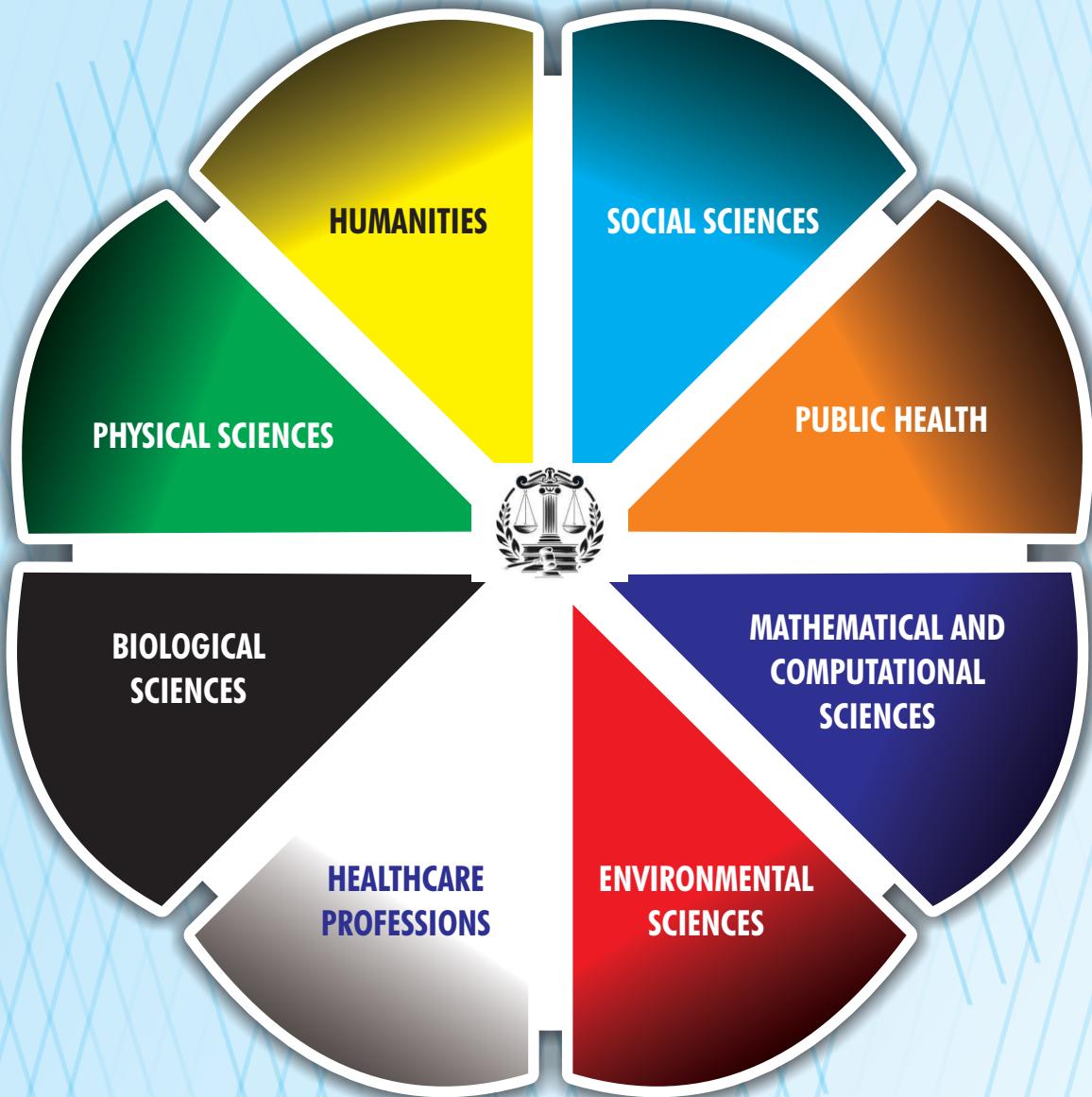


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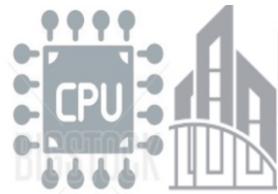


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Broadcast

Ladies and gentlemen, esteemed guests, and global audience,

It is my honor to welcome you to the official launch of the International Research Journal of Multidisciplinary Practices, Public and Community Health. Today, June 1st, 2024, marks a significant milestone in our journey to advance knowledge, promote collaboration, and improve health outcomes worldwide.

As we gather here today, we acknowledge the complexity of health challenges that transcend borders, cultures, and disciplines. We recognize the urgent need for innovative solutions, evidence-based practices, and collective action. Our journal is born out of this conviction, with a vision to bridge the gaps between research, practice, and policy.

We aim to create a platform where diverse voices and perspectives converge, where interdisciplinary approaches are fostered, and where knowledge is shared to address the most pressing health issues of our time. Our scope is broad, encompassing healthcare professions, social sciences, environmental sciences, biological sciences, physical sciences, mathematical and computational sciences, and humanities.

Expected key features of our journal include:

- High-quality, peer-reviewed research articles, reviews, and case studies
- Interdisciplinary approaches to public and community health
- Global perspectives and experiences
- Innovative methodologies and frameworks
- Best practices in healthcare delivery, education, and community engagement
- Critical perspectives and analyses
- Open access and online publication
- Rapid publication process
- Rigorous peer-review process
- Indexing in major databases
- Wide dissemination and visibility

Our editorial board, reviewers, and authors come from diverse backgrounds and disciplines, united by a shared passion for improving public and community health. We are committed to maintaining the highest ethical standards, transparency, and inclusivity in our publication process.

We believe that health is a fundamental right, not a privilege. We recognize that health is influenced by social determinants, environmental factors, and economic conditions. We acknowledge the disproportionate burden of health challenges on marginalized communities and vulnerable populations.

Our journal is dedicated to addressing these challenges through a multidisciplinary approach. We will publish research that explores the intersections of health with social sciences, environmental sciences, and humanities. We will showcase innovative practices that bridge the gaps between healthcare, education, and community engagement.

We invite you to join us on this journey. Share your research, your stories, and your ideas. Engage with us through social media, webinars, and conferences. Let us work together to create a world where health is a fundamental right, not a privilege.

Thank you for your attention, and let us embark on this exciting journey together!

- Nic Maurice

...i

FROM THE *Publishers*

Dear esteemed Editorial Board Members, Reviewers, and Authors,

Representing diverse disciplines and expertise, you are the pillars of our journal's success. As we embark on this new venture, we acknowledge the vast scope of multidisciplinary practices in public and community health, encompassing:

- Healthcare professions (medicine, nursing, allied health)
- Social sciences (sociology, psychology, anthropology)
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- Environmental sciences (environmental health, ecology, conservation)
- Biological sciences (biology, microbiology, genetics)
- Physical sciences (physics, chemistry, engineering)
- Mathematical and computational sciences (biostatistics, data science)
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Our mission is to create a platform where researchers, practitioners, and policymakers can converge, share ideas, and learn from each other's perspectives, fostering:

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As Authors, your contributions are vital in:

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- Addressing complex health issues and challenges
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- Provides a platform for underrepresented voices and perspectives
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Thank you for your dedication, expertise, and time. Let us work together to create a journal that makes a meaningful impact in the field of public and community health.

Please feel free to contact us with any questions, suggestions, or ideas. We look forward to collaborating with you and producing a journal that we can all be proud of.

Best regards,

Publishers

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Assessment Of Antisocial Behaviour Among Senior Secondary School Students In Ogidi And Nnewi Education Zone, Anambra State by **Egbuonu; Chioma Theresa; and Dr. (Mrs) Timighe Gift Cornelius** **1**

Infection Prevention And Control Practices Among Public And Private Healthcare Workers In Port Harcourt Local Government Area, Rivers State by **Chimaobi Benjamin Odo; Bethel Chibuike Nwaogu; and Inumimonte David Ennis****20**

Knowledge And Attitude Of Mental Illness Among People Living In Nnewi Lgas In Anambra State by **Olebuezie, Felicia; and Dr. (Mrs) Timighe Gift Cornelius****30**

Call FOR Papers

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- Short Communications should be limited to a total of 3000 words.
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The abstract should be limited to 100 words or fewer.

Abbreviations, diagrams and references are not allowed here.

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Five keywords or less should be given below the abstract.

4. Main body or Literature

-All required parts (Introduction, Materials & Methods, Results and Discussion) should be given in this single section titled "Literature", no section headings.

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Preparation of original research manuscripts

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All submitted manuscripts should be written in British English with correct syntax, grammar and punctuations. Authors are to use Times New Romans & font size 11

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Discussion

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Acknowledgment

Reference

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Text of original research articles should not exceed 4,550 words (including abstract, references, legends, tables and figures).

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The authors are to express all measurements & quantities in SI Units.

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The title should be concise and reflect the nature of the research and findings. The title should not be more than 155 characters.

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The author(s) should provide their email addresses, full names and institutional affiliations. The corresponding author's contact details especially e-mail address and telephone number, should also be provided. (Email addresses of other Co-Authors should be provided in the cover letter).

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The abstract should have a maximum word count of 250. There should be no paragraphing of the abstract (unstructured abstract).

Keywords

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Introduction

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The authors should provide details of the research design, materials and equipment used, and any other details which will permit reproduction of similar results by other researchers. An explicit description of interventions (or treatments) should be given. Subjects, inclusion and exclusion criteria must be stated. Statistical tests or tools for the analysis of data including the version of software employed must be provided. There must be a clear demonstration that ethical clearance was obtained before commencement of the study and all relevant regulations were followed for both human and animal studies. The anonymity of patients or diagnostic materials must be preserved.

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This section must be explicit, concise and free from any form of ambiguity or unnecessary repetition. Tables and figures should be placed as much as possible, in proximity to the part of the text referring to them. Pictures must be of very good quality. All illustrative items must have an in-text reference, annotated and should contain clear descriptive legends.

Discussion

The results of the research should be discussed with particular attention to interpretation. A well-structured discussion will state the main findings, the strength and weakness of the study in comparison with similar studies, unanswered questions and future directions.

Conclusion

A brief summary of key findings, implications and future research

Acknowledgement

Significant contributors, if any, to the research who does not qualify as authors may be acknowledged.

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2017 ,.Feb 13]; 59: 446-455. Available from <http://www.sciencedirect.com/science/article/pii/S0747563216300930>

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8. Kistner S, Vollmer R, Burns BD, Kortenkamp U. Model development in scientific discovery learning with a computer-based physics task. Comput Human Behav [Internet]. 2016 Feb 20 [cited 2017Feb 13]; 59: 446-455. Available from <http://www.sciencedirect.com/science/article/pii/S0747563216300930>

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ASSESSMENT OF ANTI SOCIAL BEHAVIOUR AMONG SENIOR SECONDARY SCHOOL STUDENTS IN OGIDI AND NNEWI EDUCATION ZONE, ANAMBRA STATE

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ABSTRACT

ABSTRACT: Antisocial behaviour refers to the destructive, harmful, negative actions or maladaptive behavior of an individual towards other individuals or things in the society. These negative behaviors consist of unlawful activities and harm the people in interpersonal manners. Such behaviors occur due to the result of unsatisfactory social, ethical, moral, and/or psychological development of children at home, school, and/or under socialization in the society. Therefore, the present study assessed the causes of antisocial behavior among senior secondary school students form II (SS 2) in Ogidi and Nnewi Education Zone in Anambra State. Two research objectives questions and Corresponding research questions were postulated for the study **Methods:** The study adopted a descriptive cross-sectional research design. The target population is 33,619 students who are in 82 public senior secondary schools in Nnewi and Ogidi Education Zone in Anambra State. The study population is 1684 students in 12 secondary schools in Anambra State. A sample of 324 was drawn from the study population with the help of Taro Yamane's formula. The study adopted multi-stage sampling technique for the study. The instrument for data collection was a self-developed questionnaire. The content and face validation of the instrument was done by experts in the field of study. Frequencies, mean, and standard deviation were used as descriptive statistical techniques while t-test was used as inferential statistical technique. **Results:** The finding of the study showed that there is no significant variation noted in the gender, age, class, school and educational zone of the students and students' antisocial behaviour. Rather, the causes of antisocial behaviour among students could be attributed to environmental and biological causes. **Conclusion:** The study concluded that secondary school students exhibited some antisocial behaviour and the causes could be traced to biological and environmental factors. It therefore, becomes very important that all hands must be on deck, both at home and school, in order to reduce such behaviours to the barest minimum among students, so that they can live as responsible citizens. Also, there should be counselors in public secondary schools, in order to assist students who exhibit antisocial behaviours or those at risk, so that they can live normal life.

Keyword: Antisocial behaviour, secondary school students.

Introduction

Conclusion
Education plays a great role in developing a person, by extension group of persons and adversely a nation. An educated country is sure of acquiring all-round development of a country. Education has the tenacity of molding a person with great skills which will equip such person for work on graduating from school. Thus, for a country to achieve sustainable development, the input of their workforce plays a very vital role, and that is why it is pertinent for

them to be educated. Ademijimi (2017) believed that education brings about new ideas, innovations, and skills needed to place a country on the right pedestal of life.

The Nigerian society is clouded with good and bad behaviours which are found in all sectors of the economy, but the big question remains, which of them is more prevalent in our society? The negative behaviours seem to have an upper hand to the good behaviours as it has crawled into Nigeria's education system.

Ademijimi (2017) argued that the education system is characterized by bad behaviours starting with the top members of different institutions; teaching and non-teaching and this has indirectly affected the students as they have opted for the wrong means to satisfy their quest for knowledge.

Behaviour is a type of reaction by people which varies from situation to situation. Behaviour is defined in various categories such as aggressive, calm, appropriate, inappropriate behaviour and so on (Unachukwu, 2018). It is termed antisocial or wrong when it goes against the standards of the laid down rules and principles of the society. It is also anti-social when it affects the mental, economic and social progress of a person, when it badly affects his/her relationship with people around him/her and when he/she negatively affects the lives of other people (Unachukwu, 2018).

Behaviour is considered abnormal or antisocial if it is uncommon, different from the norm and does not conform to what society expects. This idea is also closely related to the statistical approach to definite abnormality which rest on the idea that differences in human behaviour tends to fall into a normal distribution curve (Nwankwo, 2016). A particular behaviour is not acceptable or is antisocial if any of these three criteria are seen, the behaviour does not allow a person to function effectively with others as member of society, if the behaviour does not permit the person to meet his or her own needs and the behaviour has a negative effect in the well being of others.

There are no universally accepted behaviours that are regarded as antisocial as there are world-wide variations in norms and values upon which antisocial behaviour definitions are based. For example, homosexuality is an acceptable way of life in some countries such as England, USA, Canada and some other western countries. In Nigeria, on the contrary, homosexuality is frowned at to such an extent that over 90% of Nigerians regard it as a taboo (Ogala, 2016). It is hated by Christians, Muslims and traditional African religion practitioners forbid it. In fact, a bill was recently passed by Nigerian parliament banning the same-sex marriage and at the same time spelling out heavy penalties of 14 years imprisonment for defaulters and their collaborators or death penalty in accordance with Sharia penal code in some northern states. However, based on the acceptable societal norms and values in

Nigeria as apply to adolescents, antisocial behaviours as listed by Wachikwu and Ibegbunam (2017) include but not limited to lying, deceit, callousness, love for fighting and violence, cruelty, promiscuity, stealing, aggression, bullying, confrontation and lack of respect for elders. Others are vindictiveness, intractability, arson, counterfeiting, hostility, greed, thuggery, alcoholism, forgery, frequent running away from home.

Antisocial behaviour is annoying or harmful behavior to the people. Antisocial behaviour has been defined as a kind of behaviour that is directed against other people, their property or breaks of social rules (Garagordohi & Machimbarrena, 2017). As defined in this way, antisocial behaviour takes various forms (with different seriousness) as lying, risky sexual practices, rule breaking, illegal substance use and destructive behaviours such as theft, destruction, fraud, engaging in aggression (either physical or verbal and vandalism). Antisocial behaviour is described as any violent behaviour, against laws and people's right. According to him deviant behaviour may be found in different forms such as vandalism (e.g. breaking trees, destroying bus seats or cutting public phone wires, and writing on walls, benches and charts), crime, assaults or other sorts of behaviour, which go against the norms in a society. Kimberly and Jacob (2016) defined antisocial behaviours as any physical or psychological harm on other people or their property. Identified from their definition are behaviours such as lying, stealing, assaulting others, being cruel to others and being promiscuous. Clare (2016) defined antisocial behaviours as destructive acts characterized by overt and covert hostility and intentional aggression towards others.

People with the social problems make life miserable for those around them. They typically display no regard for the moral or ethical rules of the society or the rights of others, manipulating people and situation for their own benefits. They display little guilt when they have injured someone else and even understand that they may have caused a person some harm but feel no remorse. Antisocial people are unable to stand frustration and they are impulsive (Nwankwo, Nwoke, Chukwuocha, Obanny, Nwoga, Iwuagwu & Okereke, 2016). These traits lead to stealing, lying and cheating. They often have unusually good social skill and their charm and appearance allow them to convince others to comply with their wishes. These

behaviours however, are more common among juvenile and also peculiar to adolescents (Nwankwo et al 2016). According to Amazu and Enang (2018), statistics shows that between 35 and 40% of all boys growing up in an urbanized area will be arrested before their 18thbirthday.

In Anambra State as a whole, data on the causes of antisocial behaviour among students is not available. However, there is increased concern about anti-social behaviours among secondary school students at the family, school setting and community levels. The aim of this study is to determine the causes of antisocial behaviour among secondary school students in Anambra State.

Statement of the Problem

Antisocial behaviour practiced by students is source of distraction from academic work, as their attentions are divided and this has a negative implication in academic outcome of students. Most students instead of being an active participant in classroom activities engage themselves in one form of antisocial behaviour that jeopardizes the learning outcome in school.

In addition, the level of insecurity in the country poses a threat to harmonious living among the citizenry, as different cult groups keep having clashes on almost a daily basis (Amazu & Enang, 2018). These activities go as far as disrupting economic activities those in some parts of the country. According to Nwankwo et al (2016), the acts of militancy, vandalism, bunkering, use of weapons, kidnapping, rape and various forms of violence have been reported in various States of Nigeria, which Anambra State is no exemption. The researcher observed that some communities in Anambra State have experienced these actions and consequences for quite sometimes now. Such acts include violence, rape, murder, aggressions, bullying, victimization, theft, fighting, stealing, drug use, misuse and abuse, among others. It is in line with this that the researcher deems it necessary to investigate the causes of antisocial behaviour among secondary school students in Anambra State.

Objective of the Study

Broad Objective: The broad objective of the study is to assess the causes of antisocial behaviour among senior secondary school students form II (SS 2) in Ogidi and Nnewi Education Zone in Anambra State.

Specific Objectives

Specifically, the objectives of the study include:

1. To identify the environmental causes of antisocial behaviour among students.
2. To identify the biological causes of antisocial behaviour among students.

Research Questions

1. What are the environmental causes of antisocial behaviour among students?
2. What are the biological causes of antisocial behaviour among students?

Research Hypotheses

H_{01} : There is no significant association between the socio demographic characteristic of the students and the environmental causes of antisocial behaviour among students.

H_{02} : There is no significant association between the socio demographic characteristic of the students and the biological causes of antisocial behaviour among students.

Scope of the Study

The geographical scope of the study is the public secondary schools in Ogidi and Nnewi Education Zone in Anambra State

Significance of the Study

This study would be of great benefit to students, teachers, schools and the society. Students would benefit from the study as they would know the various behaviours termed abnormal to their academic life. This would help to reduce the menace of anti-social behaviour among students.

The study would benefit teachers as they would know the various factors associated with antisocial behaviours practicable among students. They would be enlightened to know the degree/frequency of students' behavioural pattern so that adequate efforts can be planned to reduce the trend among students in the school.

The schools would benefit from the study as those antisocial behaviours prevailing among students would be determined and in turn provide possible strategies to adopt in reducing the antisocial behaviours among students in school. The society would benefit from the study as they would know the various factors that contribute to the antisocial behaviour among students which they escalate to the society. They would know how these antisocial behaviours jeopardize the culture, norms, beliefs and tradition of the people and possibly,

adopt the study recommendations to reduce the menace.

Operational Definition of Terms

Antisocial Behaviour: This refers to the destructive, harmful or negative actions an individual towards other individuals or things in the society.

Secondary School: This is a school owed by government and runs on public funds.

Student: A student is a person undergoing training.

Conceptual Review

Behaviour: There are no universally accepted definitions of behaviours as there are worldwide variations in norms and values upon which behaviour definitions are based. For example, homosexuality is an acceptable way of life in some countries such as England, USA, Canada and some other western countries. In Nigeria, on the contrary, homosexuality is frowned at to such an extent that over 90% of Nigerians regard it as a taboo (Ogala, 2016). However, based on the acceptable societal norms and values in Nigeria as apply to individuals, behaviours as listed by Wachikwu and Ibegbunam (2017) include but not limited to lying, deceit, stealing, callousness, love for fighting and violence, cruelty, promiscuity, aggression, bullying, confrontation and lack of respect for elders. Others are vindictiveness, intractability, arson, counterfeiting, hostility, greed, forgery, thuggery, alcoholism, frequent running away from home.

Behaviour is the actions and mannerisms made by individuals, organisms, systems or artificial entities in conjunction with themselves or their environment, which includes the other systems or organisms around as well as the physical environment. It is the computed response of the system or organism to various stimuli or inputs, whether internal or external, conscious or subconscious, overt or covert, and voluntary or involuntary (Elizabeth, Minton & Khale, 2017).

Behaviour can be seen as a class or pattern. Behaviour is an occurrence, that is, an instance of a class or pattern, or at least an entity that, together with entities having one or more similar properties, makes up a class or pattern over time (Baum, 2016). Baum further noted that behaviour *qua* occurrence happens in a specific time and place, for example, the raising of a hand to ask a question. Behaviour *qua* class or pattern, on the other hand, is something in

principle realizable at different times and places, or at least is made up of things that happen at different times and places, but without itself having such momentariness and localization (Lee, 2015). So, the raising of a hand to ask a question, *qua* behaviour class or pattern, can in principle exist in a person's behavioral repertoire (which can be understood molarly) since his or her childhood and endure throughout his or her whole life. It is the sort of thing of which it makes sense to say that can occur today, tomorrow, and so on.

