AWARENESS AND DEMOGRAPHIC VARIABLES ON CULTURAL TECHNICAL COMPETENCIES AMONG ENVIRONMENTAL HEALTH OFFICERS IN DELTA STATE OF NIGERIA

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DECLARATION

I, ULOKO, Amos Ifeanyichukwu of the Department of Human Kinetics and Health Education, Faculty of Education, Delta State University, Abraka hereby declare that this dissertation titled " Awareness and Demographic Variables On Cultural Technical Competencies Among Environmental Health Officers in Delta State of Nigeria" was written by me.

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CERTIFICATION

We the undersigned, certify that this work was carried out by ULOKO, Amos Ifeanyichukwu, of the Department of Human Kinetics and Health Education, Delta State University, Abraka.

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DEDICATION

This dissertation is dedicated to my creator, the Almighty God, my late father, brother Uloko Peter Nzei, my beloved mother, Mrs. Uloko Mary Nkeoliseyenum and all my children.

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ABSTRACT

Cultural Technical competencies are desirable resources in the achievement of set objectives by Environmental Health Officers. The status of Environmental Health Officers' cultural technical competencies in Delta State are not known. It can therefore not be stated that lack or abundance of cultural technical competencies are positively or negatively influencing Environmental Health Officers performance. This study therefore, was carried out to determine the cultural technical competencies' profile of Environmental Health Officers engaged by the Local Government Councils to serve in various capacities in the state. The descriptive survey was the research design used to study all Environmental Health Officers engaged in various capacities in the state. A total of one thousand two hundred (1200) Environmental Health Officers from the three senatorial districts of the state were studied. A self structured questionnaire titled "Awareness and Demographic Variables on Cultural Technical Competencies Among Environmental Health Officers' Questionnaire (ADVCTCEHOQ)" was the instrument used for data collection. Data obtained was analyzed using descriptive statistics of mean, standard deviations and t-test. The result of the findings showed that there is no significant gender difference of environmental health officers on cultural competency level; there is significant gender difference of environmental health officers on technical competency level and there is no significant difference between more experience and less experience environmental health officers technical competency level. It was therefore recommended among others, that there is need to urgently start the processes of instituting cultural technical competencies training for Environmental Health Officers who are working in the service of the state in addition to including cultural technical competencies units into the curricula of Environmental Health Officers' training institutions.

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CHAPTER ONE

INTRODUCTION

Background to the Study

The environment is basically the natural world in which human beings, animals, living beings and other living things, live and concomitantly relate with each other. Environment encompasses the biosphere which covers parts of other segments of the environment such as lithosphere, hydrosphere and atmosphere. In a nutshell, the biosphere is a capsule encircling the earth surface where all the living things exist. According to Itavyar and Thomas, (2014), the environment is the place where human beings live and relate with one another. All the activities of life such as breathing, eating, exercising and moving among others, takes place in an environment. All the living beings and other living things in an environment, relate with one another and in some way affect human health. They affirmed that the environment comprises all the physical surrounding for natural habitats that provide the basis for human existence and exploits for agricultural, industrial, commercial, technological and tourism development of any given society.

Offiong (2011), stated that the environment comprises of physical and social conditions were people live. This could refer to the natural conditions such as air, water and land which people, animals of various type and plant exist. In the words of Last, (1995), environment is defined as all that which is external to the individual human host and affirmed that environment can be divided into physical, biological, social, cultural and spiritual. This implies that any of them can influence the health status of the populace.

