress, infectious disease risk, and poor childhood development. It arises from poverty, overpopulation, and inefficient accommodation and it is a problem that has social and health effects. (Ochodo et al 2014). (LeClair and Innes as cited in Cooper et al 2014 says when children are raised in better quality housing units, they make fewer visits to the hospital. More so, women living in poor quality neighborhood such as houses that are vulnerable to fires, vandalism, break-ins, and unsafe streets has lower mood states as opposed to those living in better quality neighborhood. (Caspi et al , Cooper et al 2014)

A study carried out by Miles et al shows that people living in a neighborhoods with higher housing density, large land spaces, green space, and minimal exposure to noises from vehicles have relatively low mental health outcomes such as depression than people that are not experiencing these specific built environment conditions. This also indicates that when the physical environmental conditions are safe, serene and secured, and there is social interaction in a community, it contributes positively to the recovery of people living with mental illnesses. (David S, Martha O, Le Conte, J.D., 2012). While some scholars believe that the health problems of high income nations differs greatly from low income nations with the former having higher cases of depression than less affluent nations. Their speculation is linked to the greater income inequality that exists in the highest income nations. The low income nations have high rates of infant mortality, malaria and lower average life span. (Clarke, A 2010).

Some authors gave three primary explanations for the association of built environment and mental health as follows: psychosocial stress (which accounts for people living in poorly built houses), concentrated disadvantage (such as harmful effects of the urban environment like noise exposure, violence and trauma and social drift (which explains that it is more likely for people with poor mental health to move into poor quality built environments). (S. Galea, J. Ahern, S . Rudenstine, Z. Wallace and D. Vlahov 2005)

In a study carried out by Chombant, findings revealed that when individuals had spaces that are less than 8 to 10 meters square, they become vulnerable to physical illnesses and irregular behavior doubled compared to those in less crowded homes. (J. E Ahianba, K. O. Dimuna and G.R.A Okogun 2008). It is observed that most houses especially in low income areas are built without much considerations for ventilation as their windows, doors and room are below the recommended sizes so there is therefore limited spaces for members of the household. In overcrowded houses, occupants lack the circulation of fresh air as there is no cross ventilation of air which encourages high humidity thereby contaminating the air which when breathe in results to health issues both physically and mentally. Consequently, living in a neighborhood with low socioeconomic status confers risk to adolescents in terms of a host of behavioral, social, and emotional problems (The National Academies, 2011), and may be more vulnerable to negative psychosocial health effect from distress and adverse urban slum characterized by congestion, high levels of unemployment, inadequate social services, extreme poverty, insecurity, crime, and hopelessness.

Another study by Gonzales, Cauce, Friedman, and masonz highlighted the influence of neighborhood on the problem of academic underachievement, relating neighborhood risk to lower grades in school. (Idowu et al 2015). One of the challenges faced with rapid urbanization is the growing number of slum dwellers. With sound urban planning and management, urban spaces can become inclusive, safe resilient and sustainable. This is goal 11 of the SDG. (United Nations Statistics Division.

People living in slums, informal settlements or inadequate housing are subjected to a great deal of disadvantages as they are socially, economically and spatially denied opportunities that other city dwellers enjoy. It is imperative to know that the number of slum dwellers is increasing due to accelerating urbanization, population growth and lack of appropriate land and housing policies. It is estimated that in 2014 880 million urban residents as compared to the 792 million in 2000 lived in

slums. Goal 7D of the MDG, states that “By 2020, there will be significant improvement in the lives of at least 100 million slum dwellers. (United Nations Millennium Development Goals 2015)

The problem of continuous and equal interaction between people and the human – made environment is of utmost importance because modern society calls for space and facilities that better suits its needs. This has made a greater part of the population to move to more attractive places. The youngest generations of city dwellers and their proper development are increasingly important, proper developed space plays at least an equally important role. This indicates that for the proper development of children in the cities, a sufficiently large open space area is important. This spaces should be easily accessible both visually and physically. (Mariusz Lamprecht 2016). According to the environmental model of public health, the urban environment is one of the first cause of disease, injury and mortality.

This is in agreement with a study carried out by Evans. G. that high-rise, multiple dwelling units have harmful effects on the psychological well-being of mothers with young children and young children themselves. Characteristics of these effects are pronounced among low-income families. These Parents often cope with the insufficient nearby play spaces which compels parents to keep their children inside their apartments. Such restrictions heighten intrafamilial conflict, minimize play opportunities with others and limits the interaction between occupants and their neighbors.

While some literatures (Ding et al 2011) found out that recreational open space beautifies and promotes physical activity which in turn can reduce depressive symptoms and could promote positive mental health, others are of the opinion that median pedestrian route directness and intersection density (components of street connectivity) were associated with increase depressive symptoms among girls because both have been associated with increased youth physical activity.

(Dustin T, Gianfranco. P, Erin. C, Renee. M, Steven. J, Beth. E 2013). This is so because median pedestrian route directness and intersection density increase neighborhood walkability, social interaction and contact and therefore increase neighborhood social cohesion, increased crime rate, noisiness, stress etc. thereby increasing the risk for depression.

2.2. DEFINITION OF A SLUM

A slum is a highly populated urban residential area consisting mostly of closely packed, decrepit housing units in a situation of deteriorated or incomplete infrastructure inhabited by impoverished persons.

The United Nations Human Settlements Programme (UN -HABITAT) defines a slum settlement as a household that cannot provide one of the following basic living characteristics. (1) Durable housing of a permanent nature that protects against extreme climate conditions. (2) Sufficient living space, which means not more than three people sharing the same room. (3) Easy access to safe water in sufficient amount at an affordable price. (4) Access to adequate sanitation in the form of private or public toilet shared by a reasonable number of people. (5) Security of tenure that prevents forced evictions. The inaccessibility to one or more of the above basic living conditions results in a “slum lifestyle” modeled by several characteristics.

According to (Fourchard, 2003) slums are defined as those areas that are yet to develop in terms of good planning and settlement. Some of the characteristics of slums are that they lack infra-structural facilities, have no planned layout and the residents are predominantly poor and illiterate.

Slums have been in existence for a long time and their presence has long been documented in literature. The vast majority of the slums are located in less developed countries and most of the growth in slum population is expected to occur in such countries. (Ron Mahabir, Andrew. C, Arie. C, Peggy A (2016)

Slums are areas that concentrate low-income earners, low-cost houses, possibly mud houses, no layout and poor inhabitants. They differ in size and other characteristics, most of them lack, reliable sanitation services and electricity, comfortable buildings and spaces, supply of clean water, law enforcement, security measures and other basic services.

In line with (United Nations, 2007) The term has traditionally referred to housing areas that were once relatively affluent but which deteriorated as the original dwellers moved on to newer and better parts of the city, but has come to include the vast informal settlements found in cities in the developing world. Although their characteristics vary between geographic regions, they are usually inhabited by the very poor or socially disadvantaged. Slum buildings vary from simple shacks to permanent and well-maintained structures.



Fig. 1: Slum in Mumbai



Fig. 2: Slum in Makoko, Lagos



Fig. 3: Slum in Makoko, Lagos

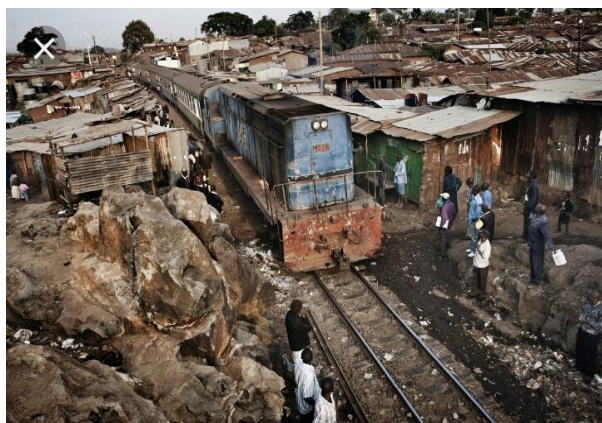


Fig. 4: Slum in Kibera, Kenya

Slums are predominantly found in urban areas of developing countries and also in developed economies. According to UN-Habitat, around 33% of the urban population in the developing world in 2012 lived in slums. The proportion of the urban population living in slums was highest in Sub-Saharan Africa with (61.7%). The world's largest slum city is found in the Neza-Chalco- Ixtapaluca area, located in the state of Mexico. Kibera slum in Nairobi Kenya is the second largest slum in Africa.

2.3. URBAN SLUM

Urban slums are settlements, neighborhood or city regions that cannot provide the basic living conditions necessary for its inhabitants or slum dwellers to live in a safe and healthy environment. (Jordan Fisher 2018)

2.4. CREATION AND EXPANSION OF SLUMS

Slums are created and expand due to a combination of many factors namely;

Rapid rural-to-urban migration, Poor planning, Poverty, High unemployment, Informal economy/ Economic stagnation, Natural disaster, Politics, Social conflicts etc.

2.5. PHYSICAL HEALTH CONDITION OF SLUMS

Overcrowded substandard housing facilitates the spread of infectious diseases such as tuberculosis, hepatitis, dengue fever, pneumonia, cholera and malaria. Poor sanitation and lack of access to safe food and water contribute to high prevalence of diarrhea within slums. The lack of structurally sound, climate –adapted and ventilated homes further puts the health of slum dwellers at risk of climate change related extreme weather including heat waves, cold or storms. Since slums are often urban planned development, they exacerbate non- communicable diseases related to outdoor and indoor air pollution (WHO 2010).

2.6. SOCIAL AND ECONOMIC IMPACT OF SLUM

- (1) Political exclusion from nation building elections, urban development and other state functions, inaccessibility to basic amenities.
- (2) Social exclusion from carnivals, celebrations and other events.
- (3) Increased crime rate
- (4) Poor education system and increased illiteracy.
- (5) Increased disaster rate.
- (6) Increased mortality rate.
- (7) Prevailing poverty.
- (8) Substandard housing.
- (9) Reduced productivity rate due to constant sickness. (Adefolake Adekola 2017).

2.7. PSYCHOLOGICAL IMPACT OF SLUM

As slums have been identified as breeding grounds for social problems, they are also characterized by high rates of diseases due to insanitary conditions, malnutrition and lack of basic health care services. (Njoku and Okoro 2014). Young people growing up in very stressful, threatening and disorienting environment have negative social coping skills, low self-esteem, anxiety and aggression. They live in constant fear and apprehension as they face threats of demolition from the government. The effect of poor neighborhood impact adversely on academic under-achievements (Idowu et al 2014).

2.8. MENTAL HEALTH PROBLEMS

Mental illness also called mental health disorders refers to a wide range of mental conditions – disorders that affect your mood, thinking and behavior e.g depression, anxiety, schizophrenia, addictive behaviors etc.(Mayo clinic)

Mental health refers to our cognitive, behavioral and emotional well-being. It is all about how we think, feel and behave. (Christian N et al 2017.