Behaviour is referred to as action and habits one undertakes for some purpose. When this action relates to health, it is called health behaviour. Conner and Normal (2016) defined health behaviours as any activity undertaken for the purpose of preventing or detecting disease or for improving health. Gochman (2018) defined health behaviours as patterns, actions and habits that relate to health maintenance, to health restoration and health improvement. Behaviours within this definition include medical services usage (e.g. physician visit, vaccinations, and screening) compliance with medical regime (e.g. diet, exercise, smoking, alcohol intake). An aspect of behaviours of interest in this study is antisocial behaviours.

Antisocial Behaviour

Every society has a way of measuring acceptable behaviour. This makes behaviour that deviates from the acceptable behaviour to be referred to as antisocial behaviour. Scholars are of the view that antisocial behaviours could be covert or overt. For instance, Hallahan (2016) defined antisocial behaviours as disruptive acts characterized by covert and overt hostility and intentional aggression towards others. Antisocial behaviours exist along a severity continuum and include repeated violations of social rules, defiance of authority and of the rights of others, deceitfulness, theft, and reckless disregard for self and others. Antisocial behaviour can be identified in children as young as three or four years of age. If left unchecked these coercive behaviour patterns will persist and escalate in severity over time becoming a chronic behavioural disorder.

Hallahan (2016) said that antisocial behaviour may be overt, involving aggressive actions against siblings, peers, parents, teachers or other adults, such as verbal abuse, bullying and hitting, or covert, involving aggressive actions against property, such as theft, vandalism and

fire-setting. Covert antisocial behaviours in early childhood may include noncompliance, sneaking, lying or secretly destroying another's property. Antisocial behaviour also includes drug and alcohol abuse and high-risk activities involving self and others.

Antisocial behaviour is apparent when an individual finds it very difficult to adhere to the norm or standard of his social environment like home or school. Kayne (2017) posited that antisocial behaviour can generally be characterized as an overall lack of adherence to the social norm and standards that allow members of a society to co-exist peacefully. According to him, many people who display this type of behaviour may seem charming, but often cause harm to others and show little remorse for their actions.

Clare (2016) defined antisocial behaviours as destructive acts characterized by covert and overt hostility and intentional aggression towards others. According to him, high risk factors in the family setting can cause antisocial behaviour in the child. These factors include:- parental history of antisocial behaviours, parental alcohol and drug abuse, chaotic and unstable home life, absence of good parenting skills, use of coercive and corporal punishment, parental disruption due to divorce, death or other separation, parental psychiatric disorders, especially maternal depression and economic distress due to poverty and unemployment. Other causes of antisocial behaviours are – heavy exposure to media violence through television, movies, internet, video games and cartoons (Clare, 2016). He posited that engaging in antisocial behaviours poses great risk to an individual's mental and physical health. It puts one at increased risk for alcoholism, cigarette smoking, illegal drug use, high risk of sexual behaviour, depression and engaging in violent acts towards others and self. In other words, the high risks of interpersonal and intra-personal implications of antisocial behaviours are readily apparent.

One of the groups of young ones who are vulnerable to antisocial behaviours is those with disabilities. They include students with hearing impairment, visual impairment, intellectual disabilities, physical disability, learning disability and those who are emotionally disturbed. This is because they are often neglected most of the times by members of their community, when it comes to issues of empowering the youth for becoming responsible citizens. To buttress this

point, Nwolise (2018) argued that after women, children and youths, persons with disabilities constitute one of the next categories of neglected and marginalized sectors in contemporary Nigeria and Africa.

Antisocial behaviour, personality disorder or conduct disorder, a term synonymous with delinquency was defined by Wachikwu and Ibegbunam (2017) as crimes committed by young people below the age of eighteen years usually characterized by violation of existing social norms and values. It was defined by Mayer (2016) as a recurrent violation of socially prescribed patterns of behaviour usually involving aggression, vandalism, rule infractions, defiance of authority and violation of social norms. Similarly, antisocial behaviour was defined by Hanrahan (2017) as a disruptive act characterized by covert or overt hostility and intentional aggression towards others. It refers to an overall lack of adherence to the social norms and standards that allow members of a society to coexist peacefully. Observation by Wachikwu and Ibegbunam (2017) described people with antisocial behaviour in the following words:

People with antisocial personalities have a low tolerance for frustration. They act on impulse, lose their temper quickly, and lie easily and skillfully, in childhood, they are often bullies who fight lie, cheat, steal, and are truant from school. They blame others for their misdeeds, feel Picked out by their parents and teachers, and never seem to learn from their mistakes (p.106).

Though antisocial behaviour referred to conduct disorder perpetrated by young people below 18 years of age (Wachikwu&Ibegbunam, 2017); it has far-reaching consequences in Nigerian society at large. We must not forget a line in the Poem (My Heart Leaps up) credited to Word worth William which says that the "child is father to the man" or a line in Jim Thompson's novel (The filler inside me) which says that "the boy is father to the man" (Language Forum), in either case, it meant that the personality, emotions, beliefs and attitudes of a person as an adult are derived from those he had in childhood.

Empirical Review

Nigerian studies on the prevalence and causes of antisocial behaviour among students

Amazu and Enang (2018) conducted a study to

determine how variables of domestic abuse (physical maltreatment, domestic enslavement, and verbal abuse of children by parents/ guardians) contribute to the prevalence of antisocial behaviour among secondary school students in Aba Education Zone of Abia State, Nigeria. Three research questions and three null hypotheses guided the study. The study adopted the ex-post facto survey design. The instrument used in data collection was the researcher-made titled: Domestic Abuse and Antisocial Behaviour Questionnaire. Independent t-test was used to analyze data for hypotheses testing. The independent variables were used as the grouping variable and the grouping was done based on the students' scores on each variable. The result of independent samples t-test conducted to test the research hypotheses showed that: there was a significant influence of parents' physical maltreatment of children on antisocial behaviour; there was a significant influence of domestic enslavement of children on antisocial behaviour; there was a significant influence of verbal abuse of children on antisocial behaviour. The study concluded that students who were physically maltreated at home were more prone to manifesting antisocial behaviour. Domestic enslavement induces negative emotions with antisocial implications. Parental verbal abuse begets in the children the tendency to use abusive words on peers at school. The study is related in terms of antisocial behaviour among secondary school students. The studies are also similar in terms of survey research design employed, but differ in terms of area of study, population of the study, and method of analysis.

Ojo (2017) examined the causes and prevalence of antisocial behaviour among secondary school students with hearing impairment in Ibadan, Nigeria. Descriptive survey research design was adopted to carry out the study. Purposive sampling technique was used to select 60 students with hearing impairment from Methodist Grammar School (Deaf Unit), Bodija, Ibadan and Ijokodo High School, Ijokodo, Ibadan, Students Antisocial Behaviour Questionnaire ($r=.80$) was used to collect data. The data collected were analyzed using descriptive statistics of frequency count and percentage. The common causes of antisocial behaviour as revealed by the study are: media influence, lack of counselor in schools, ineffective school administration, peer influence, broken home and lack of parental care. The findings of the study showed that the

most common antisocial behaviour exhibited by the participants is: examination malpractice, lateness, abortion, stealing, rape, cultism and rudeness. There should be home-school partnership in curbing antisocial behaviour among students with hearing impairment in Nigeria. The study is related in terms of antisocial behaviour among secondary school students. The studies are also similar in terms of survey research design employed, but differ in terms of area of study, population of the study, and method of analysis.

Nwankwo et al (2016) conducted a study on the prevalence and predictors of antisocial behaviours among adolescents in secondary schools in Owerri Municipal, Imo State, Nigeria. Four research questions guided the study. The study was a descriptive survey research design. The major instrument used for primary data collection was a self-constructed. The data collected was analyzed using mean. The study concluded that much antisocial behaviour exists among adolescents in secondary schools in Owerri Municipal with cultism being the most prevalent. Peer influence was found to be the major factor responsible for the prevalence of these antisocial behaviours among the sampled adolescents. These anti-social behaviours were found to be significantly associated with the respondents' gender, religion, parents' economic status and parenting style ($p < 0.05$). It is recommended among others that in line with the spirit of the laudable objectives of family planning, parents should endeavour to bear children they can comfortably cater for which includes appropriately providing for their needs economically, morally, psychologically and socially. The study is related in terms of antisocial behaviour among secondary school students. The studies are also similar in terms of survey research design, and method of analysis. The studies differ in terms of area of study and population of the study.

International studies on the prevalence and causes of antisocial behaviour among students Abdul and Shafqat (2019) conducted a study on the causes of students' antisocial behaviour at secondary level schools in province Punjab, Pakistan. Four research questions guided the study. The study was descriptive survey type by method and quantitative by approach. A cross-sectional type survey was conducted to elicit the perceptions of the research subjects. Through proportionate stratified random sampling technique, a sample of 150 male teachers and 400 male students of 10th grade

were taken in the sample. A self-developed and structured questionnaire was used as a research instrument for data collection. Both types of statistical techniques (e.g., descriptive, inferential) were used for the data analysis. It was concluded from the results of this study that school related factors (e.g., teacher-student relationships, peers' influence); parental factors (e.g., poor father child relationships, parental aspirations, parental negligence); parental support (e.g., empathy, guidance, material resources); and socioeconomic factors (e.g., parental income) are some of the major causes of secondary school students' antisocial behaviour. The study is related in terms of antisocial behaviour among secondary school students. The studies are also similar in terms of survey research design employed, but differ in terms of area of study, population of the study, and method of analysis.

Atalay, Unal, Onsuz, Isikli, Yenilmez and Metintas (2018) determined the frequency of violence-related behaviors and related causes at school or school environment among high school students educated in the semirural areas of Eskisehir, Turkey. Three research questions guided the study. This was a cross-sectional study. Data were collected using a questionnaire that included questions regarding socio-demographic characteristics and the 2013 survey questions of the "Youth Risk Behavior Surveillance System" of the Centers for Disease Control and Prevention. The study concluded that students had a high rate of violence-related behaviors at school or school environment. Community-based public health interventions are required to solve this problem. The study is related in terms of antisocial behaviour among secondary school students. The studies are also similar in terms of survey research design employed, but differ in terms of area of study, population of the study, and method of analysis.

Theoretical Review

Common forms of antisocial behaviour among students

There has been a significant increase in the prevalence of antisocial behaviour committed by the children and adolescents worldwide during the last half of the twentieth century, and the cost of youth antisocial behaviour has been estimated to exceed one trillion dollars (Anderson, 2017). Behaviour is considered as abnormal or antisocial if it is uncommon, different from the norms and does not conform

to what society expects (Nwankwo, 2016). A particular behaviour is not acceptable or is antisocial if any of these three criteria are seen; the behaviour does not allow a person to function effectively with others as a member of society, the behaviour that does not permit the person to meet his or her own needs and the behaviour having a negative effect on the wellbeing of others (Anderson, 2017).

Antisocial people are unable to stand frustration and they are impulsive. These people can steal, lie, and cheat others. They often have unusually good social skill and their charm appearance allow them to convince others to comply with their wishes (Bell, 2018). These behaviours; however, are common among juvenile and peculiar to adolescents. According to the study by Ary, Dukan and Biglan (2018), between 35%-40% of all boys growing up in an urbanized area will be arrested before their 18th birthday. Some of these antisocial behaviours are traits which run in families. Family management practices such as marital breakdown, different caretakers, harsh and inconsistent discipline or multiple mothering in early childhood are important factors in developing aggressive and antisocial behaviour in adolescents later in life.

The rate of increase in antisocial behaviour in the society is alarming (Loeber, 2019) and is evidenced by the number of people who die of suicide, rape, murder, disease, sexually transmitted diseases like AIDS. Alcoholism, drug abuse, smoking, suicide (Bell, 2018; Loeber, 2019) and others such as rape, cultism, prostitution, kidnapping, ritual are all antisocial behaviours which are traceable mostly from families with poor economic background, children from unstable family background (Ary, Dukan & Biglan, 2018) or from children who have experienced major negative life events such as death of parents, children with frequent hassles of everyday life and frustration (Nwankwo, 2016). Antisocial behaviours are not restricted to males alone but have been found to be prevalent among adolescent girls also (Rutter & Giller, 2016). However, antisocial behaviours have been consistently reported to have come from environments characterized by parental rejection, permissiveness, aggression, lack of parental care, a low level of parental expectation, use of physical and painful punishment, unfavorable family relationships, biological and physical changes, social expectation, social acceptance, fashion, inferiority feeling, pride, rebellion against

parents, authorities and elders, struggle to achieve independence from family, and career choice (Ary, Dukan & Biglan, 2018).

Causes of antisocial behaviour among students

Every society has a way of measuring acceptable behaviour. This makes behaviour that deviates from the acceptable behaviour to be referred to as antisocial behaviour. Scholars are of the view that antisocial behaviours could be covert or overt. For instance, Hallahan (2016) defined antisocial behaviours as disruptive acts characterized by covert and overt hostility and intentional aggression towards others. Antisocial behaviours exist along a severity continuum and include repeated violations of social rules, defiance of authority and of the rights of others, deceitfulness, theft, and reckless disregard for self and others. Antisocial behaviour can be identified in children as young as three or four years of age. If left unchecked these coercive behaviour patterns will persist and escalate in security over time becoming a chronic behavioural disorder. However, there are various factors associated with antisocial behaviours among students. These factors range from personal, societal to family-related issues. They are discussed in detailed below:

Environmental causes of antisocial behaviour among students

It is evident in some study that a child can exhibit antisocial behaviours due to poor family background. Mayer (2016) reported that specific parenting practices are highly correlated with antisocial behaviours in early childhood and are prognostic of more serious forms of antisocial behaviours in adolescence. According to him, coercive or punitive interactive cycle can occur in the home as the child makes demands on the parent who lacks certain parenting skills.

Home environment can contribute to the development of antisocial behaviour. For instance, parents of troubled children frequently show a high level of antisocial behaviour themselves. In one large study, the parents of delinquent boys were more often alcoholic or criminal and their homes were frequently disrupted by divorce, separated or the absence of a parent. Involved parents tend to monitor their child's behaviour, setting rules and seeing that they are obeyed, checking on the child's whereabouts and steering them away from troubled playmates. On the other hand, good supervision is less likely in broken

homes, because parents may not be available and antisocial parents often lack the motivation to keep an eye on their children.

However, children nurtured in home environments where parents show love, care and tenderness to the children are likely to develop pre-social personality traits and may hardly engage in risky behaviours. Inconsistent parenting style swinging from excessive punishment to excessive leniency is capable of precipitating antisocial behaviour in adolescents. At home or elsewhere, heavy exposure to uncensored media violence through television, video, internet sites or even cartoons has long been associated with an increase in the likelihood that a child becomes violent and behaves in an aggressive and antisocial manner (Hanrahan, 2017). In studies conducted by Wachikwu and Ibegbunam (2017), it was found that aversive and punitive home environments promoted antisocial behaviours such as violence, vandalism and escape from home while majority of children raised in loving and caring environments developed pre-social behaviours.

School environment on the other hand, plays a vital role in student's life. The school Environment is responsible to create good habits in the children. It includes the physical and aesthetic surroundings, the psychosocial climate and culture of the school. Factors that influence the physical environment include the school building and the area surrounding it, biological or chemical agents, and physical conditions such as temperature, noise and lighting. The psychological environment includes the physical, emotional and social conditions that affect the well-being of students and staff (Dasgupta & Ghosh, 2017).

Dasgupta and Ghosh (2017) explained school environment as safe, collaborative learning communities where students feel safe and supported report increased teacher morale, job satisfaction, and retention. The interaction of various characteristics of school and classroom climate can create a fabric of support that enables all members of the school community not only to learn but also to teach at optimum levels.

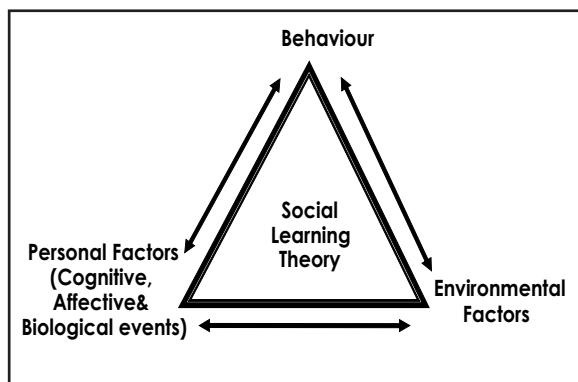
Biological causes of antisocial behaviour among students

Biological causes refer to the wide array of neurological, physiological, or chemical influences on aggression and violence. Recent

advances in the neurosciences have revealed that biological factors, interacting with the social environment, may have some significant influences on child development. The exact nature of these influences remains largely unknown. Child development researchers have found links between aggression and brain damage resulting from a variety of environmental factors include: toxic materials found in the environment (e.g., lead paint), traumatic head injury (e.g., as the result of child abuse or accident), dietary deficiencies (especially prenatal), alcohol and drug ingestion by the mother during critical fetal developmental stages, and birth trauma. Once the deficits occur, attempts to remove or remedy the biological cause may include active biological treatment in the form of medication. However, and more important, a supportive and competent social environment has also been found to neutralize or reduce the effects that these biological factors exert on any propensity toward violence.

Conceptual Model

The study model is anchored on the Social Learning Theory. This theory was propounded by Albert Bandura, 1977. The theory states that behavioural change is determined by environmental, personal and behavioural elements, it explain human behaviour in terms of continuous reciprocal interaction between cognitive, behavioural and environmental influence. The theory emphasized that most human behaviours are learned observationally through modeling, from observing others one forms an idea of how new behaviours are performed and on later occasion this coded information serves as a guide for later action. Learners observe role models, leaders, parents and guardians at home, religious sects, societal meetings and in other institutions, and learn directly or indirectly from them. The conceptual model is diagrammatically represented as follows:



Explanation of the Conceptual Model

Four main component of the theory which is relevant to the modeling process are considered in this study, which include: Attention, Retention, Reproduction and Motivation. Attention: This means to observe. The level of attention geared toward anti-social behaviour involving heterosexual issues differs with persons. According to Bandura (1977), various factors increases or decreases the amount of attention paid which include affective valence, functional value and individual characteristics such as arousal level, sensory capacity, past reinforcement and so on. While young men pay attention to how to gratify their flesh, women are more interested in maturing relationship. This phase is characterized with sex exploration and curiosity.

Retention: Deals with remembering what you paid attention to: including symbolic coding, mental images/ erotic fantasies, motor rehearsal and so on.

Reproduction: involves producing the image that is one's physical capability to practice what he has paid attention to or rehearsed. This is the stage where young people advance from sexual exploration to sexual experimentation and exploitation.

Motivation: this means having a good reason to imitate (practice what you have observed). One's motivation could be of the past positive or negative experience, the promised (imagined incentive such as monetary, security trust from one's partner and marriage proposals) and the vicarious.

Application of the model to the study

The components analyzed above, shows that heterosexual behaviour of students is dependent on: what students paid attention to or learnt from their environment (parents, religious leaders or social events), and the kind of motivation he/she receives from them which provokes or prevents them from acting in a particular way; and his/her capabilities (that is, his/her competency) which could be dependent on age and gender role expectations. Some students might have actually learnt, but their gender role expectation would not allow them to act according to their knowledge, especially in regions where females are taught to subordinate their sexual interest to their male

counterpart while taking sexual decisions. Also, the theory implied that students' heterosexual behaviours can be motivated intrinsically by the outcome of the same or similar behaviour exhibited previously. Thus, sex is not just a given something that simply is, but something that is created or fashioned out of our biological materials, partly by culture, partly by our partners and our interaction with them and partly by the richness of our imagination. Hence, it is not sex that makes us but we who makes sex.

Appraisal of Literature Review

The literature for this study focused on the conceptual review, empirical review, theoretical review, conceptual model and explanation of the conceptual model. Under the conceptual review, concepts such as behaviour, and antisocial behaviour were reviewed. The theoretical review was done under common forms of antisocial behaviour among students; environmental and biological causes of antisocial behaviour among students were also discussed.

Under the conceptual model, the theory was anchored on Social Learning Theory. This theory was propounded by Albert Bandura, 1977. The theory states that behavioural change is determined by environmental, personal and behavioural elements, it explain human behaviour in terms of continuous reciprocal interaction between cognitive, behavioural and environmental influence. The theory emphasized that most human behaviours are learned observationally through modeling, from observing others one forms an idea of how new behaviours are performed and on later occasion this coded information serves as a guide for later action.

A critical look at the empirical review above, the study looked at various studies on the causes of antisocial behaviour among students conducted in Nigeria and beyond. Judging by the findings, it was observed that several studies have indicated that students with antisocial behaviour are more likely to have feelings of depression, anxiety or low self-esteem, their parents tend to be less involved in their lives, they tend to have friends who also exhibit violent behaviour, and they usually become frustrated easily and turn to bully others to solve their problems. It was also observed that the act of exhibiting violent behaviour among secondary school students can worsen the existing psychological problems or lead to new problems, including; low self-esteem, depression, anxiety, conduct problems, rejection from peers, fighting, vandalism, risky sexual behaviour, school attendance problems and being involved in abusive relationships which have significant influence on their quality of life and the wellbeing of the society at large. This attracted the attention of this study to investigate the causes of antisocial behaviour among students in Anambra State.

Methodology

Research Design: The study was a cross-sectional quantitative study to assess the prevalence and causes of antisocial behaviour among public senior secondary schools in Anambra State

Target Population

The target population is 33,619 students who are in 82 public senior secondary schools in Nnewi and Ogidi Education Zone in Anambra State.

Table 1: Target Population of the Study

S/n	Education Zone	No of Schools	Male	Female	Total
Nnewi Zone					
1	Nnewi North LGA	8	2550	1588	4138
2	Newi South LGA	17	2120	2151	4271
3	Ihiala LGA	17	2049	2421	4470
	Total	42	6719	6160	12879
Ogidi Zone					
1	Idemili North LGA	16	4674	6117	10791
2	Idemili South LGA	13	1931	1923	3854
3	Oyi LGA	11	2393	3702	6095
	Total	40	8998	11742	20740
	Grand Total	82	15717	17902	33619

Study Population

The study population was 1684 students in 12 secondary schools in Anambra State.

Table 2: Study Population

S/N	Name of Schools	Sampled Male	Sampled Female	Total
1	Community Secondary School, Nnewi	60	82	142
2	AkoCommunity Secondary School, Nnewi	82	60	142
3	Community Secondary School,Ukpor	62	78	140
4	Community Secondary School,Amichi	50	92	142
5	Community Secondary School,Azia	68	78	146
6	Community Secondary School,Amorka	59	83	142
7	Community Secondary School,Obosi	65	78	143
8	Community Secondary School,Uke	49	97	146
9	Community Secondary School,Nnokwa	73	65	138
10	Community Secondary School,Nnobi	46	75	121
11	Community Secondary School,Awkuzu	56	87	143
12	Community Secondary School,Umunya	50	89	139
Total		720	964	1684

Sample Size Determination

In determining the sample size, a sample of 324 was drawn from the study population of 1684 students. This was accomplished by using multi-stage sampling technique to select the 324 students. Thus, the sample size determination was done with the help of Taro Yamane's formula as follow:

$$n = \frac{N}{1+N(e)^2}$$

Where; n = Sample size

N = Population

e = level of significance at 5% or 0.05

1 = constant

$$n = \frac{1684}{1 + 1684(0.05)^2}$$

$$n = \frac{1684}{1 + 1684 (0.0025)}$$

$$n = \frac{1684}{1 + 4.21}$$

$$n = \frac{1684}{5.21}$$

$$n = 324$$

Sampling Technique

The study adopted multi-stage sampling technique for the study.

Stage one: Purposive sampling method was used to select two education zones (Ogidi and Nnewi Education Zones) from the six education zones in Anambra State because there are more cases of antisocial behaviour among students in the areas.

Stage two: Stratified sampling method was used to select three local government areas each from the selected two education zones in Anambra State. Names of the selected local government areas include: Nnewi Zone (Nnewi

North, Nnewi South and Ihiala LGA), and Ogidi Zone (Idemili North, Idemili South and Oyi LGA)

Stage three: Simple random sampling method was used to select two schools each from the six selected local government areas in Anambra State. Thus, a total of 12 secondary schools were used and these schools include: Community Secondary School, Nnewichi, Nnewi; Ako Community Secondary School, Nnewi; Community Secondary School, Ukpor; Community Secondary School, Amichi; Community Secondary School, Azia; Community High School, Amorka; Community Secondary School, Obosi; Community Secondary School, Uke; Community Secondary School, Nnokwa, Community Secondary School, Nnobi; Community Secondary School, Awkuzu; and Community Secondary School, Umunya.

Stage four: Simple random sampling method was also used to select 27 senior secondary school students in each of the schools selected, making a total of 324 students.

Research Instrument

The instrument for data collection was a self-developed questionnaire. The instrument has four sections. Section A is the socio-demographic variables of the respondents. Section B contains questions on the environmental causes of antisocial behaviour among students; and Section C contains questions on the biological causes of antisocial behaviour among students.

Validity of the Instrument

The content and face validation of the instrument was done by experts in the field of study.

Reliability of the Instrument

Test retest method was used for the reliability. 20 senior secondary school students from Community Secondary School, Isuofia were used for the study.

Method of Data Collection

The instrument was administered to the respondents by the researcher with the help of three research assistants. The research assistants were trained by the researcher before data collections to understand the objectives of the study. The instrument was administered and collected on the spot. Thus, out of 324 copies of the questionnaire distributed to the students, 318 copies representing 98% were returned and correctly filled, while 6 copies representing 2% were either returned or not correctly filled. The study concluded that the returned copies can be used to draw a valid conclusion and recommendations.

Ethical Consideration

Ethical Approval for the study was obtained from Health Research Ethical Committee of Nnamdi Azikiwe University Teaching Hospital, Anambra State. Permission to carry out this study was also obtained from the school principals to use their students who are below 18 years as participants of the study. Written approval was obtained on an informed consent form.

Method of Data Analysis

After the completion of data collection process, the next phase was the data analysis. For this purpose, the researcher used the Statistical Package for Social Science (SPSS) (version 21). Both types of statistical techniques (e.g., descriptive, inferential) were used for the data analysis. Frequencies, mean, and standard deviation were used as descriptive statistical

techniques while paired sample t-test was used as inferential statistical technique.

Results

The data obtained from the field by the researcher are presented and analyzed in relation to the research questions and hypotheses for the study.

Demographic Information of Respondents

The demographic characteristics of students are measured using questions in the questionnaire (see, Appendix B, Section A). Data collected from their responses are summarized in table below:

Table 3: Socio Demographic Characteristic of the Respondents

Variable	Category	Participants N (%)
Gender	Male	136 (43)
	Female	182 (57)
Age	Below 16 years	215 (68)
	Above 17 years	103 (32)
Class	SSII	176 (55)
	SSIII	142 (45)
School	Urban School	178 (56)
	Rural School	140 (44)
Education Zone	Nnewi Zone	161 (51)
	Ogidi Zone	157 (49)

Table 3 showed that 136(43%) of the respondents are male while 182(57%) are female.

215(68%) were below 16 years and 103(32%) were above 17 years.

176(55%) were in SSII while 142(45%) were in SSIII. 178(56%) were in urban school while 140(44%) were in rural school.

Also, 161(51%) were in Nnewi Zone while 157(49%) were in Ogidi Zone.

Data Analysis

Research Question 1: What are the environmental causes of antisocial behaviour among students?

Table 4: The environmental causes of antisocial behaviour among respondents

S/n	Item description	N (%) SA (4)	N (%) A (3)	N (%) D (2)	N (%) SD (1)	Total	Mean (SD)
1	Apathetic parents or caregivers who failed to meet the child's physical and emotional needs	109 (34) 436	153 (48) 459	40 (13) 80	16 (5) 16	318 (100) 991	3.1164 (0.5177)
2	Emotional, physical, or sexual abuse	112 (35) 448	149 (47) 447	36 (11) 72	21 (7) 21	318 (100) 988	3.1069 (0.6235)
3	Exposure to domestic abuse and violence in the home	186 (58) 744	114 (36) 342	18 (6) 36	- (-) -	318 (100) 1122	3.5283 (0.2813)
4	Exposure to an unsafe and violent community	96 (30) 384	125 (39) 375	72 (23) 144	25 (8) 25	318 (100) 928	2.9182 (0.5924)
5	Excessive corporal punishment	85 (27) 340	151 (47) 453	64 (20) 128	18 (6) 18	318 (100) 944	2.9686 (0.7218)
6	Peers' influence/victimization	118 (37) 472	157 (49) 471	31 (10) 62	12 (4) 12	318 (100) 1017	3.1981 (0.5861)
7	Exposure to violent media such as news, movies, television shows and video games	131 (41) 524	175 (55) 525	12 (4) 24	- (-) -	318 (100) 1073	3.3742 (0.4186)
8	Parental negligence of their children affair	126 (40) 504	166 (52) 498	20 (6) 40	6 (2) 6	318 (100) 1048	3.2956 (0.3425)
9	Attitude of teachers in the school	92 (29) 368	145 (46) 435	61 (19) 122	20 (6) 20	318 (100) 945	2.9717 (0.6937)
10	Teachers' use of vocal or negative words on students	104 (33) 416	153 (48) 459	51 (16) 102	10 (3) 10	318 (100) 987	3.1038 (0.4609)
		Total Mean		Average Mean		31.5818 (9.7203)	
		3.1582 (0.5618)					

Hint: Strongly Agreed (SA) (4points); Agreed (A) (3points); Disagreed (D) (2points); and Strongly Disagreed (SD) (1point)

The result in Table 4 showed that 262(82%) agreed that parents failed to meet the child's physical and emotional needs; 261(82%) is the emotional, physical, or sexual abuse; 300(94%) is exposure to domestic abuse and violence in the home; 221(69%) is exposure to an unsafe and violent community; 236(74%) excessive corporal punishment; 275(86%) is the peers' influence/victimization; 306(96) is exposure to violent media such as news, movies, television shows and video games; 292(92) is parental negligence of their children affair; 237(75%) is the attitude of teachers in the school; and 257(81%) teachers' use of vocal or negative words on students. Furthermore, the grand mean of 3.16 confirmed that all the identified items are the environmental causes of antisocial behaviour among public senior secondary school students in Anambra State.

The result in Table 5 showed that 241(76%) of the biological causes of antisocial behaviour among public senior secondary school students in Anambra State were caused by blood chemistry; 227(71%) by gender; 241 (76%) by brain damage; 223(70%) by frustration; 236 (74%) by low blood sugar level; 238(75%) by emotion; 229(72%) by genetic influence; 248(78%) anger; 236(74%) by birth trauma; and 293(92%) by mental illness. Furthermore, the grand mean of 3.03 confirmed that all the identified items are the biological causes of antisocial behaviour. The study concluded that

The study concluded that failure to meet the child's physical and emotional needs; emotional, physical, or sexual abuse; exposure to domestic abuse and violence in the home; exposure to an unsafe and violent community; excessive corporal punishment; peers' influence/victimization; exposure to violent media such as news, movies, television shows and video games; parental negligence of their children affair; attitude of teachers in the school; and teachers' use of vocal or negative words on students are the environmental causes of antisocial behaviour among public senior secondary school students in Anambra State.

Research Question 2: What are the biological causes of antisocial behaviour among

blood chemistry, gender, brain damage, frustration, low blood sugar level, emotion, genetic influence, anger, birth trauma, and mental illness among others are the biological causes of antisocial behaviour among public senior secondary schools in Anambra State.

Test of Hypotheses and Interpretation

Hypothesis 1: There is no significant association between the socio demographic characteristic of the students and the environmental causes of antisocial behaviour among students.

Table 5: Relationship of environmental causes of antisocial behaviour with socio demographic characteristics of the respondents

Sample characteristics		Mean ± SD	T value (95% CI)	P value
Gender	Male	9.49 ± 2.35	0.7112 (-0.1612 to 0.0868)	0.443
	Female	7.17 ± 1.78		
Age	Below 16 years	9.66 ± 3.05	0.8124 (-0.5477 to 0.4923)	0.305
	Above 17 years	7.14 ± 2.10		
Class	SSII	9.51 ± 2.41	0.5072 (-0.2426 to 0.1871)	0.672
	SSIII	9.46 ± 2.78		
School	Urban School	9.63 ± 2.37	0.6926 (-0.5027 to 1.0626)	0.559
	Rural School	9.11 ± 2.76		
Education Zone	Nnewi Zone	9.35 ± 2.58	0.1126 (-0.7704 to 0.7104)	0.924
	Ogidi Zone	9.65 ± 2.35		

Analysis in Table 5 showed that there was no significant association between the socio demographic characteristic of the students and the environmental causes of antisocial behaviour among students. The result showed that p-value of .443 (gender), 0.305 (age), 0.672 (class), 0.559 (school) and 0.924 (educational

zone) is greater than 0.05 level of significance. This resulted in the decision to accept the null hypothesis that there was no significant association between the socio demographic characteristic of the students and the environmental causes of antisocial behaviour among public senior secondary school students

in Anambra State. This is further strengthened by the fact that the t-value of 0.71 (gender), 0.81 (age), 0.51 (class), 0.69 (school) and 0.11 (educational zone) is less than the critical value of 1.96. The study therefore concluded that

there is no significant association between the socio demographic characteristic of the students and the environmental causes of antisocial behaviour among public senior secondary school students in Anambra State

Table 6: The biological causes of antisocial behaviour among respondents

S/n	Item description	N (%) SA (4)	N (%) A (3)	N (%) D (2)	N (%) SD (1)	Total	Mean (SD)
1	Blood chemistry contribute to violent behaviour	109 (34) 436	132 (42) 396	57 (18) 114	20 (6) 20	318 (100) 966	3.0377 (0.4267)
2	Gender contribute to violent behaviour	112 (35) 448	114 (36) 342	60 (19) 120	32 (10) 32	318 (100) 942	2.9623 (0.6385)
3	Brain damage contribute to antisocial behaviour	96 (30) 384	145 (46) 435	52 (16) 104	25 (8) 25	318 (100) 948	2.9811 (0.5894)
4	Frustration contribute to antisocial behaviour	118 (37) 472	105 (33) 315	77 (24) 154	18 (6) 18	318 (100) 959	3.0157 (0.5191)
5	Low blood sugar level boost aggressiveness	85 (27) 340	151 (47) 453	45 (14) 90	37 (12) 37	318 (100) 920	2.8931 (0.7053)
6	Emotion contribute to antisocial behaviour	131 (41) 524	107 (34) 321	55 (17) 110	25 (8) 25	318 (100) 980	3.0818 (0.4681)
7	Genetic influence boost antisocial behaviour	104 (33) 416	125 (39) 375	59 (19) 118	30 (9) 30	318 (100) 939	2.9528 (0.6173)
8	Anger contribute to violent behaviour	112 (35) 448	136 (43) 408	38 (12) 76	32 (10) 32	318 (100) 964	3.0314 (0.5142)
9	Birth trauma contribute to antisocial behaviour	92 (29) 368	144 (45) 432	64 (20) 128	18(6) 18	318 (100) 946	2.9748 (0.6927)
10	Mental illness contribute to violent behaviour	140 (44) 560	153 (48) 459	25 (8) 50	- (-) -	318 (100) 1069	3.3616 (0.3278)
Total Mean						30.2923 (9.4573)	3.0292 (0.5119)
Average Mean							

Hint: Strongly Agreed (SA) (4points); Agreed (A) (3points); Disagreed (D) (2points); and Strongly Disagreed (SD) (1point)

Hypothesis 2: There is no significant association between the socio demographic characteristic of the students and the biological causes of antisocial behaviour among students.

The socio demographic profile of the respondents such as gender, age, class, school and educational zone of the respondents showed no significant association between the

Table 7: Relationship of biological causes of antisocial behaviour with socio demographic characteristics of the respondents

Sample characteristics		Mean ± SD	T value (95% CI)	P value
Gender	Male	8.13 ± 2.01	0.6096	0.418
	Female	6.15 ± 1.53	(-0.1382 to 0.0744)	
Age	Below 16 years	8.28 ± 2.61	0.6963	0.385
	Above 17 years	6.12 ± 1.80	(-0.2704 to 0.3316)	
Class	SSII	8.15 ± 2.07	0.5581	0.529
	SSIII	8.11 ± 2.38	(-0.0652 to 0.1148)	
School	Urban School	8.25 ± 2.03	0.7015	0.394
	Rural School	7.81 ± 2.37	(-0.4283 to 1.0468)	
Education Zone	Nnewi Zone	8.01 ± 2.21	0.2256	0.836
	Ogidi Zone	8.27 ± 2.01	(-0.6527 to 0.7092)	

Analysis in Table 7 showed that there was no significant association between the socio demographic characteristic of the students and the biological causes of antisocial behaviour among students. The result showed that p-value of 0.418 (gender), 0.385 (age), 0.529 (class), 0.394 (school) and 0.836 (educational zone) is greater than 0.05 level of significance. This resulted in the decision to accept the null hypothesis that there was no significant association between the socio demographic characteristic of the students and the biological causes of antisocial behaviour among public senior secondary school students in Anambra State. This is further strengthened by the fact that the t-value of 0.61 (gender), 0.69 (age), 0.59 (class), 0.70 (school) and 0.23 (educational zone) is less than the critical value of 1.96. The study therefore concluded that there is no significant association between the socio demographic characteristic of the students and the biological causes of antisocial behaviour among public senior secondary school students in Anambra State.

Discussion of Findings

Antisocial behaviours are the harmful and uncooperative actions of the students characterized by overt and covert hostility and deliberate aggression towards other individuals. It is perceived that such behaviour occurs due to the result of unsatisfactory psychological, social, or emotional development of children at home and under socialization in the community.

environmental and biological causes of antisocial behaviour among public senior secondary school students in Anambra State. This finding is in line with the findings of Isaiah (2015) who ascertain that the kind of classroom and school does not contribute to students' violent behaviours in school. His finding contradicts the present study in terms of age and gender. Isaiah discovered that age and gender of the students is a determinant of violent behaviour, as the male students tends to be more violent and aggressive in nature than the female student. The study finding is in disagreement with the findings of Abdul and Shafqat (2019). In the words of Abdul and Shafqat, they opined that there is a significant variation between the age and gender of the students and the antisocial behaviour. They argued that male students are more prone to violent behaviour than female students, while younger students constitute more problems in the class than the older students.

The study found out that antisocial behaviours among students are caused by failure to meet the child's physical and emotional needs; emotional, physical, or sexual abuse; exposure to domestic abuse and violence in the home; exposure to an unsafe and violent community; excessive corporal punishment; peers' influence/victimization; exposure to violent media such as news, movies, television shows and video games; parental negligence of their children affair; attitude of teachers in the school; teachers' use of vocal or negative words on students; blood chemistry; gender; brain damage; frustration; low blood sugar level;

emotion; genetic influence; anger; birth trauma; and mental illness. The discoveries of Abdul and Shafqat (2019); Amazu and Enang (2018); Ojo (2017); Isaiah (2016) and Nwokolo, Anyamene and Efobi (2015) agreed with the present study findings. Abdul and Shafqat (2019) finding showed that school related factors (e.g., teacher-student relationships, peers' influence); parental factors (e.g., poor father child relationships, parental aspirations, parental negligence); parental support (e.g., empathy, guidance, material resources); and socioeconomic factors (e.g., parental income) are some of the major causes of secondary school students' antisocial behaviour. Amazu and Enang (2018) study concluded that students who were physically maltreated at home were more prone to manifesting antisocial behaviour. Domestic enslavement induces negative emotions with antisocial implications. Parental verbal abuse begets in the children the tendency to use abusive words on peers at school.

Ojo (2017) argued that the common causes of antisocial behaviour as revealed by the study are: media influence, lack of counselor in schools, ineffective school administration, peer influence, broken home and lack of parental care. The findings of the study showed that the most common antisocial behaviour exhibited by the participants is: examination malpractice, lateness, abortion, stealing, rape, cultism and rudeness. Isaiah (2016), he reported that media influence, peer influence, school and home environment are causes of behavioural problems of secondary school students in schools. Furthermore, Nwokolo, Anyamene and Efobi (2015) found out that antisocial behaviour, like bullying was as a result of peer influence.

Summary of the Findings

The findings of the study are summarized as follows:

The study showed that failure to meet the child's physical and emotional needs; emotional, physical, or sexual abuse; exposure to domestic abuse and violence in the home; exposure to an unsafe and violent community; excessive corporal punishment; peers' influence/victimization; exposure to violent media such as news, movies, television shows and video games; parental negligence of their children affair; attitude of teachers in the school; teachers' use of vocal or negative words on students among others are the environmental causes of antisocial behaviour among public senior secondary schools in Anambra State.

The study showed that blood chemistry, gender, brain damage, frustration, low blood sugar level, emotion, genetic influence, anger, birth trauma, and mental illness among others are the biological causes of antisocial behaviour among public senior secondary schools in Anambra State.

The study indicated that there is no significant association between the socio demographic characteristic of the students and the environmental causes of antisocial behaviour among public senior secondary schools in Anambra State.

The study revealed that there is no significant association between the socio demographic characteristic of the students and the biological causes of antisocial behaviour among public senior secondary schools in Anambra State.

Conclusion

Students' antisocial behaviour has become one the major obstacles for their adjustment with their family, peers, society, and in school. Their negative actions/activities are indicators of their maladaptive behaviour and practices in the society. Therefore, the study was an endeavour of the researcher to explore, uncover, and highlight the major causes that may create antisocial behaviour among secondary school students.

Based on the findings of the study, the study concluded that secondary school students exhibited some antisocial behaviour and the causes could be traced to biological and environmental factors. It therefore, becomes very important that all hands must be on deck, both at home and school, in order to reduce such behaviours to the barest minimum among students, so that they can live as responsible citizens.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. There should be counselors in public secondary schools, in order to assist students who exhibit antisocial behaviours or those at risk, so that they can live normal life.
2. The government should check the activities of the mass media like television, cinema centers, where antisocial behaviours are promoted through their activities.
3. There should be early detection of repeated lying, cheating, stealing, non compliance and other disruptive behaviours in children,

- so that such behaviours will not lead to antisocial behaviours later in life.
4. Parents may be encouraged to show more love, empathy, and guidance toward their children.
 5. Teachers may focus individually on every student's activities in classroom setting particularly may concentrate on such students who commit antisocial activities (e.g., fighting with peer, abusing, stealing, bullying, misbehave with teachers and peers, frequently absent from school, late comers, run away from school, miss their classes, do not complete their homework or assignments).
 6. The students having antisocial behaviour may be engaged in co-curricular activities in schools like literary and debating club, quizzes, boys scout, and sports where leadership and team workabilities are being encouraged. These activities may help and enable the students to use their time and energies in meaningful and useful way, rather than busy in antisocial activities.

Contribution to Knowledge

The study established that there is no significant variation noted in the gender, age, class, school and educational zone of the students and students' antisocial behaviour. Thus, causes of antisocial behaviour among students could be seen as environmental and biological causes rather than the socio demographic characteristic of the students.

Suggestions for Further Studies

It is the suggestion of the researcher that the following studies be conducted:

1. Factors that contributed to adolescents' antisocial behaviour in junior secondary schools in Anambra State.
2. Causes of antisocial behaviour among students with hearing impairment in secondary schools in Anambra State.
3. Reasons why students engage in antisocial behaviour in secondary schools in Anambra State.

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INFECTION PREVENTION AND CONTROL PRACTICES AMONG PUBLIC AND PRIVATE HEALTHCARE WORKERS IN PORT HARCOURT LOCAL GOVERNMENT AREA, RIVERS STATE

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Abstract

Strict adherence to IPC protocol is essential to patient safety and quality of care. In Nigeria, prevalence of HAIs remain as high as 14 to 49%. However poor practice still persists among healthcare workers in public and private facilities. This cross-sectional comparative study aimed to assess IPC practices among HWs in Port Harcourt Local Government Area, Rivers State. A total of 352 participants, including doctors, midwives, nurses, laboratory scientists, and pharmacists, were selected using multistage sampling. Data were collected through self-administered questionnaires and observation checklists and analyzed using bivariate and multivariate analysis. Statistical significance was determined at $P < 0.05$. Healthcare workers in private and public facilities generally had good knowledge, with significantly higher rate of 84% in public compared to 60.5% in private ($p=0.001$). However, private HWs had better practices of 77% compared to 68% for public ($p=0.034$). There were some gaps in knowledge and practice of proper use of hand sanitizer, a significant proportion in both types of facilities wrongly agreed on using hand sanitizer when hands were visibly dirty ($p=0.04$) respectively. Poor knowledge of color-coded waste bins was also found. Workload, IPC knowledge, availability of PPE, and IPC training were the factors found to be significant predictors of compliance to IPC measures in both facility type. Notably those who had IPC training were 4 times likely to comply to IPC ($aOR=4.36$, 95% CI=2.34-8.13, $p<0.001$). HWs who had access to adequate PPE were about 2 times more likely to comply to IPC ($aOR=1.73$, 95% cl-1.02-2.93, $p=0.043$). The workload had a negative impact on IPC as HWs with higher workload were 7 times less likely to comply ($aOR=0.33$, 95% CI=0.16-0.67, $p=0.002$). While healthcare workers generally demonstrated good IPC knowledge, significant gaps in knowledge and practice were identified. Regular and continuous IPC training, regardless of facility type, along with improved PPE provision and comprehensive IPC measures implementation, are essential to enhance patient safety and care quality in Nigerian healthcare facilities.