Children, young people and adult living in slums are faced with a lot of mental health problems in relation to the kind of life they are exposed to and the environment they live in. A study by Lima MS et al conducted in Brazil showed that 22.7% people were suffering from mental morbidity. Crick Lund et al, emphasized that some factors such as one's housing type, social class, socio-economic status, educational background and financial stress exhibit a strong association with Common Mental Disorders. (Manna. N, Tanushree. M, Sarkar. M, Swapnodeep. S, Udit. P 2016)

Residence with a high amount of property disorder are associated with negative psychosocial status, perceived stress and depression. Depression arises due to a lot of factors such as; loss of one's home in a slum fire as a result of congestion and poorly built houses, loss of lives and properties, living in constant darkness due to lack of electricity and haven experienced home demolition by the government. All these leave them traumatized and in constant fear and apprehension. Depressive symptoms tends to decrease with the improvement of some features of the urban built environment. (Giulia Melis, Elena G, Giuseppa C 2015). This is true as some authors have also revealed that the mental health of people improves when they move into better houses as opposed to those that do not move. Depression is the commonest form of mental illnesses, it is the third leading cause of the global disease burden both in the low, middle and high income countries. (It is evident that people with housing problems are at higher risk of developing mental health problems).

It is also observed from research that people that are at risk of becoming homeless such as those living in slums are more likely to experience mental and psychological problems. In 2015, about 32% of single people that are homeless were reported to have mental health problems and depression rate is over 10 times higher among them. (Housing and mental health. Mental health foundation 2019). Also, it was reported that boys who moved to low –poverty neighborhoods had 25% reduction in dependency problems, depressive symptoms and anxiety than those who stayed in high- poverty neighborhoods. (Cooper et al 2014). Ritesh et al 2016 also agrees that depression and anxiety are common among females (24.79%) while substance abuse is common among the males (25.0%)

In a study of a slum in Mumbai, a 30-year old Tamilian Hindu man said “There is so much tension in this community; I hope you are able to do something about it... many people have died because of tension. After all, no man will admit that a person in her family died because of tension, it’s common for people to silently drink poison or hang themselves. It’s a big problem”. Safety and fear are significantly issues to deal with in poorly built physical environments, stress from the fear of crime and from considering safety issues than from direct experience from crime. (Health Canada 1997 and Butterworth 2000 as cited in Cooper 2014) says that socioeconomic factors as well as physical environment contributes to these experiences.

Stress and anxiety have been found to be with poor housing and they tend to linger longer even after the individual’s housing problems have improved. (Amanda Warren 2017). Anxiety is one of the most frequently occurring mental disorders, It should be noted that when people do not feel comfortable, safe and secured with where they are living, they are bound to be stressed and anxious which affects their mental health.

It was also reported from 10 different studies on 9713 children from 6 countries, with substantial variation in assessment methods that 13.6%-15.0% of children were identified as having

psychopathology. Studies using screening questionnaires reported higher prevalence rates (19.8%; 18.8%-20.7%) than did studies using clinical diagnostic instruments (9.5%; 8.4%-10.5%). They concluded that evidence suggests that considerable levels of mental health problems exist among children and adolescents in sub-Saharan Africa. One in 7 children and adolescents have significant difficulties, with 1 in 10 (9.5%) having a specific psychiatric disorder. Also, there are clear socio demographic correlates of psychopathology that may place children in areas of greatest deprivation (such as areas with less basic social amenities) at greatest risk (Melissa. A. Cortina, Anisha. S, Mina. F, Paul. G. R (2012)

Most of the slum dwellers resort to excessive alcohol consumption to keep away from their worries. (Puertas G et al 2006). There is low self-esteem and low academics performance rating among slum dwellers owing to neighborhood characteristics and poor housing qualities. There is also lack of social control and cohesion in the neighborhood and exposure to drugs by adolescents and young people living in slums (Idowu et al 2014).

Ochodo et al 2014 cited Humket (1999) and Adam (2000) that occupants of poor housing suffer insecurity and such houses are mostly occupied by low income earners that are concerned with housing tenure and constantly experiencing difficulties with repairs. Individuals that live in houses with very small windows are at risk of having panic disorder as opposed to those in houses with standard window sizes.

Anxiety and disruptive behavior disorders are found to be the most frequent disorders, psychopathology and functional impairment decreased with age. Similarly, psychopathology of children in a peripheral slum of a big city is 3 times higher than the median of the general population. (Lourdes .E, Noemi. G, Roser. G, Nuria de la 2006)

Wandersman et al. (1990) and Leventhal et al. (2000) as cited in Ochodo 2014 argued that neighborhood quality has mental health impacts on children and their families independent of household socioeconomic status. Overcrowding is a major problem of the built environment especially in slums and squalid environments. Overcrowded housing conditions contribute to higher mortality rates, stress, infectious disease risk, and poor childhood development. It arises from poverty, over population, and inefficient accommodation. It is a problem that has social and health effects. Noise is highly associated with poor density housing quality, for instance, noise from overcrowded apartments and neighborhoods has been observed as a major cause of annoyance and reduction in individuals' quality of life. Children are especially deficit in their mental wellbeing due to noise. There tend to be a general pattern of adverse psychological stress reaction among young children exposed to chronic noise in their neighborhood. (Cooper et al 2014)

Ramnath et al 2015 in their study found out that twenty-three percent of individuals had high risk for having a CMD. Psychological distress is a major contributor to the slum's overall burden of functional impairment. The qualitative findings suggest that non-notified status plays a central role in creating psychological distress—by creating and exacerbating deprivations that serve as sources of stress, by placing slum residents in an inherently antagonistic relationship with the government through the criminalization of basic needs, and by shaping a community identity built on a feeling of social exclusion from the rest of the city

Findings from another study revealed that individual factors shown to have a statistically significant independent association with worse mental health such as low income, not living with a partner, lack of social support, female gender, low level of education, low income, low socioeconomic status, unemployment, financial strain, and perceived discrimination. Sixty-nine studies reported associations between area-level factors and mental health, namely neighborhood socioeconomic conditions, social capital, geographical distribution and built environment, neighborhood problems

and ethnic composition. It was concluded that there is associations between at least one socio demographic or economic characteristic and mental health outcomes. (Manuela Silva; Adriana Lourero and Graca 2016)

A study by a group of scholars in the slums of Dakar reports that mental well- being was significantly associated with various factors such as selected features of the natural environment, flood risk, sanitation, housing quality, sufficiency and durability. (Oliver .G, Khan M, Sven L, Muller D, Kramer A, Tobia L and Hostert P 2012)

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CHAPTER THREE METHODOLOGY

3.1 STUDY LOCATION

The study was carried out in Beere and its environs, an urban slum in Ibadan South East of Oyo State. Its residents are majorly Yoruba by tribe but other tribes are also residual there. The people of the community are engaged in trading and other businesses.

3.2 STUDY DESIGN

The study was a cross-sectional study. A social survey of residents in the low income neighborhood of Ibadan South East

3.3 STUDY POPULATION

3.3.1 Inclusion criteria; The inclusion criteria will be:

(1) All young people between the ages of 10 and 24 years who have lived in the given neighborhood for more than 1 year

(2) All young people who are physically and mentally fit to participate in the study.

3.3.2 Exclusion criteria; The exclusion criteria will be:

(1) All young people who are living in the neighborhood for less than 1 year.

(2) All young people who are not physically and mentally fit to participate in the study.

3.4 SAMPLE SIZE DETERMINATION

Sample size will be calculated using the formula that compares proportion between two groups.

$$N = \frac{Z^2 pq}{d^2}$$

$z = 5\%$ level of confidence, $95\% = (1.96)$

$p = 20\% = 0.2$ (proportion of mental health problem in the general population)

$q = (1-p) = (1-0.2) = 0.8$

d = degree of precision 5% (0.05)

$$N = 1.96^2 \times 0.2 \times 0.8$$

0.05

$$3.416 \times 0.2 \times 0.8 = 0.614656 = 246$$

0.0025

0.0025

Using 20% non-response rate = 308; N = required sample size = 308

3.5 SAMPLING TECHNIQUE

Two-stage random cluster sampling method was employed for selection of participants in the study area.

Stage One: The community will be divided into 4 groups and from this sample frame, 3 groups will be randomly selected by ballot.

Stage Two: All young people that falls between the age group (10 -24) and who meet the inclusion criteria from each household will be selected to participate in the study.

3.6 DATA COLLECTION

Quantitative and qualitative data collection methods was used for the purpose of this research. The quantitative data collection methods, rely on random sampling and structured data collection instruments that fit diverse experiences into predetermined response categories. They produce results that are easy to summarize, compare and generalized. For the success of this work, three research assistance were trained on the administration of the study instruments to be used. The researcher sort the cooperation of the respondents and created good rapport with them in order to get prompt response and to react to the questionnaires items with all sincerity.

3.7 STUDY INSTRUMENTS

The following instruments will be used in the study:

- 3.7.1 A socio- demographic questionnaire; (Adapted from Omigbodun et al 2010). This questionnaire has been designed to capture information on respondent's personal, family as well as school related characteristics. The questionnaire was adapted from a 40 – item school health questionnaire.
- 3.7.2 Strength and difficulties questionnaire; this is a brief emotional and behavioral screening tool for children and young people. It is made up of 25 items with 5 scales of 5 items each. It is used to screen for mental health problems.(such as emotional problems, conduct problems, hyperactivity problems and peer related problems).
- 3.7.3 Researcher designed checklist for environmental characteristics. This is a checklist for the external built residential environment characteristics which will give a guide to the pattern of the built environment characteristics of dwellings of the study site. It has two sections, (Built environment characteristics checklist with 20 items and another 20 question on the respondent's evaluation report on their perception about their housing units)
- 3.7.4 Beck's depression inventory (BDI –II) ; This is a self- report instrument used to asses for the existence and severity of depressive symptoms. It is a 21 – item scale record on four likert range from 0 to 3. These items which correspond to s symptom of depression are summed together to give a single score for the BDI –II. Scores between 0 to 13 is considered minimal range, score between 14 to 19 is considered mild, score between 20 to 28 is considered moderate and score between 29 to 63 is considered severe. The responses f or the various items are coded 0-4 and the score for each question are summed up to give a total score which indicates the levels of depression.

3.7.5 VALIDITY OF THE INSTRUMENT

Validity is the extent to which a measuring instrument measures what it is supposed to measure accurately (Akinboye, 2002). In order to determine the validity of the instrument, a draft of the questionnaire was given to the researcher supervisors for content validity. Necessary corrections and suggestions were made which was taken into consideration while preparing the final draft of the instrument.

3.7.7 ADMINISTRATION OF THE STUDY INSTRUMENTS

Each item and its alternative was read out to the participant by the researcher and research assistants and option chosen was marked by the researcher or research assistant.

3.8 DATA MANAGEMENT AND ANALYSIS

Findings from the data collected with regards to the external built environment characteristics of the study area was analyzed using Statistical Package for Social Science (SPSS) Software version 21.

A combination of descriptive and inferential statistics was employed in the presentation of findings. Comparison of categorical variables and other socio- demographic variables was analyze and compared using Chi-square. Tests ($P \leq 0.05$) was used to determine the prevalence of specific mental health problems of respondents.

3.9 TRANSLATION OF THE INSTRUMENTS

All instruments used in the study was translated to Yoruba using the back translation method.

4.0 ETHICAL CONSIDERATIONS

Ethical approval for the conduct this study was obtained from the research Ethical Review Committee from the ministry of health Oyo state. Assent and consent was obtained from the research participants and their guardians after the aim, objectives and procedure of the study was explained to them for better understanding of the study.