Keywords: Infection Prevention Control (IPC) Healthcare workers (HWs), Public and private healthcare facilities, Knowledge, Practice, Personal Protective Equipment (PPE)

Introduction

Infections that patients contract during the course of receiving medical treatment, often referred to as healthcare-associated or nosocomial infections, are known as hospital-acquired infections (HAI).¹ Healthcare-associated infections encompass any infectious

disease that patients acquire while on admission in a hospital or other healthcare institution. These infections are neither present nor in their incubation phase when the patient is admitted. In addition to infections acquired by patients, it also includes infections that occur among healthcare personnel within the

healthcare setting.² The Centre for Disease Control and Prevention (CDC) defines hospital-acquired infections (HAIs) as infections that develop in a healthcare environment as a result of an adverse response to an infectious agent or its toxins (CDC, 2003). Healthcare workers (HCWs) are at risk of exposure to microorganisms that are present in patients. As part of their daily duties, HCWs frequently come into contact with various infectious agents carried by patients.³ HAI is a public health concern; it endangers patient safety by causing prolonged hospitalization, which increases medical costs and usually leads to high morbidity and mortality. Ensuring patient and healthcare worker safety is of utmost importance, making the prevention of this issue a top priority for healthcare systems and organizations.⁴ Infection prevention and control is a systematic approach aimed at minimizing the transmission of healthcare-associated infections (HAIs) to patients and clients seeking care in healthcare facilities (WHO, 2015). The importance of infection control is paramount in minimizing and preventing the incidence of healthcare-associated infections (HCAs).^{4,5}

In developed countries, the estimated prevalence of healthcare-associated infections (HCAI) stands at approximately 7.6 percent, while in developing countries, it is estimated to be around 10.1 percent.⁶ Developing countries bear a significantly higher burden of healthcare-associated infections (HAIs), which is estimated to be up to 18 times greater than that in developed countries.^{5,6} However, there is some positive news as research suggests that a considerable portion of HAIs, ranging from 55 to 70 percent, can potentially be prevented. Developing countries, including Nigeria, experience higher rates of HAIs among patients and healthcare workers due to various contributing factors. These factors include understaffing or improper staff distribution, lack of staff motivation resulting from inadequate remuneration, poor adherence to hospital standards, insufficient hygiene and sanitation practices, limited availability or shortage of essential equipment, inadequate infrastructure, overcrowding, and limited financial resources.⁷ Significant disparities have been documented between public and private hospitals in Nigeria regarding infection prevention and control practices, and these disparities have a notable impact on healthcare workers' compliance with such practices, potentially compromising patient safety and overall healthcare outcomes.^{4,8} One

of the prominent disparities lies in the variation of resources and infrastructure between public and private hospitals. Public hospitals often face challenges such as inadequate funding, limited access to essential supplies and equipment, and insufficient staffing levels. These challenges can impede the implementation of robust infection prevention and control measures, consequently affecting compliance among healthcare workers.⁹ In contrast, private hospitals may have relatively better access to resources, which facilitates the implementation of comprehensive infection prevention and control practices.¹⁰⁻¹⁴

Despite the recognized importance of infection prevention and control, healthcare settings in Nigeria, including Port Harcourt LGA, Rivers State, face significant challenges in implementing effective measures. This results in a heightened risk of HAIs among both patients and healthcare workers (HCWs), leading to adverse outcomes and increased healthcare costs.¹⁵ Due to the critical need to improve infection control practices, especially in areas with limited resources, this study aims to compare infection prevention and control methods among healthcare workers in both public and private hospitals in Port Harcourt LGA, Rivers State. The specific objectives of the study were aimed at assessing the knowledge levels, compliance rates, and the factors affecting adherence to these measures. The findings of this study hold significant implications for policymakers, healthcare practitioners, and researchers in developing evidence-based infection prevention and control programs and strategic plans. By addressing deficiencies in infection control practices, the study aims to improve patient safety, reduce healthcare-associated infections, and contribute to the advancement of knowledge in this critical area.

Methodology

Study Area: This study was carried out in Port Harcourt Local Government Area, Rivers State. Port Harcourt Local Government Area (PHALGA) is a local government area of Rivers State in southern Nigeria. It is one of the 23 local government areas in the state. The headquarters of the LGA is Port Harcourt which doubles as the capital city of Rivers state. It is bounded to the south by Okrika, to the east by Eleme, to the north by Obio-Akpor, and the west by Degema. The current estimated population of Port Harcourt LGA is put at 1,8650,000 inhabitants with the area hosting members of diverse ethnic groups (NIPOST, 2022).

Study Design: A comparative cross-sectional study design was used in this study to assess infection prevention and control practices among healthcare workers in public and private hospitals in Port Harcourt Local Government Area, Rivers State.

Study Population: The study population consists of clinical healthcare personnel working at the selected public and private hospitals at the time of the study. Clinical Healthcare workers consist of medical doctors, nurses, midwives, pharmacists, and laboratory scientists and the selected healthcare facilities in the area.

Inclusion criteria Healthcare workers involved directly in patient care at the healthcare

facilities were eligible for inclusion in the study.

Exclusion criteria: Individuals who are on annual and maternity leave and clinical healthcare workers less than six months working period. The six months allowed, was because of the recently observed high turnover rate of employees in the sector.

Sample size determinations The sample size was determined using the formula for comparative design that identifies differences in proportions⁷

$$n \text{ per group} = \frac{2(z_{\alpha/2} + z_{\beta})^2 * p(1-p)}{(P_1 - P_2)^2}$$

Table 1 Socio-Demographic Characteristics of Respondents

Variable	Type of Facility	χ^2 (p-value)
	Private (%) (n=172)	Public (%) (n=180)
Age Group (years)		2.78 (0.426)
20-29	87 (51%)	82 (46%)
30-39	61 (35%)	70 (39%)
40-49	15 (9%)	17 (9%)
50-59	9 (5%)	11 (6%)
Mean (SD)	28 ± 4.2	29 ± 4.9
Sex of Respondents		12.98 (<0.001)*
Female	75 (44%)	119 (66%)
Male	97 (56%)	61 (34%)
Marital Status		3.25 (0.357)
Married	49 (28%)	98 (54%)
Single	96 (55%)	57 (32%)
Divorced	18 (10%)	14 (8%)
Widowed	9 (5%)	11 (6%)
Profession category		0.91 (0.925)
Nurse	75 (44%)	84 (47%)
Midwife	29 (17%)	25 (14%)
Medical Doctor	16 (9%)	20 (11%)
Pharmacist	24 (14%)	21 (12%)
Laboratory Scientist/ Technician	28 (16%)	30 (17%)
Work Experience (years)		4.01 (0.259)
0-4	104 (60%)	120 (67%)
5-9	39 (23%)	37 (19%)
10-15	19 (11%)	10 (6%)
> 15	10 (6%)	13 (7%)

Results

Table 1 shows that Sex was the only demographic characteristic that was shown to be significantly different between the groups ($\chi^2 = 12.98$, p-value = <0.001). the majority of the respondents 119 (66%) in public hospitals were females 119 (66%) while private health facilities had slightly more males 97 (56%). Nurses made up the highest proportion of the respondents in both private 75 (44% and public 84 (47% hospitals. The majority of the respondents had less than 5 years working experience, for both the private 104 (60%) and public 120 (67%).

Table 2 Knowledge of Respondents on IPC

Variables under Knowledge	Type of Facility		χ^2 (p-value)
	Private (n=172)	Public (n=180)	
n (%)	n (%)		
Heard about IPC principles			0.19 (0.91)
Agree	165 (96%)	176 (98%)	
Disagree	7 (4%)	4 (2%)	
I don't Know			
Gloves providing complete protection			0.17 (0.92)
Agree	34 (20%)	39 (22%)	
Disagree	138 (80%)	141 (79%)	
I don't Know			
Gloves when blood or body fluid exposure is expected			3.53 (0.17)
Agree	60 (35%)	75 (42%)	
Disagree	112 (65%)	105 (58%)	
I don't Know			
Need to change gloves between patients			51.84 (0.006)*
Agree	32 (19%)	7 (4%)	
Disagree	140 (81%)	173 (96%)	
I don't Know			
Regular washing of hands with soap and use of Hand Sanitizer			0.93 (0.63)*
Agree	167 (97%)	171 (95%)	
Disagree	5 (3%)	9 (5%)	
I don't Know			
Colour coding of waste bins			10.48 (0.0054)*
Agree	61 (35%)	69 (38%)	
Disagree	80 (47%)	65 (36%)	
I don't Know	31 (18%)	46 (26%)	
Hand Sanitizer when hands are visibly dirty			16.49 (0.0003)*
Agree	81 (47%)	123 (68%)	
Disagree	62 (36%)	57 (32%)	
I don't Know	29 (17%)		
Hand washing before and after procedures			1.74 (0.42)
Agree	151 (88%)	167 (93%)	
Disagree	21 (12%)	3 (7%)	
I don't Know			
Sealing of Safety box when 3/4 filled			0.41 (0.82)
Agree	142 (83%)	144 (80%)	
Disagree	30 (17%)	23 (13%)	
I don't Know		13 (7%)	
Transmission of HAIs by hand contact with an infected patient			0.05 (0.97)
Agree	143 (83%)	150 (83%)	
Disagree	29 (17%)	13 (7%)	
I don't Know		17 (9%)	

Table 2 shows that 165 (96%) of respondents in private facilities and 176 (98%) of respondents in public facilities had heard about IPC principles. The majority of healthcare workers in both types of facilities agreed on the need for regular hand washing and the use of hand sanitizer, with 167 (97%) of respondents in private facilities and 171 (95%) of respondents in public facilities. 138 (80%) of respondents in private facilities rightly disagreed that gloves provide complete protection, compared to 141 (79%) of respondents in public facilities. Only 61 (35%) in private agreed on the

need for color coding of waste bins compared to those in public facilities 69 (38%). While 123 68% in public wrongly agreed on the use of hand sanitizer when hands are visibly dirty compared to those in private facilities 81 47%.

Table 3 Respondents IPC Knowledge level

Variable	Facility Type		X² (p-value)
	Private Facility (n=172)	Public Facility (n=180)	
Good Knowledge	104 (60.5%)	152 (84.4%)	56.144 (0.001)*
Poor Knowledge	68 (39.5%)	28 (15.6%)	

Table 3 findings suggest that higher proportion of respondents in both public and private health facilities had good knowledge of IPC principles. However, the proportion of the respondents in public health facilities is significantly higher 152 (84.4%) compared to those in private health facilities 104 (60.5%). ($\chi^2=56.144$ p=0.001).

Table 4 Respondents Self-Reported Practice of IPC Measures

Variables under Knowledge	Type of Facility		X² (p-value)
	Private (n=172) n (%)	Public (n=180) n (%)	
Recapping of Needles			12.33 (0.002)*
Always	19 (11%)	14 (8%)	
Sometimes	46 (27%)	65 (36%)	
Never	107 (62%)	101 (56%)	
Placement of Sharp Boxes (hand to reach)			3.11 (0.95)
Always	98 (57%)	102 (57%)	
Sometimes	67 (39%)	67 (37%)	
Never	7 (4%)	11 (6%)	
Liquid and dry waste segregation			0.239 (0.625)
Always	94 (54%)	105 (58%)	
Sometimes	51 (30%)	55 (31%)	
Never	27 (16%)	20 (11%)	
All patients considered potentially infections			5.12 (0.08)
Always	109 (63%)	101 (56%)	
Sometimes	19 (11%)	43 (24%)	
Never	44 (26%)	36 (20%)	
Change of gloves between patient contacts			9.940 (0.002)*
Always	82 (30%)	65 (36%)	
Sometimes	90 (52%)	115 (64%)	
Never			
Frequency and Proper use of PPEs			3.35 (0.19)
Always	85 (49%)	81 (45%)	
Sometimes	75 (44%)	76 (42%)	
Never	12 (7%)	23 (13%)	
Washing of Hands Between patient contact			5.681 (0.017)*
Always	108 (63%)	92 (51%)	
Sometimes	60 (35%)	85 (47%)	
Never	4 (2%)	3 (2%)	
Washing hands after change of gloves			1.677 (0.433)
Always	101 (59%)	96 (53%)	
Sometimes	59 (34%)	68 (38%)	
Never	12 (7%)	16 (9%)	

Waring foot wares that protect feet			0.060 (0.806)
Always	116 (67%)	127 (71%)	
Sometimes	43 (25%)	42 (23%)	
Never	13 (8%)	11 (6%)	
Use of Hand Sanitizers when hands are visibly dirty			6.58 (0.04)*
Always	41 (24%)	57 (32%)	
Sometimes	72 (42%)	87 (48%)	
Never	59 (34%)	36 (20%)	
Sharp Boxes disposal (not allowed fill to the brim)			1.62 (0.45)
Always	66 (38%)	57 (32%)	
Sometimes	64 (37%)	66 (37%)	
Never	42 (24%)	57 (32%)	

Table 4 shows 107 (62%) of private facility workers never recapped needles, compared to 101 (56%) of public facility workers. 90 (52%) of private facility workers always changed gloves, while only 65 (36%) of public facility workers did so. 127 (74%) of private facility workers always disinfected surfaces, compared to 103 (57%) of public facility workers. 72 (42%) of private facility workers sometimes use hand sanitizers when hands were visibly dirty while a high proportion 87 (48%) of public facility workers also did so. 108 (63%) of private facility workers always washed their hands between patient contacts, while 92 51% of public facility workers did so.

Table 5 Respondents IPC Self-Reported Practice Level

IPC Practice of HCWs	Facility Type		χ^2 (p-value)
	Private facility	Public facility	
	(n=172)	(n=180)	
Good practice	134 (77.9%)	124 (68.9%)	4.451 (0.034*)
Poor practice	38 (22.1%)	56 (31.1%)	

Table 5 shows that there is a statistically significant difference in the self-reported IPC practice levels of healthcare workers (HCWs) between private and public facilities ($\chi^2 = 4.451$, $p = 0.034$). A higher proportion of HCWs in private facilities 134 (77.9%) reported good IPC practices compared to those in public facilities 124 (68.9%). While higher proportion of HCWs in public facilities 56 (31.1%) reported poor IPC practices compared to those in private facilities (22.1%).

Table 6 Multivariate Logistic Regression Analysis of Predictors of compliance with Infection Prevention and Control

Variables	Compliant n (%)	Non-Compliant n (%)	cOR (95% CI)	aOR (95% CI)	p-value
IPC Training					
No	9 (3%)	12 (4%)	6.41 (3.68-11.15)	4.36 (2.34-8.13)	<0.001
Yes	283 (80%)	48 (14%)	1.00	1.00	
Knowledge of IPC					
Poor	18 (5%)	75 (21%)	3.26 (2.03-5.22)	2.30 (1.35-3.92)	0.002
Good	194 (55%)	65 (18%)	1.00	1.00	
Workload					
High	21 (6%)	128 (36%)	20.04 (9.32-43.06)	6.97 (2.77-17.52)	<0.001
Moderate	83 (24%)	46 (13%)	1.00	1.00	
Low	76 (22%)	12 (4%)	0.26 (0.14-0.48)	0.33 (0.16-0.67)	0.002
Availability of PPE					
Adequate	200 (57%)	41 (12%)	1.00	1.00	
Inadequate	20 (6%)	49 (14%)	2.99 (1.89-4.74)	1.73 (1.02-2.93)	0.043

Table 6 shows the four factors included remained significant predictors of compliance to IPC. Healthcare workers who received IPC training had significantly higher odds of compliance with IPC practices than those who did not receive training ($aOR=4.36$, 95% CI=2.34-8.13, $p<0.001$). Good knowledge of IPC ($aOR=2.30$, 95% CI=1.35-3.92, $p=0.002$). Healthcare workers with low workload had significantly higher odds of compliance with IPC practices than those with high workload ($aOR=0.33$, 95% CI=0.16-0.67, $p=0.002$). Healthcare workers with adequate availability of PPE had significantly higher odds of compliance with IPC practices than those with inadequate availability of PPE ($aOR=1.73$, 95% CI=1.02-2.93, $p=0.043$).

Discussion

Respondents' IPC Knowledge level

Undoubtedly, the significance of healthcare personnel's grasp on infection prevention and control (IPC) holds immense weight, given its pivotal role in ensuring the successful execution of IPC protocols.¹⁶ A study by¹⁷ found that hand hygiene was the most important measure for preventing healthcare-associated infections. Similarly, the crucial role of hand hygiene and the use of hand sanitizer in reducing the transmission of pathogens in healthcare settings is emphasized by the World Health Organization and CDC.^{6,17} This study found that while there was generally high awareness on the need for regular hand washing and the use of hand sanitizer, a higher proportion of respondents in public facilities wrongly agreed on the use of hand sanitizer when hands are visibly dirty compared to those in private facilities. The study also found that only a small proportion of respondents agreed on the need for color coding of waste bins in both private and public facilities, indicating a lack of awareness on this particular IPC practice.

Another crucial revelation arising from the research is the contrast between private and public facility healthcare workers, with a greater percentage of those in private facilities appropriately contesting the notion that gloves offer absolute safeguarding, in comparison to their counterparts in public facilities. This finding is consistent with previous studies that have highlighted the misconception among healthcare workers that gloves provide complete protection.¹⁸ The study suggests that there is a significant difference in the overall knowledge levels of respondents on IPC between private and public facilities, with a higher proportion of respondents in public facilities having good knowledge of IPC principles compared to those in private facilities. This finding is consistent with other studies such as Abiola et al., (2021) that observed good knowledge of IPC among healthcare workers in public and private

healthcare facilities in Akure, Nigeria. However, the findings from the current study contradict those of Samuel et al., (2010), who reported that healthcare workers in private hospitals had a significantly higher level of knowledge about IPC compared to those in public hospitals. Overall, healthcare workers' knowledge of IPC is vital for effective implementation of IPC measures in healthcare settings. The study suggests a need for targeted IPC training programs for healthcare workers in both private and public facilities to improve their knowledge and implementation of IPC measures, particularly those that are less widely known or less commonly practiced.

Respondents Self-Reported Practice of IPC

A breakdown of respondents' self-reported IPC practices reveals disparities between private and public healthcare workers. Private facility workers showed lower adherence to key IPC practices such as needle recapping and glove changing compared to their public facility counterparts. Also statistically significant was the findings that revealed nearly half of private facility workers sometimes used hand sanitizers when hands were visibly dirty while a higher proportion of public facility workers also did so. Only about half of private facility workers always segregated liquid and dry waste, while a similar proportion of public facility workers did so. Also the proportion of private facility workers who always washed their hands between patient contacts is not encouraging, it was equally higher than the proportion of public facility workers who did so. These discrepancies may be attributed to differences in the quality of IPC training, availability of resources, and support from management in different healthcare facilities.¹⁹

Overall, findings show that there is a significant difference in the self-reported IPC practice levels of healthcare workers (HCWs) between private and public facilities. A higher proportion of HCWs in private facilities reported good IPC practices compared to those in public facilities. These findings are in line with prior research

demonstrating that infection prevention and control (IPC) practices can vary significantly in healthcare environments, influenced by factors such as facility type, level of training, and resource availability.²⁰ The study by²⁰ found that healthcare workers in private facilities had better IPC practices compared to those in public facilities. Nonetheless, the investigation conducted by Alhumaid et al., (2021) revealed no substantial variance in infection prevention and control (IPC) protocols when comparing private and public establishments. It's crucial to recognize that a multitude of factors, such as personal conduct, institutional regulations, and resource sufficiency, can exert an influence on IPC practices. Furthermore, it's pertinent to acknowledge that self-reported evaluations of IPC practices might not invariably mirror tangible execution, given the potential for healthcare workers to overestimate their adherence to IPC protocols owing to social desirability motives.²¹

Factors Influencing Compliance with Infection Prevention and Control

Healthcare workers who received IPC training were more likely to be compliant with IPC than those who did not receive training in both private and public facilities. This finding is consistent with other studies that have shown that training programs can significantly improve IPC compliance among healthcare workers.²² It is crucial for healthcare professionals to possess a robust grasp of IPC protocols to effectively mitigate the likelihood of infection spread within medical settings. Another finding was that healthcare workers with low workload were more likely to be compliant with IPC than those with moderate or high workload in both private and public facilities. This finding is consistent with other studies that have reported a negative association between workload and IPC compliance.²³ Additionally, healthcare workers with good knowledge of IPC were more likely to be compliant with IPC than those with poor knowledge. This finding is consistent with other studies that have shown a positive association between knowledge of IPC and IPC compliance among healthcare workers. Another important finding was that healthcare workers with adequate PPE were more likely to be compliant with IPC than those with inadequate PPE. Healthcare workers who have access to adequate PPE are more likely to use the recommended PPE correctly and implement IPC practices effectively. The availability of PPE is crucial in preventing the transmission of infectious diseases, especially

during outbreaks, and therefore, healthcare facilities must ensure that adequate PPE is provided to healthcare workers to promote compliance with IPC guidelines.²⁴⁻²⁶ There was no significant association between profession category, marital status, work experience, and IPC compliance among healthcare workers in both private and public facilities. From the multivariate logistic regression, Healthcare workers who received IPC training had significantly higher odds of compliance with IPC practices compared to those who did not receive training. Also, healthcare workers with adequate availability of PPE had significantly higher odds of compliance with IPC practices than those with inadequate availability of PPE. Overall, the study's findings indicate that IPC compliance among healthcare workers in private and public facilities in Port Harcourt LGA, Rivers State Nigeria is influenced by various factors, including IPC training, knowledge of IPC, workload, and availability of PPE. These findings align with earlier research carried out in different contexts, indicating that the elements impacting adherence to infection prevention and control are widespread and require attention for the enhancement of compliance and the mitigation of infectious disease transmission within healthcare environments.