CHAPTER FOUR

RESULT

The chapter analyses and discusses the empirical result derived from this study as follows

- Socio-demographic Characteristics of the respondents.
- Prevalence of Mental Health Problems among the Respondents.
- External Built Residential Environment Characteristics.
- Respondent Perception Report about Their Built Environment.
- Association between Socio- demographic Correlates and Mental Health Problems among the Respondents.
- Association between External Built Residential Environment Characteristics And Mental Health Problems.

4.1 Socio-demographic characteristics of the respondents

A total of 305 young people aged 10 to 20 years participated in the study. There were 221 (72.4%) aged 10 to 15 years, (27.6%) aged 16-20 years. Males made up to 45.6% (139) of the population while the other 54.6% (166) were Females. About 213 (69.8%) of them are from monogamous home while 92 (30.2%) are from polygamous home.

N = 305

Table 4.1 Personal Characteristics of Study Respondents

Variables	N	%
Age		
10-15 years	221	72.4
16-20 years	84	27.6
Total	305	100
Gender		
Female	166	54.4
Male	139	45.6
Total	305	100
Religion		
Christian	89	29.2
Islam	216	70.8
Total	305	100
Years of Residing in the Location		
From Childhood	194	63.5
Below 10 Years	95	31.0
Above 10 years	16	5.5
Total	305	100
Work Done to Earn Money		
Yes	79	25.9
No	226	74.1
Total	305	100

Family Characteristics of Respondents

Variables	N	%
Family Type		
Monogamous	213	69.8
Polygamous	92	30.2
Total	305	100
Marital status of parents		
Married	289	94.8
Separated/Divorce	16	5.2
Total	305	100
Who Do You Live With Currently		
Parents	243	79.7
Mother	47	15.4
Grandparents	15	4.9
Total	305	100
Level of Father's education		
No formal education	62	20.3
Primary School	92	30.2
Secondary School	122	40.0
University	29	9.5
Total	305	100
Level of Mother's education		
No formal education	32	10.5
Primary School	44	14.4
Secondary School	229	75.1
Total	305	100
Do You Like Your Family		
Yes	305	100

School Related Characteristics of Respondents

Variables	N	%
Are You Currently in School		
Yes	242	79.3
No	63	20.7
Total	305	100
Respondents Current Level of Education		
Koranic School	8	2.6
Primary School	106	34.8
Secondary School	191	62.6
Total	305	100
Do You Like Your School		
Yes	299	98.0
No	6	2.0
Total	305	100
Do You Do Well Academically		
Yes	305	100
Difficulties With Teacher(s)		
No	305	100

4.2 Prevalence of mental health problems among young people living in an urban slum in Ibadan?

Mental Health Problems	No	Yes	Total
Depression	213(69.8%)	92(30.2%)	305(100.0%)
Emotional related problems	Normal (No) 217(71.1%)	Abnormal (Yes) 88(28.9%)	305(100.0%)
Conduct related problems	141(46.2%)	164(53.8%)	305(100.0%)
Hyperactivity related problems	262(85.9%)	43(14.1%)	305(100.0%)
Peer related problems	247(81.0%)	58(19.0%)	305(100.0%)
Total Difficulty	259(84.9%)	46(15.1%)	305(100.0%)

N = 305

Table 4.2 showed the prevalence of mental health problems among young people living in urban slum in Beere.

Prevalence of Depression

The prevalence of depression was 30.2% using a cut off of 18 and above on the (BDI score) to mean presence of depression.

Prevalence of mental health Problems on the SDQ subscale.

On the strength and difficulty questionnaire (SDQ), 88 out of the 305 (28.9%) respondents had scores suggestive of emotional problems, 164 out of the 305 (53.8%) had scores suggestive of conduct problems, 43 out of the 305 (14.1%) had scores suggestive of hyperactivity and 58 out of the 305 (19.0%) had scores suggestive of peer related problems. Forty – six of the three hundred and five (15.1%) respondents had total difficulty scores indicative of mental health problems.

Table 4.3: Pattern of external built residential environment among young living in an urban slum

S/N	Items	Categories	Frequency	Percentage (%)
1.	Type of structure	Block	109	35.7%
		Plastered Mud	181	59.3%
		unplastered mud	15	4.9%
2.	Window Type	Glass	31	10.2%
		Wooden	274	89.8%
3.	Door type	Wooden	305	100.0%
4.	Recommended sizes of doors	Standard	110	36.1%
		Below Standard	195	63.9%
5.	Recommended sizes of window	Standard	108	35.4%
		Below Standard	197	64.6%
6.	State of doors	Broken	91	29.8%
		Secured	199	65.2%
		Others	15	4.9%
7.	State of window	Broken	78	25.6%
		Secured	227	74.4%
8.	State of the wall of the house	Broken	92	30.2%
		Painted	92	30.2%
		Unpainted	76	24.9%
		Plastered	31	10.2%
		Unplastered	14	4.6%
9.	Roofing material	Zinc	289	94.8%
		Aluminum	16	5.2%
10.	Floor type	Wood Planks	121	39.7%
		Plastered mud	107	35.1%
		Cement	47	15.4%
		Tiles	30	9.8%
11.	Ceiling type	Asbestos	169	55.4%
		PVC	14	4.6%
		Plywood	107	35.1%
		Others	15	4.9%
12.	Bathroom type	Open Air	93	30.5%
		Wooden	149	48.9%
		Zinc	16	5.2%
		Block	47	15.4%
		Flush Pit Latrine	32	10.5%

13.	Sewage disposal facility	Pit Latrine with Slab	228	74.8%
		Bucket	15	4.9%
		Water closet	15	4.9%
		Bush/Field/Open defecation	15	4.9%
14.	Garbage disposal facility	Burning	198	64.9%
		Open dumpsite	77	25.2%
		Private Collectors	15	4.9%
		Others	15	4.9%
15.	Water source for household use	Borehole	290	95.1%
		Well	15	4.9%
16.	Kitchen	In-Built	263	86.2%
		Detached	42	13.8%
17.	Electricity	National Grid	305	100.0%
18.	Generating set	1.5kva (I pass my neighbour)	261	85.6%
		2.5kva	30	9.8%
		Lister	14	4.6%
19.	Drainage	Dendritic	122	40.0%
		Parallel	167	54.8%
		Radial	16	5.2%
20.	Street-light	Solar	34	11.1%
		Halogen Lamps	6	2.0%
		Fluorescent	265	86.9%
21.	Recreational facility	Viewing centre	167	54.8%
		Game House	122	40.0%
		Bar House	16	5.2%
22.	Availability of shopping facilities in the community	Shopping Mall	31	10.1%
		Supermarket	78	25.6%
		Provision Shops	196	64.3%

Table 4.4 showed the pattern of external built residential environment characteristics in Beere, Ibadan. The result indicated that 196 (64.3%) of the respondents lived in mud houses, approximately 274 (90%) of them have wooden windows of which 197 (64.6%) are below the standard recommended sizes. Furthermore, 92 (30.2%) of the 305 (100%) have dilapidated walls, the respondents whose floor type are made of wood plank and mud are 121 (39.7%) and 107 (35.1%) respectively. Note worthily, 93 (30.5%) of the 305 (100%) of the respondents do not have bathrooms and nearly a half of them 149 (48.9%) had their bathrooms made of wood detached from their building. The type of sewage facility in use here is predominately pit latrine with slab as a greater percentage 228 (74.8%) accounts for it, also 4.9% of the 305% use bucket and open field in place of toilets. About 198 (64.9%) of the 305 respondents dispose their waste by burning while 25.2% of them use the open dumpsite system.

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Table 4.4: Respondents' Perception Report about Their Built Environment

Items	Frequency	Percentage (%)
Are you comfortable with the type of building you live in		
Yes	290	95.1%
No	15	4.9%
Do you feel safe in your house?		
Yes	290	95.1%
No	15	4.9%
Are you affected by the elements of weather in your house		
Yes	62	20.3%
No	243	79.7%
Are you satisfied with the location of your bathroom		
Yes	258	84.6%
No	47	15.4%
Do you feel safe in bathroom?		
Yes	274	89.8%
No	31	10.2%
Are you comfortable with your sewage disposal facility?		
Yes	274	89.8%
No	31	10.2%
Are you satisfied, with your garbage disposal facility?		
Yes	290	95.1%
No	15	4.9%
Are you satisfied with the location of your kitchen?		
Yes	290	95.1%
No	15	4.9%
Are you affected by the generating set whenever it is on?		
Yes	15	4.9%
No	290	95.1%
Is your house or neighbourhood affected by flood whenever it rains?		
Yes	0	0.0%
No	305	100.0%
Do you visit of any of the recreational facilities in your neighbourhood		
Yes	151	49.5%
No	154	50.5%
Total	305	100.0%

Result in Table 4.4 showed that 15(4.9%) of the respondents indicated they do not feel comfortable and feel safe in the type of building they are lived in. Also, 47(15.4%) and 31(10.2%) of them reported that they are not satisfied with the location of their bathrooms and do not feel safe in it.

Similarly, a little proportion 32 (20.2%) of the entire population reported displeasure about their sewage disposal facility, Fifty percent (4.9%) of the respondents indicated that they were not satisfied with their garbage disposal facility. It should be noted that when people do not feel comfortable, safe and secured with where they are living, they are bound to be stressed and anxious which affects their mental health. (Amanda Warren 2017).

Table 4.5: Association between Socio-demographic Correlates and Mental Health Problems among Young People Living in Beere

Depression	Yes (%)	No (%)	χ^2	P
Age				
10-15 years	61(20.0%)	160(52.5%)	3.162	.075
16-21 years	32 (10.5%)	52(17.0%)		
Gender				
Male	32(10.5%)	107(35.1%)	6.764	.010
Female	61(20.0%)	105(34.4%)		
Religion				
Christian	14(4.6%)	75(24.6%)	12.920	.000
Islam	79(25.9%)	137(44.9%)		
Family Type				
Monogamy	77(25.2%)	136(44.6%)	10.668	.001
Polygamy	16(5.2%)	76(24.9%)		
Marital status of parent				
Married	92(30.2%)	197(64.6%)	4.682	.030
Separated/Divorce	1(0.3%)	15(4.9%)		
Level of Father's education				
Educated	61(20.0%)	90(29.5%)	13.845	.000
Not Educated	32(10.5%)	122(40.0%)		
Level of Mother's education				
Educated	61(20.0%)	168(55.1%)	6.441	.011
Not Educated	32(10.5%)	44(14.4%)		
Are you in school				
Yes	32(10.5%)	31(10.2%)	15.441	.000
No	61(20.0%)	181(59.3%)		

Table 4.5 above showed the association between socio demographic correlates and depression among young people in Beere, Ibadan.

Age ; It was revealed that age ($\chi^2= 3.162$; $p =.075$) has no significant relationship with depression among young people living in the area of study.

Gender; As revealed from the table above, sex ($\chi^2 = 6.764$; $p =.010$) has significant relationship with depression among young people in the study site.

Family Type; The table also showed that family type ($\chi^2 = 10.668$; $p =.001$) has significant relationship with depression among the study population

Marital Status of Parents: ($\chi^2 = 4.682$; $p =.030$) showed a significant relationship with mental health among the study respondents as those whose parents are either divorced or separated had a lower proportion as against those whose parents are still married.

Level of father's education; Father's level of education ($\chi^2 = 13.845$; $p =.000$) has significant relationship with depression among the respondents.