Conclusion

The study highlights the need for improvements in IPC practices in healthcare facilities in Nigeria regardless of whether it is a public or private healthcare facilities. Despite respondents from public facilities having better knowledge, it however didn't translate into better IPC practice as the respondents from private healthcare facilities reported better adherence to IPC measures. Significantly there was a gap in knowledge about the proper use of hand sanitizer. Also, IPC implementation was suboptimal in most implementation factors across facility type, notably there was concerning gaps in surveillance of HAIs as well as inadequate availability and accessibility of PPEs. Additionally, IPC training, workload, availability of PPE, and knowledge of IPC were found to be the most significant predictors of compliance with IPC. Overall, this study provides important insights into the current status of IPC practices in healthcare facilities in PHALGA, Rivers state, and can inform policy decisions and guide the development of interventions aimed at improving IPC practices and reducing healthcare-associated infections.

Limitations

1. The study relied mostly on self-reported data, subject to recall and social desirability bias.
2. The study was conducted in a specific region of Rivers State in Nigeria and care should be taken in account when generalizing to other states or countries.

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KNOWLEDGE AND ATTITUDE OF MENTAL ILLNESS AMONG PEOPLE LIVING IN NNEWI LGAs IN ANAMBRA STATE

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Abstract

The study examined the knowledge and attitude of mental illness among people living in Nnewi LGAs in Anambra State. Two research questions and two research hypotheses guided the study. Literatures related to the study were reviewed. **Method:** The study adopted a descriptive cross-sectional research design. The target population is 514,500 persons which comprise of 205,700 persons for Nnewi North and 308,800 persons for Nnewi South. The study population is 181,374 persons who are above 18 years in Nnewi LGAs. A sample of 400 was drawn from the study population using Taro Yamane formula. The study adopted multi-stage sampling technique for the study. The instrument for the study was "Knowledge and Attitudes towards Mental Illness Questionnaire (KAMIQ)." Descriptive and inferential statistics such as mean for research questions and t-test for research hypotheses was used for the study. The finding of the study showed that there is poor knowledge and negative attitude of the public on mental illness in Nnewi LGAs in Anambra State. **Results:** The findings of the study also indicated that there is no significant difference between the knowledge and attitude of mental illness among people living in Nnewi LGAs in Anambra State. The study concluded that poor knowledge and negative attitudes towards mental ill persons are common among the general public in Nnewi LGAs in Anambra State. **Recommendation** Based on the findings of the study, the study recommended among other that communities should create awareness on the importance of minimizing the stigmatizing attitudes towards the mentally ill-persons in the community. It is important to initiate awareness campaigns and health education all over Anambra State and especially in Nnewi LGAs to prepare more knowledgeable and open-minded individuals. As a result, people suffering from mental health disorders will not feel ashamed to seek the professional help that they need.

Introduction

Background to the Study: Mental illness can be regarded as emotional and mental impairments. It can occur to any person without regard to personal characteristics. Globally, mental illnesses and their complications are common and leading burdens of health, with more than 600 million people suffering with depression and anxiety, which are the most common types of mental illness (WHO, 2017). WHO reported that, in any given year, 8.25% to 29.1% of individuals are mentally ill and life time prevalence ranges from 12.2% to 48.6% (WHO, 2019). The WHO predicts that mental illness will increase among teenagers by 50% until 2025.

Mental illness is common. According to WHO, about 1 in 5 adults has a mental illness in any given year. Mental illness can begin at any age,

from childhood through later adult years, but most cases begin earlier in life. The effects of mental illness can be temporary or long lasting and a person can have more than one mental health disorder at the same time. For example, one may have depression and a substance use disorder.

Mental illness, also called mental health disorders, is a wide range of mental health conditions which affect one's mood, thinking and behaviour in general. Examples of mental illness include depression, anxiety disorders, schizophrenia, eating disorders and addictive behaviours. Many people have mental health concerns from time to time, but a mental health concern becomes a mental illness when ongoing signs and symptoms cause frequent stress and affect the person's ability to function

properly. Thus, mental illness can make one miserable and can cause problems in the person's daily life, such as at school or work or in relationships.

According to American Heritage Dictionary of the English Language (2018), a mental illness or disorder is an impairment of the mind causing disruption in normal thinking, feeling, mood, behaviour, or interpersonal interactions, and accompanied by significant distress or dysfunction. The causes of mental disorders are regarded as complex and varying depending on the particular disorder and the individual. Although the causes of most mental illnesses are not fully understood, researchers have identified a variety of biological, psychological, and environmental factors that can contribute to the development or progression of mental disorders (Arango et al. 2018). Thus, most mental disorders are a result of a combination of several different factors rather than just a single factor (Arango, et al. 2018).

In recent times, the advancement in modern medicine over years, understanding mental illness has remained rather stagnant. Other areas of medicine have adopted a proactive approach to deter the onset of serious illnesses and disorders, while developments in psychiatry have remained primarily therapeutic. With recent advances in genetics and neurology, mental illness has progressed faster than ever although, the dynamic nature of mental illness has made this progress difficult. Mental illness is not characterized by biology alone and the influence of environmental variables can make them unpredictable (Kong, Dunn & Parker, 2017).

Understanding mental illness in Nigeria is something that has not been taken contextually and empirically. There is a large misconception and misinformation on the context of the subject amongst Nigerians about the concept of mental illnesses. The general belief is that preternatural or supernatural forces, witches, evil spirits and even God cause mental illness (Adebawale & Ogunlesi, 2015; Abasiubong, Ekott & Bassey, 2017). These beliefs have influenced and shaped the attitude of Nigerians towards the mentally ill person(s) or people living with mental illnesses in the society. Historically, people with mental illnesses were burned, hanged, mutilated, abandoned and restrained with chains, all in the bid to save their souls, or bring redemption to their families and curb the iniquities causing mental illness within

the families (Adebawale & Ogunlesi, 2015; Abasiubong, Ekott & Bassey, 2017). These beliefs on the etiology of mental illness shape the people's attitude and have been shown to have a huge impact on the acceptance of the mentally ill people amongst Nigerians (Adewuya & Makanjuola, 2018).

An attitude is a persons' way of thinking, feeling or acting toward another person, thing or situation. It is an emotional entity and mental behaviour that characterizes a person. Zimbardo and Leippe (2015) sees attitude as a disposition of behaviour toward someone or something. Attitude influence thinking and behaviour of an individual as they serve a dual purpose of assisting or guiding behaviour positively or negatively towards various outcomes and goals and try to shade away from adverse outcomes. Attitudes also help individuals to effectively and efficiently process complex information and orientation about the modern social world. Thus, a person' attitude is determined by some psychological factors like beliefs, values, ideas, perception, among others. All these factors have a complex role in determining a person's behaviour and attitude. On the other hands, values are ideals guiding principles in one's life, or overarching goals that people strive to obtain.

According Oluwanuga and Kola (2017), attitudes are known to be shaped by such factors as contact and education. They opined that contact and education seems to be a significant source of stigmatization and discrimination against persons with mental illness, this is partly attributed to the fact that the public always encounter such ill individuals in acutely disturbed states, and also to a poor knowledge of mental illness.

Knowledge is the ability to generate an appropriate response (connection weight) to a particular input. It is the fact or condition of knowing something with familiarity gained through experience or association, acquaintance with or understanding of outcomes. Knowledge is a familiarity, awareness, or understanding of someone or something, such as facts, skills, or objects. Knowledge can be acquired in many different ways and from many difference sources, including but not limited to experience, education, reason, memory, scientific inquiry, exploration, and practice (Effiong, Idung & Iyanam, 2019).

The impact of the stigmatizing attitudes and poor knowledge of mental illness in many developing countries have shown to be a major hurdle to improving mental health services. An increase in the basic knowledge about mental illness, its causes and characteristics in the community can lead to significant positive change in the perception of people towards mental illness. This has the potential to cause a more tolerant and receptive attitude in a community, which are necessary for a successful community mental health care services delivery. A good knowledge about mental illness in the society can result in early help seeking and thereby provide a framework for early treatment interventions leading to improved long-term treatment outcomes for mental disorders (Oluwanuga & Kola, 2017).

People's knowledge and attitudes toward people living or having mental illness set the stage for how they provide opportunities for, interact with, and help support the persons with mental illness. The knowledge and attitudes of people toward mental illness also frame how they experience, behaviour and express their own emotional trauma, problems and psychological distress and whether they disclose these symptoms and seek care and support. A study by Kessler, Chiu, Demler and Walters (2017) revealed that about one in four U.S. adults (26.2%) age 18 and older, in any given year, have a mental disorder (e.g., mood disorder, anxiety disorder, impulse control disorder, or substance abuse disorder). This means that mental disorders are common and can affect anyone. Many adults with common chronic conditions such as arthritis, cancer, diabetes, heart disease, and epilepsy experience concurrent depression and anxiety, further complicating self-management of these disorders and adversely affecting quality of life (Chapman, Perry & Strine, 2014; El-Gabalawy, Cox, Clara & Mackenzie, 2018).

In the Nigerian situation, current evidence points to the paucity of basic knowledge about mental illness, its causes and characteristics. This in turn affects the needed priorities on what services or facilities are required to manage them. Conversely, there is growing evidence that changing the perception of Nigerians to mental illness will result in a better and more improved mental health care within the country (Abasiubong, Ekott & Bassey, 2017).

Meanwhile, mental health services in Nigeria like other developed countries are poorly

developed, individuals who require appropriate mental health interventions either do not receive them or experience delay from utilizing alternate pathways to care. Delays also occur when the police often prefer to detain offenders with suspected mental illness rather than refer to appropriate services promptly. It is not known if poor knowledge or negative and stigmatizing attitudes mediate the reluctance of the public to engage fully with mental health care services. The study aimed to examine the knowledge and attitudes of public towards persons with mental illness in Nnewi LGAs in Anambra State, Nigeria.

Statement of the Problem

There is high level of stigmatization and discrimination among people living with any form of mental illness in Nigeria especially in Anambra State.

On personal interactions with some of the mentally ill patients, they affirmed the ill treatment being meted on them by their relations—starved, beaten, isolated, chained and not allowed to contribute to family discussions, all because they are 'mad', 'onyeara', 'were', 'wawa'.

Many mentally ill patients wander in the villages, some live in refuse dumps, village squares and markets, being socially isolated by their families, no care, no love.

Again, attention of the researcher (a mental health nurse) was drawn in the emergency room (NAUTH Nnewi) of a mentally ill co-worker who had been absent from duty for several days. It was found out that she had been locked up, chained, and abandoned in a room by the family until security men intercepted and brought her for treatment.

During the researcher's minor posting in the Mental Health Clinic of NAUTH, Nnewi, observation made was that most of the mentally ill patients were maltreated; some were even abandoned by their relations in prayer houses.

A case of a man was brought to the clinic whose two daughters and a son had schizophrenia. He locked up the kids in one room without food or water.

Majority of the clients would be brought into the clinic in chains, both hands and feet, even beating them in the presence of the health care

personnel, denoting the inhuman treatment being given to the mentally ill in our society.

All the above, moved the researcher to seek to assess the knowledge and attitude of mental illness among people living in Nnewi LGAs of Anambra State.

Objective of the Study

Broad Objective: The main objective of this study was to examine the knowledge and attitude of mental illness among people living in Nnewi LGAs in Anambra State.

Specific Objectives

Specifically, the study seeks:

1. To assess the level of knowledge of mental illness among people living in Nnewi LGAs in Anambra State.
2. To determine the attitude of mental illness among people living in Nnewi LGAs in Anambra State.

Research Questions

1. What is the level of knowledge of mental illness among people living in Nnewi LGAs in Anambra State?
2. What is the attitude of people living in Nnewi LGAs in Anambra State towards mental illness?

Research Hypotheses

H_{01} : There is no significant difference between the knowledge and attitude of mental illness among people living in Nnewi LGAs in Anambra State

H_{02} : There is no significant relationship between the knowledge and level of education of mental illness among people living in Nnewi LGAs in Anambra State.

Scope of the Study

The geographical scope of the study is delimited to the people living within the Nnewi LGAs in Anambra State while the content scope will focus on how level of education, gender and age affect the knowledge and attitude of mental illness among people living in Nnewi LGAs in Anambra State.

Significance of the Study

The findings would be of great significance to individuals, families, health educators, health planners and policy makers, communities/ societies, ministry of health, and researchers.

The study would be of great importance to

individuals as the study would enlighten them on the implications of having negative attitude towards people living with mental illness. The individual persons would be made to understand that people living with mental illness are human which anybody can be a victim or affected by accident. Thus, showing the mentally ill with love and care could be a stepping stone for rehabilitating these people.

The study would be of great benefit to many families especially families of persons with mental illnesses. The families of persons with various forms of mental illnesses will be educated by this study on how to care and love the mentally ill persons and avoid discrimination. They will be update on how the larger societies see them which they who are the family members have to show them love and care and prove the society wrong that they are useless and worthless.

The study would benefit the health educators as they would be update on the existing knowledge about the attitude of the public towards the mentally ill persons. The health educators would also be educated on the current causes of mental illness and the way the public react to persons living with mental illness.

The study would be beneficial to the health planners and policy makers by bring to their notice the various forms of mental illness, causes of mental illness and the attitude of the public towards mentally ill persons. This would help them to plan and opt for policy option(s) that will be suitable to accommodate the mentally ill persons in the society. The study would be of great benefit to the larger communities. The communities would see the need for accommodating and showing love to the mentally ill persons for them to have the sense of belonging to the communities.

To the ministry of health, the study would help them to know the various forms of mental illness in the society. The study would also bring to their notice the various causes of mental illness and the attitudes of the people towards mentally ill persons and probably bring the study recommendations into play in the country. Furthermore, the study would add to the existing stock of scholarly literature on the subject. As such, it would then serve as a reference material or data for scholars/researchers whose interest would eventually be aroused by the findings to undertake further research on the area

Operational Definition of Terms

Attitude: Attitude is a persons' way of behaving, thinking, feeling or acting toward another person, thing or situation. In the context of this study, attitude means the way and manner the public takes and regards the mentally ill in Nnewi LGAs.

Knowledge: Knowledge is regarded as the understanding of fact or what somebody knows about something. This could be seen as experience of events or occurrences. In the context of this study, knowledge means what people in Nnewi LGAs understand mental illness to be.

Mental Illness: Mental illness is seen as inability or capacity to function properly or carry out task appropriately. It can be as a result of excessive stress, depression, anxiety, addictive behaviour, among others.

Nnewi LGAs: Nnewi is a metropolitan city which encompasses two local government areas, Nnewi North and Nnewi South. Nnewi LGAs is a business-oriented area that has much population of people with different categories.

Review of literature

Conceptual Review

Knowledge: Knowledge is a familiarity, awareness, or understanding of someone or something, such as facts (proportional knowledge), skills (procedural knowledge), or objects (acquaintance knowledge). Knowledge can be acquired in many different ways and from many difference sources, including but not limited to experience, education, reason, memory, scientific inquiry, exploration, and practice.

According to Eddy (2016), knowledge referred to a theoretical or practical understanding of a subject. It can be implicit (as with practical skill or expertise) or explicit (as with the theoretical understanding of a subject); formal or informal; systematic or particular. The philosopher Plato famously pointed out the need for a distinction between knowledge and true belief in the *Theaetetus*, leading many to attribute to him a definition of knowledge as "justified true belief" (Boghossian, 2015). The difficulties with this definition have been the subject of extensive debate in epistemology for more than half a century.

The definition of knowledge is a matter of ongoing debate among philosophers in the field of epistemology. The classical definition, described but not ultimately endorsed by Plato, specifies that a statement must meet three criteria in order to be considered knowledge: it must be justified, true, and believed (Boghossian, 2015).

Attitude: An attitude refers to a set of emotions, beliefs, and behaviours toward a particular object, person, thing, or event. Attitudes are often the result of experience or upbringing, and they can have a powerful influence over behaviour. While attitudes are enduring, they can also change. Attitudes can also be explicit and implicit. Explicit attitudes are those that we are consciously aware of and that clearly influence our behaviours and beliefs. Implicit attitudes are unconscious but still have an effect on our beliefs and behaviours.

According to Harris (2015) attitude is a general and lasting positive or negative opinion or feeling about some person, object, or issue. Attitude formation occurs through either direct experience or the persuasion of others or the media. Attitudes have three foundations: affect or emotion, behavior, and cognitions. In addition, evidence suggests that attitudes may develop out of psychological needs (motivational foundations), social interactions (social foundations), and genetics (biological foundations), although this last notion is new and controversial (Harris, 2015).

A key part of an attitude is the affect or emotion associated with the attitude. At a very basic level, we know whether we like or dislike something or find an idea pleasant or unpleasant. For instance, we may say that we know something "in our heart" or have a "gut feeling." In such cases, our attitudes have been formed though our emotions rather than through logic or thinking. This can happen through (a) sensory reactions, (b) values, (c) operant/instrumental conditioning, (d) classical conditioning, (e) semantic generalization, (f) evaluative conditioning, or (g) mere exposure (Harris, 2015).

Psychologists have diverse views about the concept of attitude and this has led to the problem of lack of unanimity on the concept with different individuals defining the concept. According to Balogun (2017), attitude is a particular tendency that is expressed by evaluating a particular entity with some degree

of favour or disfavour. To him, attitude is a response to stimuli that is positive or negative. He added further that attitude is a psychological tendency to act in a situation demanding for actions. Balogun posited that psychological tendency is a state that is internal of evaluative response, whether overt or covert; cognitive; affective and psychomotor behaviour. Psychological tendency are regarded as a type of bias that people put forward as responses which are positive or negative. He opined that attitude is biased because it is self-centered. This is because individual does not have attitude until he responds evaluative to entity on affective, cognitive and psychomotor basis. Thus, attitude according to him is similar to character.

Attitude is the way of individual acts or reacts to stimulus. It is a part of individual characteristics. Thus, attitude is a part of characters. Characters are long-lasting and develop over time, attitude occurs within a short time frame. Character cannot be identified within a short period of interaction but attitude can be ascertained shortly. Attitude is action towards event or reaction that is from the manner individual acts, reacts, speaks or behaves within the first contact; his attitude can be identified and evaluated to be acceptable or rejected.

In addition, Bavis (2016) is of the opinion that evaluative responses whether overt or covert can have and produce psychological tendency to respond with a particular degree of evaluation with an attitude or object. If the tendency to respond is established, the person has formed positive attitude towards the object. Therefore, the concept of attitude is a conscious effort and behaviour towards an entity or object.

Components of Attitudes

Attitudes comprise of three basic components: emotional, informational and behavioural.

Informational or Cognitive Component

The informational component consists of beliefs, values, ideas and other information a person has about the object. It makes no difference whether or not this information is empirically correct or real. For example, a person seeking a job may learn

from his own sources and other employees working in the company that in a particular company the promotion chances are very favourable. In reality, it may or may not be correct. Yet the information that person is using is the key to his attitude about that job and about that company.

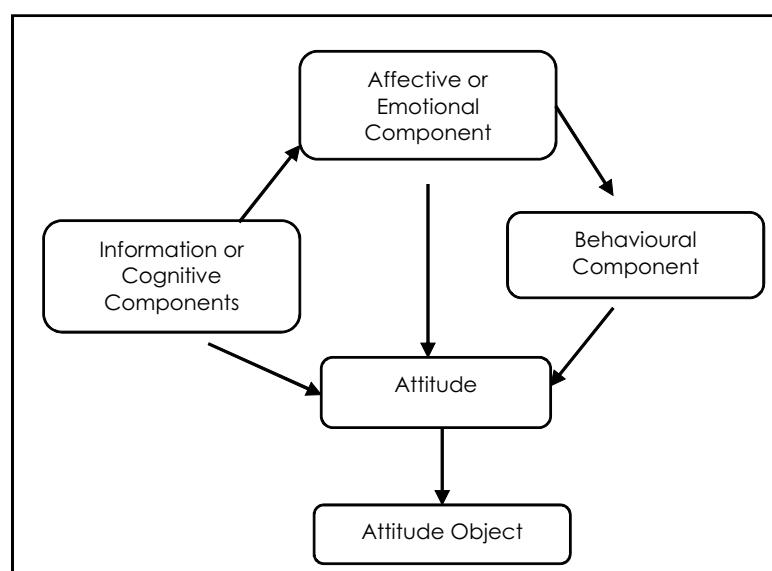
Emotional or Affective Component

The informational component sets the stage for the more critical part of an attitude, its affective component. The emotional components involve the person's feeling or affect-positive, neutral or negative-about an object. This component can be explained by this statement." I like this job because the future prospects in this company are very good".

Behavioural Component

The behavioural component consists of the tendency of a person to behave in a particular manner towards an object. For example, the concerned individual in the above case may decide to take up the job because of good future prospects. Out of the three components of attitudes, only the behavioural component can be directly observed. One cannot see another person's beliefs (the informational component) and his feelings (the emotional component). These two components can only be inferred. But still understanding these two components is essential in the study of organisational behaviour or the behavioural component of attitudes. The components are illustrated in figure 1 below:

Fig. 1: Components of Attitudes



Source: Researcher (2020)

Formation/Sources of Attitudes: Attitudes refer to the feelings and beliefs of "individuals or groups of individuals. But the question is how these feelings and beliefs developed? The point which has been stressed by many people is that attitudes are acquired, but not inherited. A person acquires these attitudes from several sources.

Direct Personal Experience: A person's direct experience with the attitude object determines his attitude towards it. The personal experience of an individual, whether it is favourable or unfavourable, will affect his attitude deeply. These attitudes which are based on personal experience are difficult to change. For example, an individual joins a new job, which is recommended to him by his friend. But when he joins the job, he finds his work repetitive, supervisors too tough and co-workers not so cooperative, he would develop a negative attitude towards his job, because the quality of his direct experience with the job is negative.

Association: Sometimes an individual comes across a new attitude object which may be associated with an old attitude object. In such a case, the attitude towards the old attitude object may be transferred towards the new attitude object. For example, if a new worker remains most of the time in the company of a worker, who is in the good books of the supervisor, and towards whom the supervisor has a positive attitude, the supervisor is likely to develop a favourable attitude towards the new worker also. Hence the positive attitude for the old worker has been transferred towards the new worker because of the association between the old and the new worker.

Family and Peer Groups: Attitudes like values are acquired from parents, teachers and peer group members. In our early years, we begin modeling our attitudes after those we admire, respect or may be even fear. We observe the way our family and friends behave and we shape our attitudes and behaviour to align with theirs. We do so even without being told to do so and even without having direct experience. Similarly, attitudes are acquired from peer groups in schools and organizations. For example, if the right thing is to visit "Amusement Park", or the "Domino's", you are likely to hold that attitude. If your parents

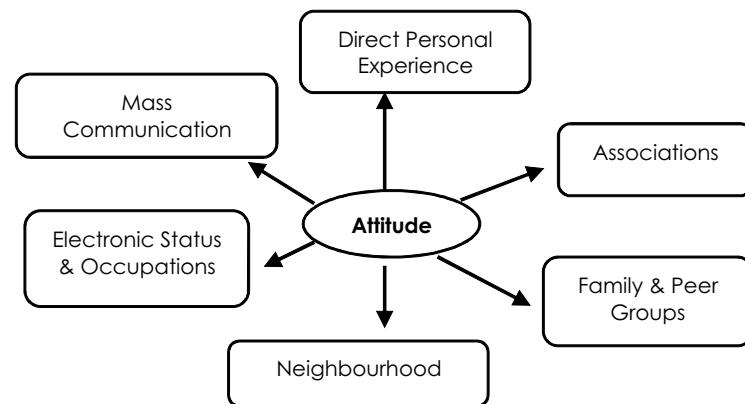
support one political party, without being told to do so, you automatically start favouring that party.

Neighbourhood: The neighbourhood in which we live has certain cultural facilities, religious groupings and ethnic differences. Further, it has people, who are neighbours. These people may be Northerners, Southerners etc. The people belonging to different cultures have different attitudes and behaviours. Some of these we accept and some of these we deny and possibly rebel. The conformity or rebellion in some respects is the evidence of the attitudes we hold.

Economic Status and Occupations: The economic status and occupational position of the individual also affect his attitude formation. Our socio-economic background influences our present and future attitudes. Research findings have shown that unemployment disturbs former religious and economic values. Children of professional class tend to be conservatives. Respect for the laws of the country is associated with increased years of higher education.

Mass Communications: Attitudes are generally less stable as compared to values. Advertising messages for example, attempt to alter the attitude of the people toward a certain product or service. For example, if the people at Innosson Motors can get you to hold a favourable feeling toward their cars, that attitude may lead to a desirable behaviour (for them)-your purchase of the Innosson car. All these sources can be illustrated with the help of figure 3 below:

Fig. 2: Formation/Sources of Attitudes



Source: Researcher (2020)

Mental Illness

Mental illness, also called mental health disorders, refers to a wide range of mental health conditions-disorders that affect one's mood, thinking and behaviour. Examples of mental illness include depression, anxiety disorders, schizophrenia, eating disorders and addictive behaviors. Many people have mental health concerns from time to time. But a mental health concern becomes a mental illness when ongoing signs and symptoms cause frequent stress and affect one's ability to function. A mental illness can make one miserable and can cause problems in one's daily life, such as at school or work or in relationships.

The World Health Organization (WHO), (2017) regarded mental illnesses as health conditions involving changes in emotion, thinking or behaviour (or a combination of these). Mental illnesses are associated with distress and/or problems functioning in social, work or family activities. Mental illness is common. WHO further revealed that in a given year; nearly one in five (19 percent) U.S. adults experience some form of mental illness; one in 24 (4.1 percent) has a serious mental illness; and one in 12 (8.5 percent) has a diagnosable substance use disorder.

Abasiubong, Ekott and Bassey (2017) opined that mental illness is a condition that affects a person's thinking, feeling or mood. Such conditions may affect someone's ability to relate to others and function each day. Each person will have different experiences, even people with the same diagnosis. Mental health is the foundation for emotions, thinking, communication, learning, resilience and self-esteem. Mental health is also key to relationships, personal and emotional well-being and contributing to community or society.

Derek (2018) defined mental illness as a behavioural or mental pattern that causes significant distress or impairment of personal functioning. Such features may be persistent, relapsing and remitting, or occur as a single episode. A mental health condition is not the result of one event. Research suggests multiple overlapping causes. Genetics, environment and lifestyle influence whether someone develops a mental health condition (Derek, 2018). A stressful job or home life makes some people more susceptible, as do traumatic life events like being the victim of a crime.

Mental illness is also called mental health

disorder. It is emotional and mental impairments. It can also be regarded as mental retardation, organic brain disease, and learning disabilities. It includes depression, anxiety disorder, additive behaviour, bipolar disorder, dementia, schizophrenia, autism, stress disorder, among others.

Mental illness does not discriminate; it can affect anyone regardless of your age, gender, geography, income, social status, race/ethnicity, religion/spirituality, sexual orientation, background or other aspect of cultural identity. While mental illness can occur at any age, three-fourths of all mental illness begins by age 24 (Uwakwe, 2017). Mental illnesses take many forms. Some are mild and only interfere in limited ways with daily life, such as certain phobias (abnormal fears). Other mental health conditions are so severe that a person may need care in a hospital.

Causes of Mental Illness

What are the causes of mental illness? Although the exact cause of most mental illnesses is not known, it is becoming clear through research that many of these conditions are caused by a combination of biological, psychological, and environmental factors.

Biological Factors of Mental Illness

Some mental illnesses have been linked to abnormal functioning of nerve cell circuits or pathways that connect particular brain regions. Nerve cells within these brain circuits communicate through chemicals called neurotransmitters. 'Tweaking' these chemicals (through medicines, psychotherapy or other medical procedures) can help brain circuits run more efficiently. More so, defects in or injury to certain areas of the brain has also been linked to some mental conditions.

Other biological factors that may be involved in the development of mental illness include:

- a. Genetics (heredity):** Mental illnesses sometimes run-in families, suggesting that people who have a family member with a mental illness may be somewhat more likely to develop one themselves. Susceptibility is passed on in families through genes. Experts believe many mental illnesses are linked to abnormalities in many genes rather than just one or a few and that how these genes interact with the environment is unique for every person (even identical twins). That is why a person inherits a susceptibility to a

mental illness and does not necessarily develop the illness. Mental illness itself occurs from the interaction of multiple genes and other factors (such as stress, abuse, or a traumatic event) which can influence, or trigger, an illness in a person who has an inherited susceptibility to it.

- b. Infections:** Certain infections have been linked to brain damage and the development of mental illness or the worsening of its symptoms. For example, a condition known as pediatric autoimmune neuropsychiatric disorder (PANDAS) associated with the Streptococcus bacteria has been linked to the development of obsessive-compulsive disorder and other mental illnesses in children.
- c. Brain defects or injury:** Defects in or injury to certain areas of the brain has also been linked to some mental illnesses.
- d. Prenatal damage:** Some evidence suggests that a disruption of early fetal brain development or trauma that occurs at the time of birth (for example, loss of oxygen to the brain) may be a factor in the development of certain conditions, such as autism spectrum disorder.
- e. Substance abuse:** Long-term substance abuse, in particular, has been linked to anxiety, depression, and paranoia.
- f. Other factors:** Poor nutrition and exposure to toxins, such as lead, may play a role in the development of mental illnesses.
- g.** Others include Pathogens; Problems during gestation or birth; Cognitive style; etc.

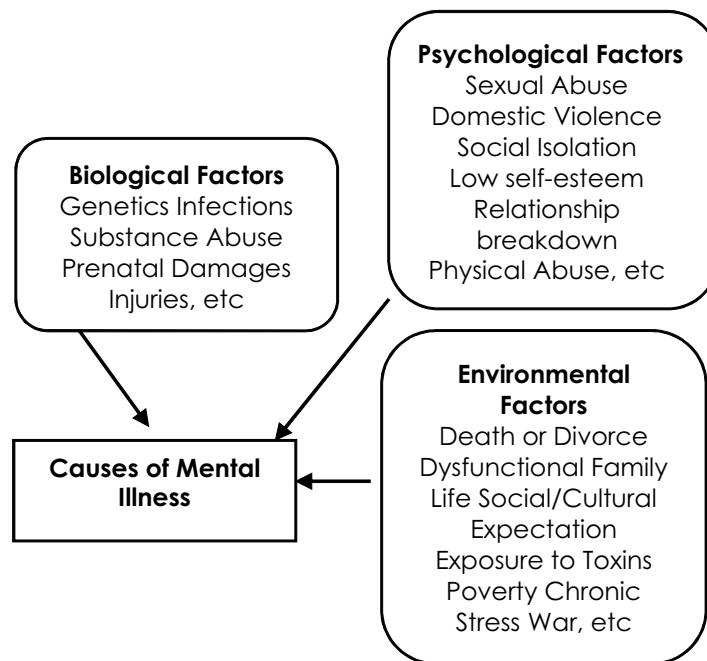
Psychological Factors of Mental Illness

Psychological factors that may contribute to mental illness include: Severe psychological trauma suffered as a child, such as emotional, physical, or sexual abuse; An important early loss, such as the loss of a parent; Neglect; Poor ability to relate to others; Low self-esteem; Depression; Domestic violence; Relationship breakdown; and Social isolation.

Environmental Factors of Mental Illness

Certain stressors can trigger an illness in a person who is susceptible to mental illness. These stressors include: Death or divorce; A dysfunctional family life; Feelings of inadequacy, anxiety, anger, or loneliness; Changing jobs or schools; Social or cultural expectations (For example, a society that associates beauty with thinness can be a factor in the development of eating disorders.); Substance abuse by the person or the person's parents; poor nutrition; exposure to toxins; stressful life events; chronic stress; culture; poverty; and war.

Fig 3: Causes of Mental Illness



Source: Researcher (2020)

Empirical Review

International Studies on the Attitude of General Public toward Mental Illness

Abi, Haddad, Sacre, Salameh, Akeland Obeid (2019) conducted a study on the knowledge, attitude and behaviors towards public stigma of mental health diseases, among a sample of the Lebanese population. A cross-sectional study, conducted between November 2017 and May 2018, enrolled 2289 community dwelling participants using a proportionate random sample from all Lebanese governorates (Beirut, Mount Lebanon, North, South and Bekaa). The Mental Health Knowledge Schedule (MAKS), the Community Attitudes toward Mental Illness

(CAMI) and the Reported and Intended Behavior Scale (RIBS) were used to assess knowledge, attitude and behaviors toward mental illness respectively. The 25th, 50th and 75th percentile of the MAKs, CAMI and RIBS scales scores were considered as cutoff points for low, medium and high scores respectively. Data analysis was conducted using SPSS software version 23. The independent-sample t-test was used when comparing two means, whereas the ANOVA test was used to compare 3 means or more. The Pearson's correlation coefficient was used between 2 quantitative variables. The result revealed a high knowledge score was found in 33.0% of the participants, whereas a high attitude score and a higher behavior score were found in 32.2% and 26.9% of the participants respectively. Living in North Lebanon ($\text{Beta} = 1.331$) and being familiar with a non-close person with mental illness ($\text{Beta} = 0.811$) were associated with higher knowledge of mental illness (higher MAKs score), whereas living in Bekaa ($\text{Beta} = -8.693$) and being 70 years old and above ($\text{Beta} = -5.060$) were associated with lower knowledge toward mental illness (lower MAKs score). Higher knowledge of mental illness (higher MAKs score) ($\text{Beta} = 0.670$), having a high level of education (university ($\text{Beta} = 8.785$), secondary ($\text{Beta} = 6.084$) and technical ($\text{Beta} = 5.677$)) were associated with less stigmatizing attitudes (higher CAMI scale). Being familiar with close people with mental illness ($\text{Beta} = 0.577$), less stigmatizing attitudes (higher CAMI scale) ($\text{Beta} = 0.077$) and higher knowledge of mental illness (higher MAKs score) ($\text{Beta} = 0.115$) were associated with higher favorable behaviors (higher RIBS score), whereas knowing a non-close person who have a mental illness ($\text{Beta} = -0.720$) was associated with lower favorable behaviours (lower RIBS score). The study concluded that a mass media awareness campaigns that could transmit health messages to a wide public audience in the country to fight stigma toward mental illness, seems warranted. This study is related to the present study in terms of both studies discussing the attitude of general public toward mental illness. Although the former study was conducted in Lebanon, the current study will be carried out in Nigeria. The studies are also similar in terms of the survey research design. The studies differ in terms of method of analysis, area of study and population of the study.

Anwar, Mostafa, Mahmoud, Adel, Zainab, Abdallah and Omar (2019) determined levels of knowledge, perception, and attitudes toward

MI, determine attitudes toward mental health help-seeking, and identify socio-demographic predictors of correct knowledge and favorable attitudes among the Saudi public. A cross-sectional survey was conducted on 650 Saudi adults aged >18 years who attended the Saudi Jenadriyah annual cultural and heritage festival during February 2016. The previously validated Attitudes to Mental Illness Questionnaire (AMIQ) were used. Attitude to professional help-seeking was also assessed, using a tool retrieved from the World Mental Health Composite International Diagnostic Interview part II. SPSS software version 25 was used for data entry and analysis. Descriptive statistics - mean scores, SD, frequency, and percentages for all independent variables - were used. Student's t-test and ANOVA were applied for quantitative data, and c² test was used for qualitative data. To predict significant predictors of knowledge, perceptions, and attitudes on MI and mental health help-seeking, multiple regression analyses were applied. Significance was considered to be $P < 0.05$. The showed that majority of the Saudi public reported lack of knowledge about the nature of MI (87.5%, percentage mean score [PMS] 45.02 }19.98), negative perception (59%, PMS 59.76 }9.16), negative attitudes to MI (66.5%, PMS 65.86 }7.77), and negative attitudes to professional help-seeking (54.5%, PMS 62.45 }8.54). Marital status was a predictor of knowledge ($t = -3.12$, $P = 0.002$), attitudes to MI ($t = 2.93$, $P = 0.003$), and attitudes to help-seeking ($t = 2.20$, $P = 0.03$). Attitudes to help-seeking were also predicted by sex ($t = -2.72$, $P = 0.007$), employment ($t = 3.05$, $P = 0.002$), and monthly income ($t = 2.79$, $P = 0.005$). Perceptions toward the mentally ill were not predicted by these socioeconomic characteristics ($P > 0.05$).

The Saudi public reported lack of knowledge of MI and stigmatizing attitudes toward people with MI in relation to treatment, work, marriage, and recovery and toward professional help-seeking. Socio-demographic characteristics predicted correct knowledge and favorable attitudes, while Saudi culture was the likely factor behind negative judgments about mentally ill persons. Efforts to challenge this negative publicity and stigma through anti-stigma campaigns and public education through schools and media are recommended. This study is related to the present study in terms of both studies discussing the attitude of general public toward mental illness. Although the former study was conducted in Saudi Arabia, the current study will be carried out in Nigeria.

The studies are also similar in terms of the survey research design. The studies differ in terms of method of analysis, area of study and population of the study.

Eyasu, Medhane, Amos, Dawit, Eyob, Eyob and Nebay (2018) determined the attitude of secondary school students towards mental illness and its associated factors. A cross-sectional study design employing stratified random sampling was applied to select a sample of 402 students. Data was obtained using a self-administered Belief towards Mental Illness (BMI) questionnaire. Independent sample t-tests and one way ANOVA were used to determine possible differences in scores of attitude. From a total of 21 BMI scale items, positive attitudes were found in eight items and negative attitudes were found in the remaining thirteen. The mean score of the full BMI scale was 2.47 (95% CI: 2.41, 2.54). The mean (95% CI) scores of dangerousness, poor social relations and incurability, and shame subscales were 2.68 (2.60, 2.76), 2.55 (2.48, 2.62), and 1.22 (1.09, 1.34), respectively. A significant negative correlation was found between attitude scores and the average mark of students ($r = -0.257, p < 0.0001$). Moreover, significant differences in attitude scores were observed between students with a relative of mental illness and those without such a relative ($p=0.004$). There was an increasing trend of positive attitudes with increased educational level among 9th, 10th, and 11th graders ($p\text{-trend}<0.0001$) and with an increase in the educational level of the students father ($p\text{-trend}=0.028$). However, no significant difference in attitude score was found across categories of sex, religion, living condition of father, presence of a mentally ill neighbor, educational level of mother, or ethnicity.

In conclusion, considerable numbers of secondary school students have negative attitudes towards mental illness. Implementation of programs that enhance positive attitudes towards mentally ill individuals is recommended. This study is related to the present study in terms of both studies discussing the attitude of people toward mental illness. Although the former dealt with secondary school students towards mental illness in Asmara, Eritrea, the current study will deal with the attitude of general public toward mental illness in Anambra State, Nigeria. The studies are also similar in terms of the survey research design. The studies differ in terms of method of analysis, area of study and population of the study.

Yuan, Abdin, Picco, Vaingankar, Shahwan and Jeyagurunathan (2016) examined the underlying factors of the Attitudes to Mental Illness questionnaire among the general population in Singapore and the socio-demographic correlates of each factor. Data for the current study were from a nation-wide cross-sectional survey of mental health literacy conducted in Singapore from March 2014 to April 2015 with 3,006 participants. It adopted a disproportionate stratified sampling design with 12 strata by age ($18\pm34, 35\pm49, 50\pm65$) and ethnicity groups (Chinese, Malay, Indian, and other ethnic groups). A probability sample was randomly selected via a registry that maintains the names and socio-demographic characteristics such as age, gender, ethnicity and household address of all residents in Singapore. To be included in this study, participants had to be Singapore residents (Citizens or Permanent Residents) aged between 18 ± 65 years and living in Singapore during the recruitment period. Residents aged 50 ± 65 years,

Malays and Indians were over-sampled to ensure sufficient sample size for subgroup analysis. 26-items of the original 27-item AMI questionnaire were used in the current study to measure public attitudes towards mental illness. Items were rated on a 5-point Likert scale ranging from '1 = strongly agree' to '5 = strongly disagree'. Socio-demographic information including age, gender, ethnicity, marital status, education level, employment status and personal monthly income were also collected. Multivariate linear regression was conducted to examine the socio-demographic correlates (i.e. age, gender, ethnicity, marital status, education level, employment status and personal income) for each of the AMI factor scores (dependent variables). A two-sided p-value below 0.05 was considered as statistically significant. The descriptive and the multivariate linear regression analyses were conducted using SAS 9.3. The study found that revealed a 4-factor structure for the Attitudes to Mental Illness questionnaire among the Singapore general population, namely social distancing, tolerance/support for community care, social restrictiveness, and prejudice and misconception. Older age, male gender, lower education and socio-economic status were associated with more negative attitudes towards the mentally ill. Chinese showed more negative attitudes than Indians and Malays (except for prejudice and misconception). The study concluded that there is need for culture-

specific interventions, and the associated factors identified in this study should be considered for future attitude campaigns. This study is related to the present study in terms of both studies discussing the attitude of general public toward mental illness. Although the former study was conducted in Singapore, the current study will be carried out in Nigeria. The studies are also similar in terms of the survey research design. The studies differ in terms of method of analysis, area of study and population of the study.

Yan Tang (2015) conducted a study on the attitude of general public toward mental illness in China and investigated the factors associated with attitude toward mental illness. Two research questions guided the conduct of the study. A cross-sectional study design was adopted. Data was collected in 10 housing estates randomly selected from a list of housing estates with mental rehabilitation centers in Hong Kong in September 2014. 20 respondents were selected by quota sampling from every chosen housing estate. The inclusion criteria for the selection were residents of respective housing estates, aged over 18 years and could communicate in Chinese. The exclusion criterion was those diagnosed with mental illnesses. In total, 200 respondents were recruited. They were asked to complete a 15-item questionnaire using a 5-point Likert scale. General Linear Model Univariate Analysis and correlation analysis were used to analyze the data. The results showed that amongst 200 respondents, 42.5% were female and 57.5% were male. 70-80% of respondents believed that everyone had equal chance of having mental illness. They thought that the community should tolerate mentally ill people, and those who are mentally ill should not blame themselves for the illness. 40-70% of respondents expressed that they had difficulty in communicating with mentally ill people. They also commented that the behaviours of the mentally ill were difficult to predict. Such people would conceal their mental problem. Correlation analysis found that the attitude score was negatively associated with age ($r = 0.152, p = 0.032$) and positively associated with educational attainment ($r = 0.176, p = 0.013$) and family history of mental illness ($r = 0.139, p = 0.045$). The study concluded that public expressed uneasiness when getting contact with mentally ill people. Their unfamiliarity with mental illness which is yet properly addressed could be an obstacle of mental rehabilitation. This study is related to the present study in terms of both studies discussing

the attitude of general public toward mental illness. Although the former study was conducted in Hong Kong, China, the current study will be carried out in Nnewi LGAs in Anambra State, Nigeria. The studies are also similar in terms of the survey research design adopted. The studies differ in terms of method of analysis, area of study and population of the study.

Nigerian Studies on the Attitude of General Public toward Mental Illness

Effiong, Idung and Iyanam (2019) conducted a study on the knowledge, attitudes and perceptions about mental illness in Ekom Iman Community in Akwa Ibom State, Nigeria. This study examines causal attributions, the perceptions and attitudes towards mental illness and the help seeking behaviour of a community in the south-south region of Nigeria. This is cross sectional descriptive study which was conducted among residents of Ekom Iman community in Akwa Ibom State in the South-South region of Nigeria. Causal belief, attitude toward mental illness and help seeking behaviour were assessed using a structured questionnaire. Poor knowledge of mental illness and stigmatizing attitudes are common. Most of the respondents prefer to keep a high social distance from the mentally ill and are unwilling to maintain close social contacts with them expressed as refusal to share a room, marry, keeping friendship with them. The study concluded that causal beliefs of mental illness affects help seeking behavior. Poor knowledge and exposure to mental illness was common. Attitudes towards mental illness were generally negative and stigmatizing. Multidisciplinary community interventions are required to ensure high social acceptance and preference for orthodox professional treatment of mental illness. This study is related to the present study in terms of both studies discussing the attitude of public toward mental illness. Although the former study was conducted in Akwa Ibom State, the current study will be carried out in Nnewi LGAs in Anambra State. The studies are also similar in terms of the survey research design employed. The studies differ in terms of method of analysis, area of study and population of the study.

Adewuya and Makanjuola (2018) conducted a study on the pattern and correlates of the lay beliefs regarding causes of mental illness in Osun State Nigeria. A quantitative cross-sectional study was used to select 2342 respondents from 3 different communities being urban, semi-

urban and rural in Osun State. Thus, the response rate was 88%. Results showed beliefs in supernatural factors and the misuse of psychoactive substances to be the most prevalent factors. Urban settlement, higher education, and knowledge of mental illness correlated with belief in biological and psychosocial causation. Rural settlement, older age and lack of knowledge of mental illness correlated with belief in supernatural causation. Educational status had no effect on belief in supernatural causation. This study is related to the present study in terms of both studies discussing the attitude of public toward mental illness. Although the former study was conducted in Osun State, the current study will be carried out in Nnewi LGAs in Anambra State. The studies are also similar in terms of the survey research design adopted. The studies differ in terms of method of analysis, area of study and population of the study.