Level of mother's education; The table further showed that mother's level of education ($\chi^2 = 6.441$; $p =.011$) has significant relationship with mental health among the respondents

Schooling; The showed that schooling ($\chi^2 = 15.441$; $p =.000$) has significant relationship with mental health among the respondents

Table 4.6: Association between external built residential environment characteristics and mental health (depression) among young people living in an urban slum

Depression	Yes (%)	No (%)	χ^2	P
Type of structure				
Block	16(5.2%)	93(30.5%)	20.011	.000
Mud	77(25.2%)	119(39.0%)		
Window Type				
Glass	0(0.0%)	30(9.8%)	14.596	.000
Wooden	93(30.5%)	182(59.7%)		
Recommended Doors				
Standard	32(10.5%)	78(25.6%)	.159	.690
Below Standard	61(20.0%)	134(43.9%)		
Recommended Window				
Standard	25(8.2%)	83(27.2%)	4.255	.039
Below Standard	68(22.3%)	129(42.3%)		
State of Doors				
Broken	46(15.1%)	60(19.7%)	12.765	.000
Secured	47(15.4%)	152(49.8%)		
State of Window				
Broken	30(9.8%)	48(15.7%)	3.141	.076
Secured	63(20.7%)	164(53.8%)		
State of Wall				
Broken	31(10.2%)	75(24.6%)	.119	.730
Secured	62(20.3%)	137(44.9%)		
Floor Type				
Cement	31(10.2%)	154(50.2%)	40.738	.000
Wood/Planks	62(20.3%)	59(19.3%)		
Sewage disposal facility				
No Toilet	93(30.5%)	167(54.8%)	23.157	.000
Toilet	0(0.0%)	45(14.8%)		
Garbage disposal facility				
Other available means	93(30.5%)	197(64.6%)	6.921	.009
Private collector	0(0.0%)	15(4.9%)		

N=305

EBREC and depression

Table 4.6 showed that type of structure ($\chi^2 = 20.011$; $p = .000$) has significant relationship with mental health related problems as 77 (25.2%) out of 196 respondents who lived in mud houses show symptoms suggestive of depression.

It was revealed also from the table above that window type ($\chi^2 = 14.596$; $p = .000$) has significant relationship with mental health related problem as 93 (30.5%) out of the 274 respondents whose windows were made of wood had symptoms suggestive of depression.

From the figures gotten, respondents whose windows are below the standard recommended sizes ($\chi^2 = 4.255$; $p = .039$) had significant relationship with mental health problems as 68 (22.3%) of 197 respondents had symptoms suggestive of depression.

The table further revealed that state of the door ($\chi^2 = 12.765$; $p = .000$) of 46 (15.1%) out of 106 of the respondents who had insecure doors has symptoms suggestive of depression. The association however was statistically significant of the doors in relation to you

The table further showed that floor type ($\chi^2 = 40.738$; $p = .000$) has significant relationship with mental health problems as 62 (20.3%) out of 121 respondents using plank as floor type showed symptoms suggestive of depression.

It was also discovered that those without sewage ($\chi^2 = 23.157$; $p = .000$) had significant association with mental health problems as 93 (30.5%) of 260 respondents showed symptoms suggestive of depression. Same was reported for those disposed their waste through burning and open dumping ($\chi^2 = 6.921$; $p = .009$). However, 164 (53.8%) out of 227 of the respondents who lived in houses with secured windows had symptoms suggestive of depression as well as those 48 (15.7%) out of 78 who do not live in such houses. There is therefore no significant association between the state of the window of a house and depression. ($\chi^2 = 2.596$; $p = .107$)

Table 4.7: Association between external built residential environment characteristics and symptom of emotional related problem among young people living in an urban slum

Emotional Symptom	Normal (%)	Abnormal (%)	χ^2	P
Type of structure				
Block	77(25.2%)	32(10.5%)	.002	.966
Mud	138(45.2%)	58(19.0%)		
Window Type				
Glass	15(4.9%)	15(4.9%)	6.717	.010
Wooden	200(65.6%)	75(24.6%)		
Recommended Doors				
Standard	94(30.8%)	16(5.2%)	18.518	.000
Below Standard	121(39.7%)	74(24.3%)		
Recommended Window				
Standard	72(23.6%)	36(11.8%)	1.176	.278
Below Standard	143(46.9%)	54(17.7%)		
State of Doors				
Broken	75(24.6%)	31(10.2%)	.005	.941
Secured	140(45.9%)	59(19.3%)		
State of Window				
Broken	46(15.1%)	32(10.5%)	6.683	.010
Secured	169(55.4%)	58(19.0%)		
State of Wall				
Dilapidated	60(19.7%)	46(15.1%)	15.064	.000
Secured	155(50.8%)	44(14.4%)		
Floor Type				
Cement	94(30.8%)	90(29.5%)	83.960	.000
Wood/Planks	121(39.7%)	0(0.0%)		
Sewage disposal facility				
Toilet	200(65.6%)	60(19.7%)	35.041	.000
No Toilet	15(4.9%)	30(9.8%)		
Garbage disposal facility				
Any available means	200(65.6%)	90(29.5%)	6.604	.010
Private collector	15(4.9%)	0(0.0%)		

N=305

Table 4.7 showed that type of structure ($\chi^2 = .002$; $p = .966$), recommended sizes of window ($\chi^2 = 1.176$; $p = .278$), state of doors ($\chi^2 = .005$; $p = .941$) had no significant relationship with emotional related problems .

It was revealed from the table above that window type ($\chi^2 = 16.717$; $p = .010$) has significant relationship with mental health related problem as 75 (24.6%) out of the 275 respondents whose windows were made of wood had symptoms suggestive of emotional problems.

The table further showed that recommended door ($\chi^2 = 18.518; p = .000$) has significant relationship with mental health problems as 74 (24.3%) out of 195 respondents whose doors are below the standard recommended sizes showed symptoms suggestive of emotional problems. On the other hand, 59 (19.3%) out of 199 of the respondents who had secured doors had symptoms suggestive of emotional related problems alongside 31 (10.2%) out of 106 of those with broken doors. The association was not significant. ($\chi^2 = 2.596; p = .107$).

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Table 4.8: Association between External Built Residential Environment Characteristics and Symptom of Conduct Related Problem among young People Living in Beere

Conduct related problems	Normal (%)	Abnormal (%)	χ^2	P
Type of structure				
Block	62(20.3%)	47(15.4%)	.8.743	.003
Mud	77(25.2%)	119(39.0%)		
Window Type				
Glass	15(4.9%)	15(4.9%)	.263	.608
Wooden	124(40.7%)	151(49.5%)		
Recommended Doors				
Standard	94(30.8%)	16(5.2%)	110.322	.000
Below Standard	45(14.8%)	150(49.2%)		
Recommended Window				
Standard	87(28.5%)	21(6.9%)	82.493	.000
Below Standard	52(17.0%)	145(47.5%)		
State of Doors				
Broken	45(14.8%)	61(20.0%)	.638	.424
Secured	94(30.8%)	105(34.4%)		
State of Window				
Broken	16(5.2%)	62(20.3%)	26.536	.000
Secured	123(40.3%)	104(34.1%)		
State of Wall				
Broken	15(4.9%)	91(29.8%)	64.673	.000
Secured	124(40.7%)	75(24.6%)		
Floor Type				
Cement	77(25.2%)	107(35.1%)	2.596	.107
Wood/Planks	62(20.3%)	59(19.3%)		
Sewage disposal facility				
No Toilet	109(35.7%)	15(4.9%)	9.469	.002
Toilet	30(9.8%)	151(49.5%)		
Garbage disposal facility				
Any available means	124(40.7%)	166(54.4%)	18.840	.000
Private collector	15(4.9%)	0(0.0%)		

N=305

Table 4.8 showed that 119 (39.0%) out of 196 of the respondents who lived in mud houses showed symptoms suggestive of conduct problem as opposed to 47 (15.4%) of 102 who do not. The association is significant. ($\chi^2 = 8.743$; $p = .003$). Also, 91 (29.8%) out of 106 of the respondents who lived in dilapidated houses showed symptoms suggestive of conduct related problems as opposed to 75 (24.6%) out of 199 who do not. The association was statistically significant. ($\chi^2 = 64.673$; $p = .000$). Furthermore, floor type was not found to be associated with conduct related problems as 107 (35.1%) out of 184 respondents who had their floor type made of cement and 59

(19.3%) out of 121 respondents with wooden floor all had symptoms suggestive of conduct related problems, the association is therefore not significant. ($\chi^2 = 2.596$; $p = .107$).

Table 4.9: Association between external built residential environment characteristics and symptom of hyperactivity problem among young people living in an urban slum

Hyperactivity	Normal (%)	Abnormal (%)	χ^2	P
Type of structure				
Block	109(35.7%)	0(0.0%)	29.357	.000
Mud	151(49.5%)	45(14.8%)		
Window Type				
Glass	30(9.8%)	0(0.0%)	5.759	.012
Wooden	230(75.4%)	45(14.8%)		
Recommended Doors				
Standard	110(36.1%)	0(0.0%)	29.778	.000
Below Standard	150(49.2%)	45(14.8%)		
Recommended Window				
Standard	108(35.4%)	0(0.0%)	28.940	.000
Below Standard	152(49.8%)	45(14.8%)		
State of Doors				
Broken	106(34.8%)	0(0.0%)	28.118	.000
Secured	154(50.5%)	45(14.8%)		
State of Window				
Broken	78(25.6%)	0(0.0%)	18.139	.000
Secured	182(59.7%)	45(14.8%)		
State of Wall				
Dilapidated	91(29.8%)	15(4.9%)	.047	.828
Secured	169(55.4%)	30(9.8%)		
Floor Type				
Cement	153(50.2%)	31(10.2%)	1.617	.204
Wood/Planks	107(35.1%)	14(4.6%)		
Sewage disposal facility				
Toilet	215(70.5%)	45(14.8%)	9.136	.003
No Toilet	45(14.8%)	0(0.0%)		
Garbage disposal facility				
Any available means	245(80.3%)	45(14.8%)	2.730	.098
Private collector	15(4.9%)	0(0.0%)		

N=305

Table 4.9 revealed that 45 (14.8%) out of 275 of the respondents whose window type are wooden showed symptoms suggestive of hyperactivity related problems compared to 0(0.0%) of 30 of those with glass windows. The association was statistically significant. ($\chi^2 = 5.759$; $p = .012$) Also, 45 (14.8%) out of the 199 respondents who had broken windows showed symptoms suggestive of hyperactivity related problems. ($\chi^2 = 18.139$; $p = .000$). The association was statistically significant. Fifteen out of 106 (4.9%) of the respondents who live in dilapidated houses and 30 out of 199 (

9.8%) of those in non-dilapidated houses all showed symptoms suggestive of hyperactivity. The association is not statistically significant. ($\chi^2 = .047$; $p = .828$)

Table 4.10: Association between external built residential environment characteristics and symptom of peer related problem among young people living in an urban slum