Abasiubong, Ekott and Bassey (2017) conducted a comparative study of attitude to mental illness between journalists and nurses in Uyo, Nigeria. A cross-sectional quantitative study carried out to assess the attitude of 250 randomly assessed journalists in to mental illness using the Taylor and Dear Inventory of Community Attitude to mental illness. Results were then compared with 180 nurses from Health centers in the same city. Response rate were 84% (210) for journalist and 86% (154) for nurses. Responses were similar in the two groups, however there showed to be a widespread negative attitude to mental illness among journalist (70%) than nurses (60%). Common opinions given on knowledge and causes of mental health by journalists (79.5%) and nurses (59.1%) included; black magic, evil powers, witchcrafts, God's punishment to sin. A majority of the journalists (97%) and nurses (89%) believed mentally ill people to be dangerous, violent and should not be married. This study is related to the present study in terms of both studies discussing the attitude of public toward mental illness. Although the former study was conducted in Uyo State using journalists and nurses, the current study will be carried out in Nnewi LGAs in Anambra State using the general public in the area. The studies are also similar in terms of the survey research design adopted. The studies differ in terms of method of analysis, area of study and population of the study.

Uwakwe (2017) investigated the views of some selected Nigerians about mental disorders in Nnamdi Azikiwe University Teaching Hospital,

Nnewi, Anambra state, Nigeria. A quantitative cross-sectional descriptive study was adopted for the study. The study had 144 respondents (30 medical students, 20 nurses, 20 medical record officers, 10 religious ministers, and 64 others). Primary data was collected using self-administered questionnaires assessing the causes of mental disorders, the role of evil spirits in mental disorders and treatment options. The study was analyzed using simple percentage and mean. The result revealed that 28.4% expressed evil spirits are causes of mental illnesses and 66% recommended prayer houses for treatment of mental disorders. There was no difference in beliefs and attitude for medical students even after 4-weeks of rotation in mental health clerkship. This study is related to the present study in terms of both studies discussing the attitude of public toward mental illness. Although the former dealt with medical students, nurses, medical record officers, religious ministers, and others, the current study will be carried out in Nnewi LGAs in Anambra State using the general public and the persons with mental illness. The studies are also similar in terms of the survey research design, method of analysis and the area of study. The studies differ in terms of population of the study.

Ikwuka, Galbraith, Manktelow, Chen-Wilson, Oyebode and Muomah (2016) investigated the attitudes of the Igbo people of Southeastern Nigeria toward mental illness to establish the extent and determinants of negative attitudes. Descriptive survey design was adopted by the study. Multistage sampling was used to select participants ($n = 602$), to whom questionnaires were administered. More than half of all the demographic groups demonstrated authoritarian attitude and primary social distance. A third of the sample equally endorsed social restrictiveness, anti-community care, and secondary social distance. Low education, male gender, older age, protestant denomination, and not being familiar with people with mental illness predicted more negative attitudes. Culture, stereotypes, causal explanations, and poor mental health knowledge were the leading mediators of negative attitudes. The determinant role of culture and demographic variables in the stigma dynamics indicate that contextualized and targeted interventions could be more effective than general campaigns. This study is related to the present study in terms of both studies discussing the attitude of public toward mental illness. The studies are also similar in terms of the survey research design. The studies differ

in terms of method of analysis, area of study and population of the study.

Adebawale and Ogunlesi (2015) examined the beliefs and knowledge about etiology of mental illness among Nigerian psychiatric patients and their relatives in Aro Neuropsychiatric hospital, Abeokuta, Ogun State, Nigeria. A quantitative cross-sectional study was used for the study and enrolled a total of 140 participants. 70 were out-patients who had been diagnosed with, schizophrenia, mania, or bipolar affective disorder, not acutely ill or having any symptoms of mental disorder at the period of assessment. Another 70 were relatives of psychiatric patients. Response rate was 100%. Data was compared between both groups based on pre-identified indices to assess the knowledge and beliefs of both groups on the causal factors of psychiatric illness. 17% of patients and relatives respectively gave medical causal explanations; 23% of patients and 19% of relatives gave psychosocial causal explanations. The most acceptable causal explanation for both patients and relatives was supernatural explanation, while the least was psychosocial. This study is related to the present study in terms of both studies discussing the attitude of public toward mental illness. Although the former study was conducted in Ogun State using the patients and their relatives, the current study will be carried out in Nnewi LGAs in Anambra State using the general public in the area. The studies are also similar in terms of the survey research design adopted. The studies differ in terms of method of analysis, area of study and population of the study.

Kabir, Iliyasu, Abubakar and Aliyu (2015) examined the perception and beliefs about mental illness among adults in Karfi Village, Kano State, Nigeria. A cross-sectional descriptive study involving 250 adults randomly selected using a multi-stage technique was employed in the study. Quantitative primary data was collected using a pre-tested, semi-structured questionnaire. The study was designed to assess the knowledge, attitude and beliefs about causes, manifestations and treatment of mental illness and the analysis was carried out with the help of percentage and mean. Results revealed 50% had negative feelings towards the mentally ill. Also, the most common cause of mental illness was substance abuse and alcohol, then supernatural powers and magic. 46% preferred orthodox methods of treatment. This study is related to the present study in terms of both studies discussing the attitude of public toward

mental illness. Although the former study was conducted in Karfi Village, Kano State, the current study will be carried out in Nnewi LGAs in Anambra State. The studies are also similar in terms of the survey research design adopted. The studies differ in terms of method of analysis, area of study and population of the study.

Adewuya and Oguntade (2014) investigated the doctors' attitude towards people with mental illness in Ekiti, Ondo and Osun states in South-western Nigeria. A quantitative cross-sectional study was used by randomly recruited 350 medical doctors from eight selected health institutions in three states in Nigeria. The doctors completed the questionnaire on the knowledge and attitude towards patients with mental illness. Thus, the response rate was 89%. The study was analyzed with the use of simple percentage and mean. Results reported 64% of medical doctors showed high social distance. Belief in supernatural causes was more prevalent and perceived dangerousness was also high among respondents. This study is related to the present study in terms of both studies discussing the attitude of public toward mental illness. Although the former study was conducted in Ekiti, Ondo and Osun states in South-western Nigeria using doctors, the current study will be carried out in Nnewi LGAs in Anambra State using the general public. The studies are also similar in terms of method of analysis and the survey research design employed. The studies differ in terms of area of study and population of study.

Theoretical Review

Public Attitude and Beliefs towards Mental Illness

Throughout the world, there is an increasing awareness of mental illness as a significant cause of morbidity (Adebawale & Ogunlesi, 2015). This awareness has increased with the steady decline of morbidity due to nutritional disorders, communicable diseases and other forms of physical illness, especially in countries undergoing epidemiological transition.

The role of the community in the prevention and care of the mentally handicapped has now been widely acknowledged and is regarded as the most appropriate basis for the development of mental health programs. Several studies have shown that knowledge of public attitude to mental illness and its treatment is a vitally important prerequisite to the realization of successful community based programmes

(Abasiubong, Ekott & Bassey, 2017; Abi et al. 2019).

The recognition of mental disorder also depends on a careful evaluation of the norms, beliefs and customs within the individual's cultural environment. Furthermore, community attitude and beliefs play a role in determining help-seeking behavior and successful treatment of the mentally ill. Unarguably, ignorance and stigma prevent the mentally ill from seeking appropriate help.

People tend to have strong beliefs about the mentally ill, and many of these concepts are based on prevailing local systems of belief (Kabir et al. 2015). In developing any mental health education program, the basis of such beliefs must be taken into consideration. People's beliefs regarding mental illness should not only be known, but the purpose of their beliefs should be understood. Such attitudes and beliefs about mental illness can only be studied within a cultural context. Although the knowledge and perception of mentally ill patients and their relatives regarding mental illness has been reported from southwest Nigeria (Adebawale & Ogunlesi, 2015), to date there is little research on public attitudes towards mental illness from southern Nigeria, thus, the thrust of the study to bridge the gap in literature.

Community Attitude and Beliefs towards Mental Illness

Mental and behavioural problem exist in all countries, in women and men at all stages of life, among the poor and rich and among rural and urban people. According to WHO, as many as 450 million people worldwide are estimated to be suffering at any given time from some kind of mental or brain disorder, including behavioral and substance related disorders. Worldwide it is estimated that life time prevalence ranges from 12.2% to 48.6% and 12-month prevalence between 8.25% and 29.1% (WHO, 2017).

Community's perception of mental health varies across the culture, and there are various myths and beliefs regarding mental health (Arnault, 2014). The conceptualization and perceived cause of mental illness vary from community to community. Accordingly, people with mental health problem get different names in different societies (Arnault, 2014).

Several studies show that people's belief regarding mental illness is also the main factor which leads to stigmatization and labeling.

Stigma against people with mental illness remains a significant barrier to positive outcomes across cultures and nations, related to the threat value of mental symptoms, intolerance for diversity, and inaccurate conceptions of mental disorder. Community's perception is dynamic and tends to change as the awareness and education changes. Education and social media are the major factors which move the perception of the community to the scientific perspectives (Effiong et al. 2019).

Globally, including developed and developing countries, people held different explanation regarding mental illness, especially its causal and treatment option. A report of the behavioral risk factor surveillance system shows that in USA 80% of the adult population in the state surveyed agree that mental illness treatment is effective. The rest either disagree or have no idea about that and only 35%-67% of the population agreed that people are caring and sympathetic to people with mental illness (Behavioral Risk Factor Surveillance System (BRFSS), 2012).

Mental health, neglected for far too long, is crucial to the overall well-being of individuals, societies, and countries and must be universally regarded in a new light. Unfortunately, in most parts of the world, mental health and mental disorders are not regarded with anything like the same importance as physical health (Adewuya & Oguntade, 2014).

Poor perception of mental illness in different community contributed to low treatment seeking and stigmatization of people with mental illness. They often go to hospitals after they have tried all options and after the symptom has got worse and this in turn negatively affect the prognoses of treatment. Hence, assessing community's perception is important to have appropriate plan of health promotion and scaling up publics' utilization of mental health services, particularly in multiethnic and multicultural Nigeria as the community's view of mental illness varies with culture. In Nigeria, there are few published studies (Uwakwe, 2017) assessing community perception towards people with mental illness. Therefore, this study has great value on assessing the perception of the community towards mental illness.

Conceptual Model

Health Belief Model (HBM)

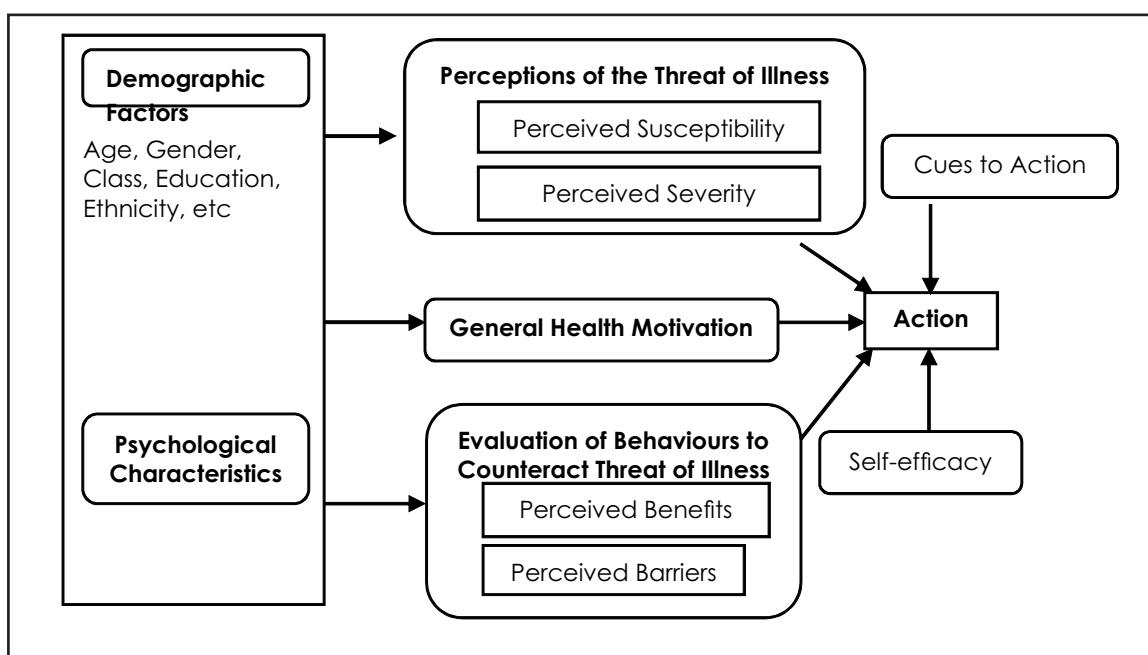
This study was anchored on the Health Belief Model (HBM). The health belief model (HBM) was championed by Hochbaum in 1956. The model was an attempt to explain why individuals fail to engage in preventive health measures. Hochbaum concerned was why people seek diagnostic x-rays for tuberculosis. Hochbaum published a paper on this topic, which contained references to factors that would later become part of the HBM, such as perceived personal susceptibility and perceived benefits of engaging in the preventative behaviour. The first clear formulation of the HBM appeared in a paper by Rosenstock in 1966, and was later refined by Marshall Becker in 1974. Today, the HBM is one of the most widely used social cognition models in health psychology.

Becker (1979) explains reasons for compliance behaviour. The model is known to be most successful when applied to preventive health services. It has been used extensively to organize theoretical predictors of preventive health actions including individual perceptions

of diseases, individual perception of preventive actions and modifying factors such as social and demographic and structural characteristics.

The model states that individuals engage in preventive health behaviour based on three main factors. These factors are perceived vulnerability, perceived severity and perceived benefits. This means that a person would have to believe that he or she is susceptible or vulnerable to a disease in order to take any action. The value of compliance is therefore based on the probability that in the client's view, compliance will reduce the perceived threat and not be too costly in money, time and emotional energy (Becker, 1979). Hence, the preventive action taken by an individual depends on the individual's perception that he or she is personally susceptible and that occurrence of the disease would have at least some severe implication of a personal nature. The assumption here is that taking action reduces susceptibility. The perception of threat is also affected by modifying factors. These include demographic, social, psychological and structural variables. These can influence both perception and corresponding cue necessary to instigate action.

Fig. 4: The Conceptual Model of Health Belief Model (HBM)



Source: The Health Belief Model (HBM) modified by Rosenstock, Strecher and Becker (1998)

Explanation of the Conceptual Model

The model contains two main components, (1) perceptions of the threat of illness and (2) evaluations of the effectiveness of behaviours aimed at counteracting the threat of illness (see Figure 3). Threat perceptions result from beliefs about the perceived susceptibility to the illness and the perceived severity of the consequences of the illness. Perceived susceptibility refers to an individual's assessment of his or her personal risk of contracting a condition. Perceived severity is concerned not just with medical consequences, but also with the potential effects of an illness on an individual's job, family life, and social relations. Whether an individual engages in a health-related behaviour is determined by the combined effect of these two variables. An individual will decide on the particular action to be taken by evaluating the possible alternatives. Health behaviours will be evaluated in terms of their perceived benefits or efficacy and also by their perceived costs or barriers. Examples of perceived benefits are the reduction of susceptibility to an illness or the reduced severity of an illness. Examples of perceived barriers are the health behaviour being painful, inconvenient, unpleasant, or expensive. Therefore, according to the HBM, individuals are likely to follow a particular health action if they believe that they are susceptible to a particular condition or illness that they consider to be serious, and believe the benefits of the action taken to counteract the condition or illness outweigh the costs.

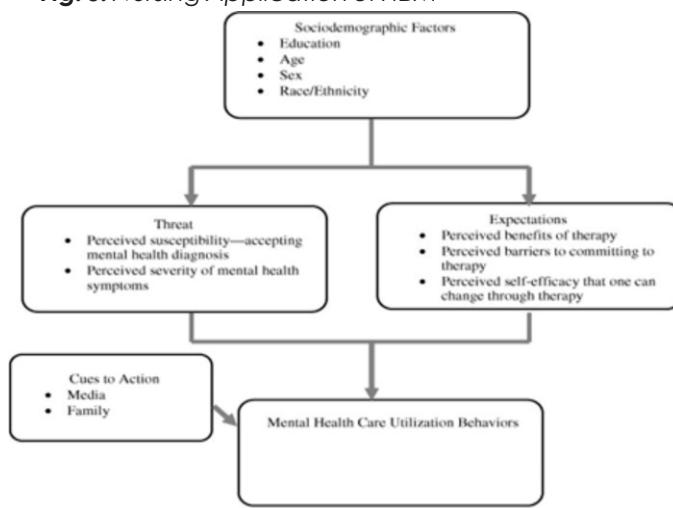
Although Hochbaum discussed cues to action in some of his early publications, they were not added to the HBM until later. Health motivation was also not an original part of the model, but in 1974 Becker published an influential paper suggesting that it should be added to the model. According to Janz and Becker (1984), cues to action include a diverse range of triggers to the individual taking action and are commonly divided into factors that are internal (e.g., physical symptom) or external (e.g., mass media campaign, advice from others such as physicians) to the individual. Becker defined health motivation as readiness to be concerned about health matters and argued for its inclusion in the model as certain individuals may be predisposed to respond to cues to action because of the value they place on their health.

Other influences on the performance of health behaviors include demographic factors such as age, gender, ethnicity, socioeconomic status,

and education. Psychological characteristics such as personality, peer pressure, and perceived control over behavior are also thought to play a role. Both these groups of factors are assumed to exert their influence indirectly by influencing the other six components of the HBM. Evidence, however, to support this contention is mixed. For example, a study by Orbell, Crombie and Johnston (1996) found that HBM components did mediate the effects of social class on uptake of cervical screening, but did not mediate the effects of marital status or sexual experience.

The HBM has been applied to a wide range of populations and health behaviors. Sheeran and Abraham (2006) distinguished three broad areas of research: (1) preventative health behaviours, (2) sick role behaviours, and (3) clinic use. They noted that the preventative health behaviours to which the HBM have been applied include smoking, alcohol use, diet, exercise, genetic screening, health screening, vaccination, breast self-examination, contraceptive use, and dental behaviours. Sick role behaviours include compliance with professionally recommended medical regimens in response to illness. Sheeran and Abraham described how the HBM has been used to study adherence to a wide range of regimens such as those concerned with hypertension, diabetes, and renal disease. Examples of how the HBM has been applied to clinic use include physician visits for preventative, psychiatric, and parent and child conditions. According to Sheeran and Abraham, there is no strong evidence that the HBM has been more predictive of behaviour in any one of these areas compared to any other.

Fig. 5: Nursing Application of HBM



Adapted from Health Belief Model proposed by Rosenstock et al., 1990

Appraisal of Literature Review

The literature for this study focused on the conceptual review, empirical review, theoretical review, conceptual model and explanation of the conceptual model. Under the conceptual review, concepts such as attitude (components of attitudes and formation/sources of attitudes), and mental illness (causes of mental illness) were reviewed. The theoretical review was done under public and community attitude and beliefs towards mental illness.

Under the conceptual model, the theory was anchored on Health Belief Model (HBM). The model states that individuals engage in preventive health behaviour based on three main factors. These factors are perceived vulnerability, perceived severity and perceived benefits. This means that a person would have to believe that he or she is susceptible or vulnerable to a disease in order to take any action. The value of compliance is therefore based on the probability that in the client's view, compliance will reduce the perceived threat and not be too costly in money, time and emotional energy.

A critical look at the empirical review above, the study looked at various studies on the attitude of general public toward mental illness conducted in Nigeria and beyond. Judging by the findings, it is obvious that there is mixed result of positive and negative attitude towards persons with mental illness with different set of people and groups such as doctors, medical students, nurses, medical record officers, religious ministers, patients, and other members (general public) of the society. It remains an open fact that as some people have negative attitude

towards mental illness, some others have a positive attitude towards persons with mental illness. The study is being motivated by the fact that none of these studies had looked into the attitude of the general public in Nnewi LGAs in Anambra State, Nigeria, thus, the trust of the study to bridge the existing gap in literature.

Methodology

Research Design: The study adopted a descriptive cross-sectional research design. This kind of research design helps in facilitating the use of questionnaire to conduct a survey using a sample as representative of the population which is studied.

Research Setting

The research setting was Nnewi. Nnewi is an Igbo city and the second largest commercial and industrial city after Onitsha in Anambra State in southeastern Nigeria. Nnewi as a metropolis has two local government areas, which is Nnewi North and Nnewi South. Nnewi is nicknamed the Japan of Africa. Nnewi is famous as a hub for automobile spare part dealers. The town is also known for its factories that manufacture household goods and is home to the biggest road transport companies in the country. Nnewi, with a little over two million residents, is a 30-minute drive from the Onitsha – the biggest outdoor market in West Africa – on the banks of the Niger River.

Target Population

The target population is 514,500 persons which comprise of 205,700 persons for Nnewi North and 308,800 persons for Nnewi South (Population Projection of 2016) (see, Appendix C).

Study Population

Table 1 (A): The study population is 181,374 persons who are above 18 years in Nnewi LGAs (NPC, 2006).

S/N	Anambra State	Population Census (2006)	Population Projection (2016)	No. of Districts	No of Political Wards
1	Aguata	369,972	489,500	13	20
2	Anambra East	152,149	201,300	10	15
3	Anambra West	167,303	221,400	8	10
4	Anaocha	284,215	376,100	10	19
5	Awka North	112,192	148,400	9	14
6	Awka South	189,654	250,900	9	20
7	Ayamelum	158,152	209,300	8	11
8	Dunukofia	96,517	127,700	6	14
9	Ekwusigo	158,429	209,600	4	12

10	Idemili North	431,005	570,300	10	12
11	Idemili South	206,816	273,600	8	12
12	Ihiala	302,277	400,000	10	20
13	Njikoka	148,394	196,300	6	18
14	Nnewi North	155,443	205,700	5	10
15	Nnewi South	233,362	308,800	10	20
16	Ogbaru	223,317	295,500	16	16
17	Onitsha North	125,918	166,600	1	15
18	Onitsha South	137,191	181,500	5	17
19	Orumba North	172,773	228,600	14	18
20	Orumba South	184,548	244,200	13	18
21	Oyi	168,201	222,600	16	15
	TOTAL	4,177,828	5,527,800	191	326

B: Population Distribution of Nnewi North and Nnewi South

S/N	Nnewi North (Communities)	Nnewi South (Communities)	Nnewi North (Political Wards)	Nnewi South (Political Wards)
1	Nnewi	Akwaihedi	Nnewi Ichi 1	Awka Ihedi
2	Nnewi-Ichi	Amichi	Nnewi Ichi 11	Amichi 1
3	Otolo	Azigbo	Otolo 1	Amichi 11
4	Umuodim	Ebenator	Otolo 11	Amichi 111
5	Uruagu	Ekwulumbili	Otolo 111	Azigo
6		Ezinifite	Umuodim 1	Ebenator
7		Ogbodi	Umuodim 11	Eekwulumbili
8		Osumenyi	Uruagu 1	Ezinifite 1
9		Unubi	Uruagu 11	Ezinifite 11
10		Utuh	Uruagu 111	Ezinifite 111
11				Osumenyi 1
12				Osumenyi 11
13				Ukpori 1
14				Ukpori 11
15				Ukpori 111
16				Ukpor 1
17				Ukpor 11
18				Ukpor 111
19				Unubi
20				Utuh

Source: Independent National Electoral Commission (INEC), 2018

Sample Size Determination

In determining the sample size, a sample of 400 will be drawn from the study population of 181,374 persons.

This will be accomplished by using multi-stage sampling technique to select the 400 persons who are above 18 years.

Thus, the sample size determination was done with the help of Taro Yamane's formula as follow:

$$h = \frac{N}{1+N(e)^2}$$

Where; n = Sample size

N = Population

e = level of significance at 5% or 0.05

1 = constant

$$n = \frac{181374}{1 + 181374(0.05)^2}$$

$$n = \frac{181374}{1 + 181374 (0.0025)}$$

$$n = \frac{181374}{453.435}$$

$$n = \frac{453.435}{454.435}$$

$$n = 400$$

Sampling Technique

The study adopted multi-stage sampling technique for the study.

Stage one: Purposive sampling method was used to select eight communities (Nnewi-Ichi, Otodo, Uruagu, Umudim, Amichi, Osumenyi, Utuh and Ezinifite) from the 15 communities that make up Nnewi LGAs in Anambra State because there are more cases of mental illness in the areas.

Stage two: Stratified sampling method was used to select 5 political wards (Nnewi Ichi 1, Otodo 1, Uruagu 1, Umudim 1 and Uruagu 111) from Nnewi North and 10 political wards (Amichi 1, Amichi 11, Amichi 111, Utuh, Ezinitife 1, Ezinitife 11, Ezinitife 111, Osumenyi 1, Osumenyi 11 and Ukpori 1) from Nnewi South from the selected communities that make up Nnewi LGAs in Anambra State.

Stage three: Simple random sampling method was used to select 20 households in the select 5 political wards in Nnewi North and 30 households in the select 10 political wards in Nnewi South, making a total of 50 households in Nnewi LGAs in Anambra State.

Stage four: Simple random sampling method was also used to select 2-3 persons who are above 18 years in each of the households selected. This process continued until a sample of 400 persons was selected.

Research Instrument

The instrument for the study was adopted from previous studies of Effiong, Idung and Iyanam (2019) as developed by Wahl and Zatina (2012). The instrument is titled "Knowledge and Attitudes towards Mental Illness Questionnaire (KAMIQ)." The instrument has three sections A, B and C. Section A contains the bio-data of the respondents. Section B is on 'General Knowledge towards Mental Illness' and it has 10-items while section C is on 'Attitudes towards Mental Illness', has 10-item statement. KAMIQ has a total of 20-item which is structured with 5-point rating scale as Strongly Agree (SA) (5), Agree (A) (4), Undecided (UD) (3), Disagree (D) (2), and Strongly Disagree (SD) (1).

Validity of the Instrument

The instrument was content and face validated by three experts. The instrument was validated by the study supervisor alongside with two experts in Psychiatric Department in the Nnamdi Azikiwe University Teaching Hospital, Nnewi,

Anambra State. These experts assessed the instruments with respect to their relevance to the purpose of the study, research questions and hypotheses. These experts, after scrutinizing the instrument, made a very important and useful suggestions and corrections, which was reflected in the final modification of the instrument.

Reliability of the Instrument

The reliability of the instrument was established through internal consistency estimate. 40 respondents representing 10% of the sample study in Onitsha Metropolis was used to establish the reliability of the instrument. Copies of the questionnaire were distributed to the respondents in Onitsha Metropolis which is not part of the study. The area has been chosen because it shares similar characteristics with the area of study. After the respondents had responded to the instruments, the completed copies were collected and analyzed using Cronbach Alpha statistics. The result yielded an average value of 0.81 which was considered high enough to justify the use of the instrument for the study.

Method of Data collection

Direct method was used to administer and collect the instrument by the researcher with three research assistants. The research assistants were nurses who are working in Nnamdi Azikiwe University Teaching Hospital, Nnewi, Anambra State and they were briefed by the researcher before the data collections to understand the objectives of the study. Thus, the researcher and the research assistants administered the instrument to the respondents and collected on the spot.

Method of Data Analyses

Data were entered in Statistical Package for Social Sciences (SPSS version 23) for analysis. Descriptive and inferential statistics such as mean for research questions and t-test for research hypotheses was used for the study. Decision rule is that a criterion mean of 3.00 was set for the study. Thus, any item that has a mean of 3.00 and above was accepted as a positive attitude and a good knowledge while any item less than 3.00 and below was accepted as a negative attitude and poor knowledge of mental illness.

Ethical Consideration

Ethical approval letter for the study was obtained from Local Government Chairmen (Nnewi North and Nnewi South) to carry the

study, same was obtained from Health Research Ethical committee of Nnamdi Azikiwe University Teaching Hospital, Anambra State. The research instrument was reviewed and approved by the Nnamdi Azikiwe University Teaching Hospital Ethics Committee of Anambra State.

Data Analysis

Demographic Information of Respondents

The demographic characteristics are measured using questions in the questionnaire. Data collected from their responses are summarized in table below:

Table 2: Respondent Biodata

Variable	Category	Participants N (%)
Gender		
	Male	182(47)
	Female	204(53)
Age		
	18 - 34 years	109(28)
	35 - 59 years	186(48)
	Above 60 years	91(24)
Educational Level		
	Elementary and Below	-
	Secondary School	117(30)
	Tertiary Level & Above	269(70)
A relative with mentally ill person		
	Yes	299(78)
	No	87(22)
A neighbour with mentally ill person		
	Yes	335(87)
	No	51(13)
Familiarity with mental illness		
	Yes	374(97)
	No	12(3)

Table 2 showed the demographic information of the respondents.

The study indicated that 182 respondents representing 47% of the total number of respondents were male while 204 respondents representing 53% are female. This means that the number of female respondents is slightly greater than that of male respondents for the study.

The age categories of respondents within 35-59 years were predominant at 48% (186). This is being followed by respondents within the age of 18-34 years with 28% (109). Thus, above 60 years of age made up the remaining 24% (91) of the respondents.

Respondents' category indicated that 269 respondents representing 70% are tertiary level and above holders, secondary school holders represent 117(30%), while none was an elementary level holder for the study in Nnewi environment in Anambra State. The study revealed that 299(78%) had a relative with mentally ill person, 335(87%) had a neighbour with mentally ill person, and 374(97%) are familiar with mental illness in Nnewi environment in Anambra State.

Data Analysis

For the purpose of convenience, each question will be presented in a table and the use of mean will be used to carry out the analysis according to the responses of the respondents.

Research Question 1: What is the level of knowledge of mental illness among people living in Nnewi LGAs in Anambra State?

Table 3: Mean and standard deviation of the general knowledge of public on mental illness

S/N	Common symptoms of mental illness	N (%) SA (5)	N (%) A (4)	N (%) UD (3)	N (%) D (2)	N (%) SD (1)	Total	Mean (SD)
1	Public nakedness	85 (22) 425	103 (27) 412	36 (9) 108	77 (20) 154	85 (22) 85	386 (100) 1184	3.0674 (0.5817)
2	Destructive behaviour	81 (21) 405	90 (23) 360	43 (11) 129	75 (20) 150	97 (25) 97	386 (100) 1141	2.9559 (0.6725)
3	Aggression (verbal/physical)	76 (20) 380	80 (21) 320	55 (14) 165	93 (24) 186	82 (21) 82	386 (100) 1133	2.9352 (0.6183)
4	Talking off context	90 (23) 450	113 (29) 452	31 (8) 93	72 (19) 144	80 (21) 80	386 (100) 1219	3.1581 (0.5125)
5	Aimless wandering tendencies	85 (22) 425	89 (23) 356	43 (11) 129	65 (17) 130	104 (27) 104	386 (100) 1144	2.9637 (0.6417)
6	Neglect of self-care	88 (23) 440	97 (25) 388	28 (7) 84	81 (21) 162	92 (24) 92	386 (100) 1166	3.0207 (0.6305)
7	Withdrawal/ keeping to self	82 (21) 410	96 (25) 384	23 (6) 69	65 (17) 130	120(31) 120	386 (100) 1113	2.8834 (0.7486)
8	Declining abilities to carry out assigned duties or function socially	81 (21) 405	85 (22) 340	30 (8) 90	72 (19) 144	118 (31) 118	386 (100) 1097	2.8421 (0.8025)
9	Violent behaviour	80 (21) 400	86 (22) 344	37 (10) 111	82 (21) 162	101 (26) 101	386 (100) 1118	2.8964 (0.6983)
10	Unfair treatment	84 (22) 420	92 (24) 368	40 (10) 120	74 (19) 148	96 (25) 96	1152 29.7074 (6.4903)	2.9845 (0.5837) 2.9707 (0.649)
	Total Mean							
	Average Mean							

...Best practices, rigorously constructive peer review, interdisciplinary approach and innovative methodologies.

The result presented on Table 3 showed the general knowledge of public on mental illness in Nnewi LGAs in Anambra State.

The study revealed the common symptoms of mental illness identified by the respondents from the list of ten items include public nakedness (49%), destructive behaviour (44%), talking off context (52%), aimless wandering tendencies (45%), neglect of self-care (48%), withdrawal/ keeping to self (46%), declining abilities to carry out assigned duties or function socially (43%), violent behaviour (43%), and unfair treatment from the public (46%).

The response pattern showed that gross/overt behavioral deviations like public naked, talking off context, neglect of self-care were more easily recognizable by majority of participants as symptoms of mental illness as indicated by the mean scores while other respondents recognize the less overt symptoms like destructive behaviour, aimless wandering tendencies, withdrawal/ keeping to self, declining abilities to carry out assigned duties or function socially, violent behaviour, and unfair treatment from the public as indicating mental illness.

Thus, the grand mean of 2.97 confirmed that there is poor knowledge of the public on mental illness in Nnewi LGAs in Anambra State.

Table 4: Mean and standard deviation of the attitude of public on mental illness

S/n	Stigmatizing practices	N (%) SA (5)	N (%) A (4)	N (%) UD (3)	N (%) D (2)	N (%) SD (1)	Total	Mean (SD)
1	Am afraid to have a conversation with the mentally ill person	140 (36)	148 (38)	64 (17)	24 (6)	10 (3)	386 (100)	3.9948 (0.6109)
2	Am disturbed about working with the mentally ill person	700	592	192	48	10	1542	3.9016 (0.4882)
3	I do not maintain a good friendship with the mentally ill person	112 (29)	194(50)	54 (14)	26 (8)	-	1550	4.0115 (0.5184)
4	Am not willing to share a room with the mentally ill person	560	776	162	52	-	1566	4.0569 (0.4275)
5	Am ashamed of relating to the mentally ill person	103 (27)	177 (46)	71 (18)	23 (10)	12 (3)	386 (100)	3.7228 (0.6218)
6	Am not prepared to marry a mentally ill person	515	708	213	46	12	1437	3.7356 (0.2594)
7	I always maintain a high social distance from the mentally ill person	151 (39)	147 (38)	55 (14)	25 (6)	8 (2)	386 (100)	3.9955 (0.5603)
8	Am frightened if approached by a person with mental illness	755	588	165	50	8	1442	3.7358 (0.5819)
9	It is a good idea to avoid people who have mental illness	124 (32)	183 (47)	69 (18)	10 (3)	-	1598	4.3756 (0.2594)
10	I have little in common with persons living with mental illness	620	732	207	20	-	1579	4.0907 (0.3861)
Total Mean		39.9545 (5.8185)						
Average Mean		3.9955 (0.5603)						

Research Question 2: What is the attitude of mental illness among people living in Nnewi LGAs in Anambra State?

The result presented on the Table 4 showed the attitude of the public on mental illness in Nnewi LGAs in Anambra State. Responses to questions on attitudes towards mentally ill persons show that majority of distance from the mentally ill persons.

Various stigmatizing attitudes and practices of the respondents towards persons with mental illness include shame to be identified with them, 73%, unwillingness to co-operation at work 79%, avoiding friendship with them 73%, unwillingness to share rooms 77%, ashamed for being a relative 79%, unwillingness for marital union

(78%), avoiding most social contacts 80%, avoiding persons with mental illness 74% and having nothing in common with them 72%.

Thus, the grand mean of 4.00 confirmed that there is a negative attitude of the public on mental illness in Nnewi LGAs in Anambra State.

Test of Hypotheses and Interpretation

Hypothesis 1: There is no significant difference between the knowledge and attitude of mental illness among people living in Nnewi LGAs in Anambra State.

Table 5: Paired sample t-test of respondents on the significant difference between the knowledge and attitude of mental illness of public

Variables	N	Mean	Std. Dev.	Df	t-value	Sig. (2-tailed)
Knowledge & Attitude	386	18.4706	3.3189	385	1.72	.068

*Not Significant at $p > .05$

Analysis in Table 5 showed the t-test of the respondents on the significant difference between the knowledge and attitude of mental illness among people living in Nnewi LGAs in Anambra State. The result showed that p-value of .084 is greater than 0.05 level of significance. This resulted in the decision to accept the null hypothesis that there is no significant difference between the knowledge and attitude of mental illness among people living in Nnewi LGAs in Anambra State. This is further strengthened by

the fact that the t-value of 1.72 is less than the critical value of 1.96. The study therefore concluded that there is no significant difference between the knowledge and attitude of mental illness among people living in Nnewi LGAs in Anambra State.

Hypothesis 2: There is no significant relationship between the knowledge and level of education of mental illness among people living in Nnewi LGAs in Anambra State.

Table 6: Paired sample t-test of respondents on the significant relationship between knowledge and level of education of public on mental illness

Variables	N	Mean	Std. Dev.	Df	t-value	Sig. (2-tailed)
Knowledge & Level of Education	386	12.0736	1.8462	385	1.12	.094

*Not Significant at $p > .05$

Analysis in Table 6 showed the t-test of the respondents on the significant difference between the knowledge and level of education of mental illness among people living in Nnewi LGAs in Anambra State. The result showed that p-value of .094 is greater than 0.05 level of significance. This resulted in the decision to accept the null hypothesis that there is no significant difference between the knowledge

and level of education of mental illness among people living in Nnewi LGAs in Anambra State. This is further strengthened by the fact that the t-value of 1.12 is less than the critical value of 1.96. The study therefore concluded that there is no significant difference between the knowledge and level of education of mental illness among people living in Nnewi LGAs in Anambra State.

Discussion of Findings

The common symptoms of mental illness identified by respondents, from a list of ten items include public nakedness, destructive behaviour, talking off context, aimless wandering tendencies, neglect of self-care, withdrawal/ keeping to self, declining abilities to carry out assigned duties or function socially, violent behaviour, and unfair treatment from the public. The response pattern showed that gross/overt behavioral deviations like public naked, talking off context, neglect of self-care were more easily recognizable by majority of participants as symptoms of mental illness as indicated by the mean scores while other respondents recognize the less overt symptoms like destructive behaviour, aimless wandering tendencies, withdrawal/ keeping to self, declining abilities to carry out assigned duties or function socially, violent behaviour , and unfair treatment from the public as indicating mental illness.

According to Abi et al. (2019), the people's knowledge of mental illness, including the causal attributions, help seeking path to care and stigma towards the mentally ill persons had been largely erroneous and influenced by cultural factors and the prevailing local beliefs system.

In the present study, knowledge about symptoms and manifestations of mental illness was found to be poor. Response pattern to questions on presentations of mental illness indicated that majority of respondents mostly endorsed gross behavioral deviations like public nudity, violent and destructive behaviour as indicative of mental illness. The more insidious and less dramatic symptoms of mental illness are usually not often well recognized by the general populace. This is consistent with previous studies which reported similar findings (Adebawale & Ogunlesi, 2015; and Effiong, Idung & Iyanam, 2019).

Concerning attitude towards mental illness, the study found a high level of negative beliefs and stigmatizing attitudes. Responses to questions on attitudinal social practices showed that mentally ill persons are viewed as dangerous and unpredictable in behaviour and should be avoided. A high proportion of respondents prefer to keep a high social distance in social situations that require high level of intimacy. This is consistent with findings from previous studies (Balogun, 2017; and Adewuya & Makanjuola, 2018). Responses to questions on attitudes

towards mentally ill persons show that majority of respondents prefer to maintain a high social distance from the mentally ill persons.

Probably arising from the fact that the respondents are more likely to encounter the mentally ill in severe psychotic states, the majority of respondents in this study believed sufferers of mental illness are distinct from normal persons and other kinds of patients. It therefore appears that the majority of the respondents perceive "mental illness" only as severe psychotic illnesses; it may also suggest that the respondents are able to make a distinction between severe psychotic illness and criminal behaviour in a "normal" person, a finding that is further corroborated by the significantly high positive attitudes expressed on the benevolence scale. Arguably, this may be a positive factor in reduction of incidents of criminalization of mentally ill persons, particularly in situations where the respondents have to exercise discretion. However, as a reflection of the respondents' view of the mentally ill as potentially dangerous persons.

Various stigmatizing attitudes and practices of the respondents towards persons with mental illness include shame to be identified with them, unwillingness to co-operation at work, avoiding friendship with them, unwillingness to share rooms, ashamed for being a relative, unwillingness for marital union, avoiding most social contacts, avoiding persons with mental illness and having nothing in common with them. The study showed that these stigmatizing attitudes existing among people living in Nnewi environment are worse among the younger ones. Participants in this study believed the public should be protected from the mentally ill, and did not mind having them institutionalized, even if such mental health facilities were considered outdated. Again, this may translate to a situation where the public may make a decision to opt for transfer of a mentally ill person whose behaviour has necessitated contact with the individuals, to a mental health facility rather than to law enforcement institutions.

Only about a third of respondent in this study did not think that virtually anyone could become mentally ill. This is in keeping with the relatively high number of those who believed that mentally ill persons are somehow responsible for their illness through a lack of self- discipline and willpower. This is contrary to the study conducted by Abasiubong, Ekott and Bassey

(2017) findings. They found that respondents did not show high levels of authoritarianism or significantly socially restrictive attitudes toward individuals with mental illness. They interpreted this to mean that they are less likely to attribute responsibility for their situation to the mentally ill. Furthermore, older people who are above 60 years of old and those with greater than 12 years of formal education in this study were found to be more benevolent in their attitudes towards the mentally ill. Other studies have revealed a mixed picture concerning the effect of education and age on attitudes towards the mentally ill. This picture ranges from those who are married and with higher educational status tending to be less pessimistic in their view of people with mental illness (Effiong, Idung & Iyanam, 2019) to some other studies where no relationship was found (Adebawale & Ogunlesi, 2015).

The study revealed that there is no significant difference between the knowledge and attitude of mental illness among people living in Nnewi LGAs in Anambra State. The study revealed that a substantial proportion of the respondents had poor knowledge regarding mental illness and only few had average knowledge. Most of respondents had poor knowledge regarding causes of mental illness and believed that mental illness could result from punishment from God. The possible explanation for the difference in recognition rate is lack of education and information on nature and causes of mental illness in the community. These findings were similar to previous studies (Samuel, 2014; Effiong, Idung & Iyanam, 2019). Despite the fact that the educational level of the respondents in this study is high (that is, more than half of the respondents are attended tertiary schools), they still lack adequate knowledge about mental illness.

Summary

Summary of the Findings: The findings of the study showed that there is poor knowledge of the public on mental illness in Nnewi LGAs in Anambra State. The findings of the study showed that there is negative attitude of the public on mental illness in Nnewi LGAs in Anambra State. The findings of the study showed that there is no significant difference between the knowledge and attitude of mental illness among people living in Nnewi LGAs in Anambra State. The findings of the study showed that there is no significant difference

between the knowledge and level of education of mental illness among people living in Nnewi LGAs in Anambra State.

Conclusion

There is widespread belief in supernatural and biological explanations for mental illnesses in a typical community. Many believed orthodox professional care and faith healer are best able to treat mental illness. Thus, the study concluded that poor knowledge and negative attitudes towards mental ill persons are common among the general public in Nnewi LGAs in Anambra State.

Recommendations

The following recommendations were drawn based on the findings of the study:

1. It is important to initiate awareness campaigns all over Anambra State and especially in Nnewi LGAs to prepare more knowledgeable and open-minded individuals. As a result, people suffering from mental health disorders will not feel ashamed to seek the professional help that they need.
2. Communities should create aware on the importance of minimizing the stigmatizing attitudes towards the mentally ill persons in the host community. This will help to reduce the stigmatizing attitudes of the public towards the mental illness persons.
3. Health education and sustained public enlightenment is needed to reduce stigma and ensure high social acceptance and preference for orthodox professional treatment of mental illness.

Contribution to Knowledge

The study established that the people living within Nnewi LGAs in Anambra State have poor knowledge of mental illness. Thus, public nakedness, destructive behaviour, talking off context, aimless wandering, and neglect of self-care among others are the common symptoms of mental illness observable among the mentally ill persons in Nnewi LGAs in Anambra State.

The study affirmed that the people living within Nnewi LGAs in Anambra State have negative attitudes towards people living with mental illness. The people are afraid to have a conversation with the mentally ill, avoid friendship with the mentally ill, and maintain a high social distance from the mentally ill persons. They are also ashamed that they are related to the mentally ill person, and they avoid marrying a

mentally ill person among others.

Suggestion for Further Studies

The following suggestions are recommended for further research:

1. Factors that contribute to poor knowledge of public towards people living with mental illness.
2. Factors that contribute to negative attitudes towards people living with mental illness.

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