Peer Related Problem	Normal (%)	Abnormal (%)	χ^2	P
Type of structure				
Block	109(35.7%)	0(0.0%)	45.139	.000
Mud	136(44.6%)	60(19.7%)		
Window Type				
Glass	30(9.8%)	60(19.7%)	8.148	.004
Wooden	110(70.5%)	0(0.0%)		
Recommended Doors				
Standard	110(36.1%)	0(0.0%)	42.135	.000
Below Standard	135(44.3%)	60(19.7%)		
Recommended Window				
Standard	108(35.4%)	60(19.7%)	40.949	.000
Below Standard	137(44.9%)	0(0.0%)		
State of Doors				
Broken	46(15.1%)	60(19.7%)	140.227	.000
Secured	199(65.2%)	0(0.0%)		
State of Window				
Broken	34(11.1%)	44(14.4%)	89.513	.000
Secured	211(69.2%)	16(5.2%)		
State of Wall				
Dilapidated	76(24.9%)	30(9.8%)	7.657	.006
Secured	169(55.4%)	30(9.8%)		
Floor Type				
Cement	184(60.3%)	0(0.0%)	113.584	.000
Wood/Planks	61(20.0%)	60(19.7%)		
Sewage disposal facility				
Toilet	200(65.6%)	60(19.7%)	12.928	.000
No Toilet	45(14.8%)	0(0.0%)		
Garbage disposal facility				
Any available means	230(75.4%)	60(19.7%)	3.863	.048
Private collector	15(4.9%)	0(0.0%)		

N=305

Table 4.10 showed that 60 (19.7%) out of the 196 respondents who lived in houses made of mud showed symptoms suggestive of peer related problems as against the 0 (0.0%) of the 109 who lived in block houses. The association is significant. ($\chi^2 = 45.139$; $p = .000$). Similarly, 60 (19.7%) out of 106 respondents who had broken doors had symptoms suggestive of peer related problem compared

to those who had secured doors 0 (0.0%) out of 199 respondents. The association is however significant. ($\chi^2 = 140.227$; $p = .000$)

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CHAPTER FIVE

Discussion, Conclusion and Recommendations

This chapter provides a discussion of the key findings of this study in relation to the existing literature. Conclusions are made by highlighting some of the limitations encountered in the course of the study and recommendations are made for the purpose of future research.

5.1 DISCUSSION

5.1.1 Prevalence of mental health problems among young people living in Beere.

Findings from this study records a prevalence of 30.2 % depression among the respondents. This indicates that there is severe depression among the respondents. There is a however variation in the prevalence rate in this study as it is higher than other studies. Kumar et al reports of having the prevalence to be 14.5% and a study by Singh et al reported a variation from 0.1 to 18.5%. Galae et al also gave their depression rate to be 19.9%. Reasons for this difference could be due to methodological difference across studies, study design, sample size and data collection tools. It could also be changes in assessment questions, the respondents perception of mental health and their sincere responses. Roberts et al reported that the prevalence estimates of psychopathology ranged from approximately 1% to nearly 51%. This is in support of this finding as there is record of 15.1% (48 out of 305) respondents having a total difficulty score on the SDQ scale. Also Cooper et al started in their study that when people live in buildings with structural problems such as in slums, they are 1.4 times at risk of developing mental disorders compared to those whose buildings do not have structural problems. Anisha Mellisa et al 2012 reported that there are clear sociodemographic correlates of psychopathology that may place children in areas of greatest deprivation (such as areas with less basic social amenities) at greatest risk. And that psychological difficulties have been shown to affect children's abilities to fulfil their potential in high-income countries, and there is, however, a paucity of research in lower-income countries, where adversity is most prevalent and the impact may be more detrimental

Living in neighborhood with poor structural characteristics can be very challenging and can affect the growth and development of its residents especially children and young people as they need a good, comfortable and friendly environment for optimal functioning.

5.1.2 Pattern of external built residential environment characteristics among young living in an urban slum in Ibadan

Findings from this study showed that there is high concentration of poor external built residential housing characteristics in these areas with a greater percentage (64.3%) of the respondents living in plastered mud and mud houses, more than three-quarter of their windows being made of wood and all of them having wooden doors. This is in agreement with findings from Idowu et al 2015 that living in the slums is characterized by substandard housing, hazardous housing conditions, informal settlement and poverty. Also, Ochodo et al 2014 findings is in agreement with this study that poor structural designs often consist of mud, iron sheets or cardboard walls, poorly kept pathways, absence of sewage facilities and lack of electricity supply. This may be due to the fact that residents of slums are low income earners who cannot afford standard houses because of tenancy problems. Another reason for this could be that the study area is an ancient city and when their buildings get deteriorated, they are not been fixed and as such would have old and vandalized utilities.

It was also revealed from the study that (63.9%) and (634.6%) of the respondents used doors and windows that are below the standard recommended sizes respectively and the floor of (39.4%) of the respondents houses were made with wood planks. More so, more than one-quarter of them had in-secured doors while (4.9) do not have doors to the passages of their houses as they use either wooden slab or zinc as protection at night. About (25.6%) of them had broken windows also.

Another finding from this study was that 30.2% and 24.9% of the respondents live in houses with dilapidated and unpainted walls respectively with about 4.6% unplaster walls. In line with findings from this study, Okogun et al 2008 reports that most houses especially in low income areas such as slums are built without much considerations for ventilation as their windows, doors and rooms are below the standard recommended sizes. Ancient houses are prone to having broken and fallen doors and windows due to prolonged use and also because of the activities of the elements of weather. It can also be that proper housing plan was not done and people with less competence and skills were employed in the erection of such buildings.

Another striking finding in this study is the record of open air bathing which accounted for (30.5%) of the respondents. This means that more than one-quarter of the study population do not have bathroom. More than half of them had bathrooms made of woods with (5.2%) using that of zinc. There is also high prevalence of poor sewage facility in the area of study as more than three quarter of the respondents using pit latrine with slab and leaving about five percent of them using either buckets or open field defecation as they do not have toilets. This finding corroborates the finding of Benjamin, M et al (2013) who reported that there is poor sanitation and poor access to water which denies majority of slum dwellers access to private latrine (some using open spaces and very inferior latrine types), also there is no proper garbage collection leaving garbage to be dumped in road side ditches or burnt next to household dwelling. Open burning of refuse is predominately in use in this area as 64.9% of the respondents accounts for this, 25.2% use open dump site while the remaining takes to other form to disposing their garbage such as dumping along major roads. Ochodo et al 2014 mentioned that poor quality housing is often located in neighborhood with multiple indicators of urban decay such as dilapidated roads, vandalized utilities, indiscriminate garbage dumping that are harmful to health.

These are common features of slums as there are no policy keeping environmental and health conditions in check and also no good laid down housing plans when buildings in low income areas and by low income earners are constructed.

There is also report of restricted access to supermarkets (25.6%) as revealed from this study and from a study by Stephens et al 2012. Areas without sidewalks, bike paths, and recreational centres reduce Physical activity and increases adverse mental health problems. Also lack of supermarket in a neighbourhood restrict the access of its resident to healthy food which can affect their health.

Interestingly, residents of this area kept themselves entertained as there are records of viewing centres (54.8%) and game houses (40.0%) for recreational purposes. This negates most literatures and also that of Stephens et al 2012.

RESPONDENTS PERCEPTION ABOUT THEIR EBRE

Each respondent reported how they felt about their housing units and the environment, 15 (4.9%) indicated they are not comfortable and do not feel safe in their houses owing to the poor external characteristics, some said there was also always quarrelling and fighting in their neighborhood, and also there are touts around. Some said that the neighborhood was dirty and lacked good and modern recreational facilities. Surprisingly, 290 (95.1%) of the respondents reported that they felt safe and

comfortable in the houses, this is just normal as one feels comfortable and relax in one's home notwithstanding the situation and/or state of their homes even if they would feel a lot better if given or moved into a better and safer place.

Furthermore, (20.3%) of the respondents said they are affected by the elements of weather in their houses as water comes in through the windows whenever there is heavy downpour. Some of the respondents (15.4%) and (10.2%) said they are not comfortable with the location of their bathrooms neither do they feel safe because it's situated outside, it wants to collapse, there is always ants there and people may see them while taking their bath and also there are lots of touts in the area.

Furthermore,(10.2%) says they are not comfortable with their sewage disposal facility as it smells and can affect their health, a few said they would have preferred water closet. Similarly, nearly five percent of the respondents said they are not satisfied with the way they dispose their waste because it makes the place dirty and smell, it attracts rodents and can cause diseases. In the same vein, a very small percent (4.9%) of the study population expressed dissatisfaction about the location of the kitchen, indicated that they are often affected by the generating set when it is on because it makes a lot of noise and pollutes the air. Approximately half indicated that they make use of one form of the available recreational facilities in their neighbourhood or another saying it affords them the opportunity of meeting with their friends, making new friends and feeling happy, while the other half reported that they were too young and some of them do not have money.

5.1.3: Association between socio-demographic correlates and mental health problems among young people living in an urban slum in Ibadan?

It was revealed by the findings of the study that sex, religion, family type, one position in mother's children, marital status of the parents, father's occupation and mother's occupation were the socio-demographic factors that are correlated (tend to increase the likelihood of) with mental health related problems.

Findings from this study was able to show that there is significant association between some socio-demographic correlates and depression.

Gender. Result showed that gender was associated with depression as female had significant proportions of depression scored compared to males. (20.0% – 10.5%). This is in support with lots of findings. Kumar et al 2018 reported that females (19.1%) were more affected by depression

compared to males (10.8%). This tend to be true as the female are emotional and easily affected by their surroundings and stresses of life.

Religion. From the study those the Islamic religion had significant proportion of depression when compared with the Christian religion. (25.9% -4.6%). This negates other findings that stated that religion is not associated with depression, although Richard J et al reported that religious participation and religious importance reduces depressive symptoms by enhancing social support. Reasons for this could be that those of the Christian faith wouldn't want to accept or believe in mental health problems as they see it as satanic and would want to apply their faith even in the mist of having symptoms suggestive of mental disorders.

Family type; Findings from this study reported a higher proportion of depression among respondents from monogamous family compared to those from polygamous home. (25.2% - 5.2%). This tend to share similarities with findings from Ritesh et al 2016 that MD seem to be more in nuclear families (70.29%) compared to joint families (25.74%). Ramnath S et al 2012 also agrees with this showing (29.4%) with psychiatry disorders belonging to nuclear families. An explanation to this could be that there are more activities in the polygamous homes, children will have many family members to visit and there will be competition as parents will try to meet up with their co wives by satisfying their children needs. Life in the monogamous home may be less fun as the children may be lonely.

5.1.4: Association between the external built residential environment characteristics and mental health problems among young people living in an urban slum in Ibadan?

Depression was found to be associated with some EBREC as a significant proportion of the respondents who lived in mud houses had symptoms suggestive of depression as opposed to those who lived in block houses (25.2% - 5.2%), those with wooden window as opposed those with glass type (30.5%-0.0%), recommended sizes of window revealed (22.3%- 8.2%) are for those with

broken/insecure doors (20.7%- 9.8%), roofing materials (30.5%- 0.0%) , floor type (20.3%- 10.2%) ceiling type (45.2%-24.3%), sewage disposal facility (30.5%- 0.0%), garbage disposal facility (30.5% - 0.0%), recreational facilities in the community(20.5%- 10.0%) were the external built residential environment characteristics that are correlated (tend to increase the likelihood of) with depression. This is in agreement with findings from other studies. Cooper et al explains that poor quality housing can lead to developing poor mental health which enhances feelings of depression, excessive worrying and isolation. Galea et al also reported that living in neighborhood characterized by a poor quality built environment associated with a greater likelihood of depression. The location of residential buildings in areas that limit availability and access to services can have adverse impacts on both physical and mental health.

Emotional Related Problems

Outcome of result analysis and observations showed significant association between some EBREC and symptoms suggestive of emotional related problems.

A substantial proportion of respondents showed symptoms suggestive of emotional related problems with respect to their housing characteristics such as living in houses with wooden windows (24.6%) , houses with doors below recommended standard (74 out of 195) , who had poor garbage collection and disposal systems (90 out of 290) as supposed to those who did not. This is in agreement with findings from Cooper et al that the processes individual undergo to be better acquitted with their surrounding and to gain cognitive and emotional resources of their environment is very much associated with the type of physical environment they live in. Evans et al also speaks in support of this that poor quality housing can lead to poor mental health. This is so because young people (which includes children and adolescents) need a conducive and comfortable environment to develop and thrive successfully into adulthood.

Conduct Related Problem

The BEC associated with conduct related problems which emanated from this study were the respondent building type (119 out of 186) , building whose doors and windows are below the standard recommended sizes (49.5% and 145 out of 197), those with dilapidated buildings (24.6%

) and those who do not have proper garbage disposal facilities (166 out of 290) when compared to those who did not. To corroborates findings from this study, Stephens 2012, explores the impact of the process of urban social, environment and health inequality and inequity on urban children and young people and found that mental disability, or mental illness, is a global problem of current generation of urban children and may be particularly difficult in very inequitable urban settings where children may grow up in a very stressful, threatening, and disorienting environment with impacts on social coping, self-esteem, anxiety, and aggression. Ernie Hood also reported that dilapidated and poorly built houses exposes residents to environmental hazards and mental health stressors such as violence and social isolation. There is also lack of social control and cohesion in the neighborhood and exposure to drugs by adolescents and young people living in slums (Idowu et al 2014).

Hyperactivity

This was found out to have an association with the respondents building type (mud houses), (14.8), broken windows (45 out of 275), doors and windows that are below the standard recommended sizes (14.8%) respectively, those with poor sewage and garbage facilities (45 out of 290) compared to those who did not live in such houses. In a study carried out by Ahianba et al, findings revealed that when individuals had spaces that are less than 8 to 10 meters square, they become vulnerable to physical illnesses and irregular behavior doubled compared to those in less crowded homes. The lack of structurally sound, climate –adapted and ventilated homes further puts the health of slum dwellers at risk of climate change related extreme weather including heat waves, cold or storms. Since slums are often urban planned development, they exacerbate non- communicable diseases related to outdoor and indoor air pollution. (WHO 2010)

This can be so because houses without good doors and windows to allow for illumination and fresh air could cause occupants to be irritable, restless and might want to be outdoor always keeping themselves occupied and/or busy.

Peer Related Problems

There is significant number of the respondents showing peer related problems in all the domains of housing characteristics. People living in slums, informal settlements or inadequate housing are subjected to a great deal of disadvantages as they are socially, economically and spatially denied opportunities that other city dwellers enjoy. Idowu et al 2014 highlighted the influence of neighborhood on the problem of academic underachievement, relating neighborhood risk to lower grades in school.. Consequently, living in a neighborhood with low socioeconomic status confers risk to adolescents in terms of a host of behavioral, social, and emotional problems (The National Academies, 2011), and may be more vulnerable to negative psychosocial health effect from distress and adverse urban slum characterized by congestion, high levels of unemployment, inadequate social services, extreme poverty, insecurity, crime, and hopelessness.

Udit et al 2016 also emphasized that factors such as one's housing type, social class, socio – economic exhibit a strong association with common mental disorders. There is low self -esteem and low academics performance rating among slum dwellers owing to neighborhood characteristics and poor hosing qualities. There is also lack of social control and cohesion in the neighborhood and exposure to drugs by adolescents and young people living in slums (Idowu et al 2014).

5.3 Conclusion

The study resolved that significant and distinct associations exist between explicit characteristics of the urban external built residential environment and the likelihood of mental health problems in Beere, an urban slum in Ibadan, Oyo State, Nigeria. Some of the respondents who showed significant signs of mental health problem associated it with feelings of inferiority among their peers, while others stated that they just felt bad when they go out to other places where there are modern, finer houses and clean environment. It thus become expedient to seek for ways of improving the qualities of the external built residential environment as part of key involvements to safeguard public mental

health. Children, young people and adult living in slums are faced with a lot of mental health problems in relation to the kind of life they are exposed to and the environment they live in. Residence with a high amount of property disorder are associated with negative psychosocial status, perceived stress and depression. This is true as some authors have also revealed that the mental health of people improves when they move into better houses as opposed to those that do not move. Depression is the commonest form of mental illnesses, it is the third leading cause of the global disease burden both in the low, middle and high income countries (Giulia Melis, Elena G, Giuseppa C 2015). Also, psychological stress is a major contributor to the slum's overall burden of functional impairment.

Goal 7D of the MDG, states that "By 2020, there will be significant improvement in the lives of at least 100 million slum dwellers. (United Nations Millennium Development Goals 2015). This goal I must say hasn't been achieved even if we are yet to attain 2020, but evidence from this study and other studies coupled with what is obtainable out there counters that goal.

5.4 Recommendations

This research work is confined to examining external built residential environment characteristics and mental health problems among young people living in Beere, an urban slum in Ibadan, Oyo State, Nigeria. The following recommendations were made imperative:

1. Government, public health professionals and town planners in particular should employ the use of available resources to upgrade the built residential environment through modification of available living structures to protect residents from factors that can affect their, decongesting residential estates by adhering to prescribed housing densities, provision of street lighting, sanitary, and garbage management facilities alongside maintenance of access pathways.
2. There is need to look for ways of easing population pressure in highly congested areas by stemming rural-urban migration and improving overall neighbourhood economic outlook.
3. Government should endeavour to develop rural infrastructure alongside provision of basic amenities like electricity and water which can help stimulate the establishment of agro-based industries that would reduce rural-urban migration.

4. There is need for the government to come up with some social intervention packages that can help improve the lives of the downtrodden in the society. With this, they can feel happy and live a normal healthy life.

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APPENDICES

APPENDIX I

INFORMED CONSENT FORM

I am a MSc. Student from the Centre of Child and Adolescent Mental Health, University of Ibadan, Oyo State, Nigeria. I want to carry out a study with the topic “External Built Residential Environment Characteristics and Mental Health problem among young people living in an Urban Slum in Ibadan. The aim of this research is to look at the different built environmental characteristics e.g, the doors, windows, ceiling, floor, location of your environment and how it affects your mental health.

The study procedure is to have with you a single interview where you will have to answer a few questions. Your participation in this study is voluntary, so you are free to withdraw at any time if you are no longer interested in the study. Your withdrawal from the study does not have any consequences.

Please, bear in mind that the information you supplied for this study is strictly confidential and will be managed with care by the Centre for Child and Adolescent Mental Health. Also, you are not going to be exposed to any risk by participating in this study. Some of the questions are personal but accurate answer are encouraged as much as possible. Please, feel free to seek further clarification from me. If you agree to participate in the study described above, please sign or thumb print below.

Thank you very much.

.....

Thumbprint/Sign

APPENDIX II

Today's Date: ___/___/___

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, your environment and your health.

SECTION 1: DEMOGRAPHIC QUESTIONNAIRE

PERSONAL INFORMATION

1. Serial Number: _____

1. Nanba ni si se ntele _____

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

2. Nibo le ngbe lowolowo?

3. How long have you lived here?

3. O to igbawo te ti ngbe nibi?

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

Day Month Year

4. Kini Ojo ibi yin? Ojo Ibi: _____

Ojo Osu Odun

5. How old are you?

5. E to omo odun melo?

6. Are you a boy or a girl? (a) boy (b) girl
6. Okunrin tabi Obinrin niyin bi? (a) okunrin (b) obinrin
7. Do you practice any religion? (a) No (b) Yes
7. Nje elesin niyin bi (a) Rara (b) Beni

8a. What religion do you practice?

8a. kini esin ti e nse?

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

Other

- (a) Musulumi (b) Onigbagbo Ninu Olorun Nikan (d) Onigbagbo Ninu Ise Emi-Mimo (e) Esin Isese Asa (e) Omiran

If "Other", please specify: _____

Bi "omiran", jowo sapejuwe

9a. please write down the exact place you attend for worship _____

9a. jowo s'akosile ibi pato te ti njosin _____

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

9b. Bawo ni eko esin yin se nto ihuwasi yin?

- (a) Very much (b) much (c) Just a little (d) Not at all
- (a) Pupo gidigidi (b) pupo (d) kekere (e) rara

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

10. Bawo ni eko esin yin se nto igbe aye ebi yin?

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

- (a) Pupo gidigidi (b) pupo (d) kekere (e) rara

Family Information

11. Family Type:

11. Iru ẹbi:

- (a) Monogamous (b) Polygamous
(a) Oniyawo kan (b) Oniyawo meji tabi ju beḗlo

12. Number of Mother's Children:

12. Ọmọ melo ni Iya rẹ ni?:

13. Number of Father's Children:

13. Ọmọ melo ni Baba rẹ ni?:

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

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

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

15. Ipo wo lo wa ninu awon ọmọ iya rẹ?

16. Marital Status of Parents:

16. Ibagbepọ awon obi rẹ:

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

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

17. How many husbands has your mother had?

17. Ọkọ melo ni Iya rẹ ti ni ri?

18. Who do you live with presently?

18. Tani o n gbe pẹlu lẹwọlẹwọ?

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

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

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

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

19. Who brought you up from your childhood?

19. Talo tọ ẹ dagba lati kekere?

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

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

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

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

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

21. Ti o ba ju enikan lo, ka won, akoko ti o lo lodu enikookan ati bi o ba dara tabi ko dara?

Person lived with	From which age to which age	Experience (good or bad)
Eni ti o ba gbe	Omọ odun melo ni o nigba naa	Iriri re nibu (O dara tabi ko dara)
_____	_____	_____
_____	_____	_____

24. Level of Father's Education

24. Iwe melo ni baba re ka?

- (a) No Formal Education (b) Koranic School (c) Primary School (d) Secondary School
(e) Post Secondary (Non-University) (f) University Degree and above (g) I do not know
- (a) Ko kawe rara (b) Ile-keu (c) Ile-Iwe Alakobere (d) Ile iwe girama
(e) Ile-iwe agba (Yato fun yunifasiti) (f) Yunifasiti ati ju be lo (g) Nko mo

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

25. Ise wo ni Baba re n se: [Ko ise ti won nse pato lekunre] _____/Nko mo

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 (g) I do not know

(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 (g) Nko mo

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

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

28. Do you like your family? Yes No

28. Ẹ o fẹran ẹbi rẹ? Bẹni/Bẹkọ

29a. If Yes, Why? _____

29a. Bẹni, Ẹ alaye? _____

29b. If No, Why? _____

29b. Bẹkọ, Ẹ alaye? _____

School Related Questions

30. Are you currently in school? (a) Yes (b) No

30. Nje o wa ni ile iwe lowolowo? (a) Yes (b) No

If no, skip to 38

Bi beeko, fo si 38

If yes,

Bi beeni,

31. What is your current level of Education?

31. Iwe melo ni oti ka?

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

(e) Post Secondary (Non-University) (f) University Degree and above

(a) Mi o kawẹ 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

32. Do you like your school? (a) Yes (b) No

32. Şe o fẹran ile-iwe rẹ? (a) Bẹni (b) Bẹko

33. Do you do well academically? (a) Yes (b) No

33. Njẹ o nşẹ daada ninu ẹko rẹ? (a) Bẹni (b) Bẹko

33a. If Yes, why _____

Bi beeni, kinidi beeni _____

33b. If No, why not _____

Bi beeko, kinidi beeko _____

34. Are you having difficulties with your teacher? (a) Yes (b) No

Njẹ o n ni idojuko pelu awon oluko re? (a) Beeni (b) Beeko

If yes, what sort of difficulties? _____

Bi beeni, iru idojuko wo? _____

35. Do you have guidance counsellors in your school? (a) Yes (b) No

35. Nje o ni atona agbani-niyanju ni ile iwe yin? (a) Beeni (b) Beeko

36. Have you ever gone to see them? (a) Yes (b) No

36 Nje o ti lo riwon nigbakan ri? (a) Beeni (b) Beeko

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

Bi beeni, ki le lo ri won fun?

37. If you have a problem at school would you go to the guidance counsellor for help? (a) Yes
(b) No

37. Ti o ba ni isoro ni ile iwe, Nje o ma lo sodo atona agbani-niyanju fun iranlowo (a) Beeni (b)
Beeko

If yes, why would you go?

Bi beeni, kinidi to fi ma lo?

If not, why not?

Bi beeko, kinidi beeko?

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

38. Nje o maa nsişe lati ri owo lehin tabi saaju ki o to lo si ile iwe? (Beeni tabi beko)

38a. If yes, please describe what you do if you are not currently in school

38a. Bi beeni, se alaaye ohun ti o n se lowolowo

39. What is your highest level of education?

39 Kini iwe to ga ju to ka?

40. Do you do any kind of work to earn money? (a) Yes (b) No

40 Nje o sise kise lati ri owo? (a) Beenì (b) Beeko

41. If yes, please describe the kind of work you do

41 Bi beeni, jowo s'apejuwe iru ise to nse

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APPENDIX III

SECTION 2

CHECKLIST FOR EXTERNAL BUILT RESIDENTIAL ENVIRONMENT

CHARACTERISTICS.S

Note: Please tick the appropriate answer as it applies.

	ITEMS
1. Type of Structure 1. Iru Ile	1. Block 2. Plastered mud 3. Unplaster mud 4. Wood planks 5. Zinc 6. Bricks 7.Other 1. Biriki 2. Amo ti are 3. Amo ti a ko re 4. Pako 5. Panu 6. Biriki ti a fina sun 7. Omiran
2.Window Type 2. Ferese	1. Glass 2.Wooden 3.Iron 4.Others 1. Gilasi 2. Igi 3. Irin 4. Omiran
3.Door type 3. Ilekun	1. Glass 2.Wooden 3.Iron 4.Others 1. Gilasi 2. Igi 3. Irin 4. Omiran
4. Recommended sizes of doors and windows. 4. Odiwon to to fun ferese ati ilekun	(1)Doors (1) Ferese (a)Standard (b)Below Standard (a) Odiwon (b) Din si odiwon (2)Windows (2) Ferese (a)Standard (b)Below Standard (a) Odiwon (b) din si odiwon
5.State of doors and windows 5. Ipo ti ferese ati ilekun wa	(1)Doors (1) Ilekun (a) Broken (b) Secured (c) Others (a) O ti baje (b) O ni aabo (d) Omiran (2)Windows (2) Ferese (a)Broken (b)Secured (c)Others

	(a) O ti baja (b) O ni aabo (d) Omiran
6.State of the wall of the house	(1)Broken (2)Painted (3)Unpainted (4)Plastered (5)Unplaster (6)Others
6. Ipo ti ogiri ile wa	(1) O ti baja (2) Kun loda (3) A ko kun loda (4) Rire (5) A ko re (6) Omiran
7. Roofing Material	(1) Zinc (2) Aluminum (3) Thatch/ Palm leaf (4) Shingle (5) Corrugated
7. Ohun elo ikanle	(1) Panu (2) Ayo (3) Ewe ope (4) eleyo (5) onipele
8. Floor Type	(1) Earth (2) Wood planks (3) Plaster mud (4) Cement (5) Terrazzo (6) Tiles (7) Others
8. Iru Ile	(1) erupe (2) Pako (3) Amo ti a re (4) Simenti (5) Terasoli (6) Aseleloge (7) Omiran
9. Ceiling type	(1) Asbestos (2) PVC (3) Plywood (4) Gypsum (5) Others
9. Iru orule inu ile	(1) Abesto (2) pvc (3) pako felefele (4) (5) Omiran
10. Bathroom Type.	(1) Open Air (2) Wooden (3)Zinc (4)Block 5.Others
10. Iru Ile-iwe	(1) Ojutaye (2) Onigi (3) Panu (4) Biriki (5) Omiran
11.Sewage disposal facility	(1) Flush Pit Latrine 2.Pit Latrine with Slab 3. Bucket 4. Water closet
11. Ohun elo iyagbe	(5) Bush /Field/Open defecation 6. Others (1) Ile-yagbe agbedibo alawo (2) Ile-yagbe agbedibo onipako (3) ike iyagbe (4) ile-yagbe alawo (5) Inu igbo (6) Omiran
12. Garbage disposal facility	1. Burning 2.Open dumpsite 3.Private Collectors 4.River Dumping 5.Others
12. Ohun elo idalenu	1. Sisun (2) Atan (3) Aladani (4) Sinu odo (5) Omiran
13. Water Source for household use.	(1) Borehole (2) Well (3) River (4) Others
13. Orisun omi fun ilo ile	(1) Omi ero (2) Omi kanga (3) Odo tin san (4) Omiran
14. Kitchen	(1) In-built (2) Detached (3) Open Air (4) Others
14. Ile idana	(1) Inu Ile (2) Takete (3) Oju gbangba (4) Omiran
15. Electricity	(1) National Grid (2) Mechanical (Generator) (3) Solar Energy (4) Others
15. Ina	(1) Ina Ijoba (2) Ina ero amunawa (3) Ina itansan orun (4) Omiran
16. Generating Set	(1) 1.5kva (I pass my Neighbor) (2) 2.5kva (3) 4.5kva (4) Lister (5) Others

16. Ero amunawa	(1) 1.5kva (mo ju alabagbe mi lo) (2) 2.5kva (3) 4.5kva (4) Lister (5) Omiran
17. Drainage System	(1) Dendritic (2) Parallel (3) Radial (4) Others
17. kota	(1)
18. Street-light	(1) Solar (2) Halogen Lamps (3) Fluorescent (4) Others
18. Ina Oju popo	(1) Itasan-orun (2) Ina mooran (3) fuluorisenti (4) Omiran
19. Recreational Facilities	(1) Viewing Centre (2) Game House (3) Bar House (4) Town Hall (5) Others
19. Ibi igbafẹ	(1) Ile iworan (2) ile isere (3) ile imuti (4) Gbongan ipade (5) Omiran
20. Availability of shopping facilities in the community.	(1) Shopping Mall (2) Supermarket (3) Provision Shops (4) Others
20. ipese eto karakata ninu ilu	(1) Ile nla itaja (2) Ile itaja nla (3) Ile ate (4) Omiran

RESPONDENT EVALUATION REPORT

1. Are you comfortable with the type of building you live in? Yes No

1. Nje o ni itelorun lori iru ile to ngbe? Beeni Beeko

If No, Why? _____

Bi beeko, salaye? _____

2. Do you feel safe in your house? Yes No

2. Nje aabo to peye wa fun o ninu ile? Beeni Beeko

If No, Why? _____

Bi beeko, salaye? _____

3. Are you affected by the elements of weather in your house? Yes No

3. Nje iyipada oju ojo fun e ni ipenija bi? Beeni Beeko

If yes, please explain

Bi beeni, jowo salaye

4. Are you satisfied with the location of your bathroom? Yes No

4 Nje o ni itelorun lori ibi ti ile iwe re wa? Beeni Beeko

If No, Why? _____

Bi beeko, salaye _____

5. Do you feel comfortable in your bathroom? Yes No.

5 Nje o ni irorun lori ile iwe re? Beeni Beeko

If No, Why? _____

Bi beeko, salaye _____

6. Do you feel safe in bathroom? Yes No

6 Nje o ni aabo to peye ni ile iwe yin Beeni Beeko

If No, Why? _____

Bi beeko, salaye? _____

7. Are you comfortable with your sewage disposal facility? Yes No

7 Nje o ni itelorun lori ile iyagbe re? Beeni Beeko

If No, Why? _____

Bi beeko, salaye? _____

8. Are you satisfied, with your garbage disposal facility? Yes, No

8 Nje o ni itelorun lori ile idalesi re? Beeni Beeko

If No, Why? _____

Bi beeko, salaye? _____

9. Do you face any challenge getting water for household use? Yes No

9 Nje o ni idojuko omi fun lilo ninu ile? Beeni Beeko

If yes, please explain. _____

Bi beeni, jowo salaye _____

10. Are you satisfied with the location of your kitchen? Yes No

10 Nje o ni itelorun lori ibi ti ile idana re wa? Beeni Beeko

If no, why?

Bi beeni, kilosele? _____

11. How often do you have electric power supply?

11 Bi emelo le ma ni ina ijoba? _____

12. Do you have an alternative power supply? Yes No

12 Nje o ni ona miran dipo ina ijoba? Beeni Beeko

If Yes, What type? _____

BI beeni, iru ewo ni? _____

How often do you put it on _____

Bi igba melo lo ma ntan _____

13. Are you affected by the generating set whenever it is on? Yes No

13 Nje o ni idiwo ti o ba tan ero amunawa re? Beeni Beeko

If yes, how?

Bi beeni, bi ti bawo _____

14. Is your house or neighborhood affected by flood whenever it rains?

14 Nje ile tabi adugbo re ma ni omiyale nigbakugba ti ojo ba ro?

If yes, how? _____

Bi beeni, bi ti bawo _____s

15. Is the street-lighting system in your neighborhood functional? Yes No None

15 Nje ina oju popo re nsise daradara? Beeni Beeko Rara

16. Has the street lighting system been helpful in your neighborhood? Yes No

16 Nje ina oju popo re wulo fun agbegbe re bi? Beeni Beeko

17. Please explain with regards to question 16 above.

17 Jowo salaye lori ibere kerinla loke

18. Do you visit of any of the recreational facilities in your neighborhood Yes No.

18 Nje o maa n sabewo si awon ile igbafé towa ladugbo re? Beeni Beeko

If Yes, which one of them?

Bi beeni, ewo ninu won?

If No, Why? _____

Bi beeko, kilode? _____

Do you derive satisfaction from using any of them? Yes No

Nje o ni itelorun lori awon ile igbafefe yi? Beeni Beeko

If Yes, Please explain _____

Bi beeni, jowo salaye _____

19. Do you make use of any of the shopping facilities in your neighborhood? Yes No

19 Nje o ti figbakan ri lo awon ile itaja nla ni adugbo re? Beeni Beeko

If yes, which one of them?

Bi beeni, ewo ninu won?

20. Do you feel happy using any of the shopping facilities?

20 Nje o ni inu didun si ilo awon ile itaja nla yi? _____

APPENDIX IV

SECTION 3

Beck's Depression Inventory

Please choose one statement from among the groups of statement that best describe how you have been feeling over the past two (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 am 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 that things cannot improve.
3	0 I do not feel like a failure. 1 I feel I have failed more than the average person. 2 As I look back on my life, all I can see is a lot of failures. 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 the way 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.

	<p>1 I feel guilty a good part of the time.</p> <p>2 I feel quite guilty most of the time.</p> <p>3 I feel guilty all of the time.</p>
6	<p>0 I don't feel I am being punished.</p> <p>1 I feel I may be punished.</p> <p>2 I expect to be punished.</p> <p>3 I feel I am being punished.</p>
7	<p>0 I don't feel disappointed in myself.</p> <p>1 I am disappointed in myself.</p> <p>2 I am disgusted with myself.</p> <p>3 I hate myself.</p>
8	<p>0 I don't feel I am any worse than anybody else.</p> <p>1 I am critical of myself for my weaknesses or mistakes.</p> <p>2 I blame myself all the time for my faults.</p> <p>3 I blame myself for everything bad that happens.</p>
9	<p>0 I don't have any thoughts of killing myself.</p> <p>1 I have thoughts of killing myself, but I would not carry them out.</p> <p>2 I would like to kill myself.</p> <p>3 I would kill myself if I had the chance.</p>
10	<p>0 I don't cry any more than usual.</p> <p>1 I cry more now than I used to.</p> <p>2 I cry all the time now.</p> <p>3 I used to be able to cry, but now I can't cry even though I want to.</p>

11	<p>0 I am no more easily angered or irritated by things than I ever was.</p> <p>1 I am slightly more easily angered or irritated now than usual.</p> <p>2 I am quite annoyed or irritated a good deal of the time.</p> <p>3 I feel annoyed or irritated all the time.</p>
12	<p>0 I have not lost interest in other people.</p> <p>1 I am less interested in other people than I used to be.</p> <p>2 I have lost most of my interest in other people.</p> <p>3 I have lost all of my interest in other people.</p>
13	<p>0 I make decisions about as well as I ever could.</p> <p>1 I put off making decisions more than I used to.</p> <p>2 I have greater difficulty in making decisions more than I used to.</p> <p>3 I can't make decisions at all anymore.</p>
14	<p>0 I don't feel that I look any worse than I used to.</p> <p>1 I am worried that I am looking old or unattractive.</p> <p>2 I feel there are permanent changes in my appearance that make me look unattractive.</p> <p>3 I believe that I look ugly.</p>
15	<p>0 I can work about as well as before.</p> <p>1 It takes an extra effort to get started at doing something.</p> <p>2 I have to push myself very hard to do anything.</p> <p>3 I can't do any work at all.</p>
16	<p>0 I can sleep as well as usual.</p> <p>1 I don't sleep as well as I used to.</p> <p>2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.</p> <p>3 I wake up several hours earlier than I used to and cannot get back to sleep.</p>

17	<p>0 I don't get more tired than usual.</p> <p>1 I get tired more easily than I used to.</p> <p>2 I get tired from doing almost anything.</p> <p>3 I am too tired to do anything.</p>
18	<p>0 My appetite is no worse than usual.</p> <p>1 My appetite is not as good as it used to be.</p> <p>2 My appetite is much worse now.</p> <p>3 I have no appetite at all anymore.</p>
19	<p>0 I haven't lost much weight, if any, lately.</p> <p>1 I have lost more than 2k.g.</p> <p>2 I have lost more than 5k.g.</p> <p>3 I have lost more than 7k.g.</p>
20	<p>0 I am no more worried about my health than usual.</p> <p>1 I am worried about physical problems like aches, pains, upset stomach, or constipation.</p> <p>2 I am very worried about physical problems and it's hard to think of much else.</p> <p>3 I am so worried about my physical problems that I cannot think of anything else.</p>
21	<p>0 I have not noticed any recent change in my interest in the opposite sex.</p> <p>1 I am less interested in the opposite sex than I used to be.</p> <p>2 I have almost no interest in the opposite sex.</p> <p>3 I have lost interest in the opposite sex completely.</p>

AKOSILE BECK LORI ISORIKO

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 yiya odo si nomba to tele gbolohun yii.

1.	<p>0 Mi o kii banuje</p> <p>1 Inu mi maa n baje</p> <p>2 Inu mi maa n baje nigbogbo igba mi o kii le kuro ninu re</p> <p>3 Inu mi maa n baje inu mi kii dun nigba gbogbo</p>
2.	<p>0 Mi o kii so ireti nu nipa ojo ola</p> <p>1 Mo maa n so ireti nu nipa ojo ola</p> <p>2 Mi o ni ohun kan ti mo ri wo niwaju</p> <p>3 Mo lero pe ojo iwaju ko ni ireti ati wipe nnkan ko le dara sii</p>
3.	<p>0 Mi o kii nronu bi eni to kuna</p> <p>1 Mo lero pe mo ti kuna ju opolopo eniyan lo</p> <p>2 Bi mo se n boju wo aye mi, mo ripe o kun fun opolopo ikuna</p> <p>3 Mo lero wi pe emi gan-an je eni ti o kuna raurau gege bi alara</p>
4.	<p>0 Mo maa n ni itelorun ninu ohun ti mo maa n se</p> <p>1 Mi o kii gbadun awon nnkan bi mo se maa n gbadun re tele mo</p> <p>2 Mi o ni itelorun tooto ninu ohunkohun mo</p> <p>3 Ohun gbogbo ko temilorun tabi ohun gbogbo lo maa n su mi</p>
5.	<p>0 Mi o n lero pe mo jebi</p> <p>1 Mo maa n lero pe mo jebi ni akoko ti o ju lo</p> <p>2 Mo maa n lero pe mo jebi ni opolopo igba</p> <p>3 Mo maa n lero pe mo jebi nigbagbogbo</p>
6.	<p>0 Mi o gba pe won fi iya je mi</p> <p>1 Mo maa n lero wipe won le fiya je mi</p> <p>2 Mo maa n ni ireti pe won ma fiya je mi</p> <p>3 Mo gba pe won fi iya je mi</p>
7.	<p>0 N o ni ijakule ninu ara mi</p> <p>1 Mo ni ijakule ninu ara mi</p> <p>2 Mo korira ara mi</p>

	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 aniyani 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 ronun opolopo nkan miran 3 Mo n saniyan gan-an nipa awon isoro ti ara mi de bi pe n kole ronun 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

APENDIX V

SECTION 4

Strengths and Difficulties Questionnaire SDQ

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

	Not True	Somewhat True	Certainly True
I am restless, I find it hard to sit down for long	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get a lot of headaches, stomach-aches or sickness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually share with others, for example food or drink	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get very angry and often lose my temper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would rather be alone than with other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am generally willing to do what other people want	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I worry a lot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am helpful if someone is hurt, upset or feeling ill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am constantly fidgeting or squirming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have at least one good friend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I fight a lot. I can make other people do what I want	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am often unhappy, depressed or tearful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other people generally like me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am easily distracted, I find it difficult to concentrate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I am nervous in new situations. I easily lose confidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am kind to children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am often accused of lying or cheating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other people pick on me or bully me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often offer to help others (family members, friends, colleagues)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think before I do things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I take things that are not mine from home, work or elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get along better with older people than with people of my own age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have many fears, I am easily scared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I finish the work I'm doing. My attention is good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do you have any other comments or concerns?

Overall, do you think that you have difficulties in one or more of the following areas: emotions, concentration, behavior or being able to get along with other people?

No	Yes- minor difficulties	Yes- definite difficulties	Yes- severe difficulties
----	-------------------------	----------------------------	--------------------------

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

If you have answered "Yes", please answer the following questions about these difficulties:

- How long have these difficulties been present?

Less than a month 1-5 months 6-12 month Over a year

Do the difficulties upset or distress you?

Not at all Quite a lot A great deal Only a little

Do the difficulties interfere with your everyday life in the following areas?

Not at all Only a little Quite a lot A great deal

	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting along with the people you are closest to				
(e.g. family, partner)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making and keeping friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work or study				<input type="checkbox"/>
Hobbies, sports or other leisure activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Do the difficulties make it harder for those around you (family, friends, etc.)?

not at all only a little quite a lot a great deal

Your Signature:

Today's Date:

Thank you very much for your help.

Ìwé iförō-wàní-lènù-wò ní pá Agbára àti iyòro ɔ̀nì (SDQ-YOR)

Orúkò rē

Ôkùn rín/Obìn rín

Ôjò ìbì

Mó gbìyànjú látí yē dárádára sí àwôn èlòmíràn. Mó máa n bojútó ìmōlárá wôn □ □ □

Ara mí k̀ì n bálê, mí ò sì lè dúró lojú kan fún ìgbà pípē □ □ □

Mó máa n sáàbà ní ori-fifò, inú rirùn tàbí éébì □ □ □

Mó máa n sáàbà pín àwôn ñnkan pèlu àwôn èlòmíràn (oúnjç, ìdáráyá, ohun □ □ □

Mó máa n bínú gán mó sì máa n bínú ìrunú lópō ìgbà □ □ □

Mó máa n sáàbà dá wà, mó sì máa n dá yèré fún rá mi □ □ □

Mó máa n sáàbà yē ohun tí á sò fún mì pé kí n yē □ □ □

Mó máa n ní àníyàn púpō □ □ □

Mó máa n yē ìrànlöwö tí ɔ̀nikan bá fí ára pa; bínú, tàbí tí ó bá yē àìléra □ □ □

Mó máa n mi ara nígbà gbogbo, bí ó tilé jē wipé mo wà ní ìjokdò (bii ki □ □ □

Mó ni òrē tímötímö kan tàbí jù bēé lô □ □ □

Mó máa n jà gán. Mo lè jē kí àwôn èniyàn mìíràn yē ohun tí mó bá fē □ □ □

Mó máa n ni àidùnnú, irèwèsì-òkàn tàbí kí omijé lé sí mí lojú lópō ìgbà □ □ □

Àwôn ɔ̀lègbè mi lákòópō fèràn mi □ □ □

Òkàn mi máa n tètè kúrò nínú nkan tí mo n yē. O máa n nira fún mi lati □ □ □

Mó máa n ni ibèrù-bòjò tàbí kí n ma so mö àwôn tí mó bá mō nìkàn nigbà tí □ □ □

Mó máa n fèràn àwôn òmòdé tí ò tó mí löjò orí □ □ □

Á máa n fisùn kan mí wipé mó n páró tàbí yàn enia jē lópō ìgbà □ □ □

Àwôn òmò yòóku máa n fi ojú sí mí lara látí kó mí làyà jē □ □ □

Mó máa n fi ara mi silê lati ràn àwôn èlòmíràn löwö (òbí, olùkò ati àwôn □ □ □

Mó máa n ronú ki n tó ÿe ohunkóhun □ □ □

Mó máa n mú ñnkan tí kì n ÿe temi nínú ilé, ilé ìwé, ati ibomíràn □ □ □

Mó máa n ni ìbàÿépō tí ó gún menràn pèlú àgbalàgba ju òmòdé çgbè mí lö □ □ □

Mó ni ìfòyà púpô, mò si máa n tètè bèrù □ □ □

Mó máa n parí iÿç ti mó n ÿe. Ìfòkànsí nkan mí dara púpô □ □ □

Kìÿe

òótö

Ifòwösí

Ôjò òní

O ÿé púpô fun ìrànlöwö rê.

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