Nigeria is a developing country undergoing rapid industrialization and urbanization which tend to make the environment less fit for healthy living. This show-cased the fact that the proliferation of industrialization and urbanization brought about the mass movement of people from the rural areas to the urban areas in search of white cola jobs. It implies therefore that people's life style and failure of Health Agencies in the protection and preservation of the environment, tend to make the environment less fit for healthy living. Nabofa and Onohwosafe, (2011), posited that working in the agricultural, manufacturing or mining sector in Nigeria, are associated with high rates of injury from mechanical, electrical and physical hazards in the environment. Daramola and Ibem (2010), opined that Nigeria's coastal regions are currently experiencing widespread contamination from petroleum exploration (gas flaring, oil spillage) while the general poor living conditions in urban areas in the country constitute an affront to human dignity. They further posited that deforestation resulting from road projects, subsistence activities, logging, mining and dam construction are constituting the greatest threat to environmental health in the country.

Arinlade and Raheem (2008) identified that the quest for industrial development has lead to serious environmental degradation of the Nigerian environment. They affirmed that some of the activities which degrade the Nigerian environment include agricultural production, construction of roads, houses and social amenities, fishing, mining and excavation, uncollected urban and rural refuse and bush burning, industrial pollution of air, land and water.

Medupin and Adedoyin (2014), postulated that the environment in Nigeria is gradually becoming very hostile to life. They intricately emphasized that it is therefore

imperative to protect the environment if it is to be good and fit for living for the present and future generations. In the light of protecting the environment, Gordon (2001), has this to say: "Environmental health and protection is the art and science of protecting against environmental factors that adversely impact human health or the ecologic balances to long-term human health and environmental quality, whether in the natural or human-made environment." Also, Gordon posited that environmental health and protection agencies and programmes, need the services of practitioners who are capable of anticipating and responding quickly and with flexibility to environmental health threats, and further postulated that to be able to achieve this objective, environmental health practitioners need fourteen core competencies which are grouped into three primary functions of an environmental health programme. These include assessment, management and communication.

Nabofa (2010) in Uloko (2014), posited that safe guarding against air, food, water contaminants, radiation, toxic chemicals, wastes, disease vectors, safety hazards and habitats alterations and other causes of environmentally related diseases and injuries, is the major objectives of environmental health and protection efforts. He further postulated that the need for environmental health and protection has since been recognized in Nigeria and affirmed that it is for this reason that laws were enacted and several bodies such as the Federal Environmental Protection Agency (FEPA) and Federal Ministry of Environment (FME), were established to tackle environmentally related issues in the country. The core competencies as postulated by Gordon (2001), were grouped into three thus:

1. Assessment competency: This include competency in information gathering, data analysis, data interpretation and evaluation.
2. Management competency: This has to do with problem solving, economic and political issues, organizational knowledge and behaviour, project management, computer and information technology reporting, documentation, record-keeping and collaboration.
3. Communication competency: This is described as the competency in educating, communicating and conflict resolution plus marketing.

As a matter of priority, these core competencies are the resources provided to environmental health practitioners while in training and by law (The Environmental Health Officers Act) (Amended Bill, 2013). The Environmental Health Officers Act, (2013), stipulates that these competencies are needed for the successful practice of environmental health profession in all of its aspects and ramifications, including corporate practice area as waste collection and disposal, public health pest control, cleaning services, air quality monitoring, sanitary inspection of premises and environmental health impact assessment among others. Apart from the above, people's way of life styled culture, has bearing with the practice of environmental health officers in Delta State.

Culture as defined by Bentacourt, Green and Carrilo (2002), is the integrated pattern of human behaviour that includes thoughts, communications, languages, practices, beliefs, values, customs, courtesies, rituals, manners of interacting and roles, relationships and expected behaviours of a racial, ethnic, religious or social groups and the ability to transmit the above to succeeding generations. They averred that several

cultures are therefore identifiable within every society including the culture of parents, peers, partners and neighbours; those with whom we worship, work and vote; our media, market and socio-economic class. Bentacourt, et al, (2002), posited that peoples' cultural identities usually influence their health behaviour either directly or indirectly. They further stated that the knowledge, inter-personal skills and behaviours that enable an environmental health practitioner to work effectively across different cultures by understanding, appreciating, honouring and respecting cultural differences and similarities within and between cultures, is known as cultural competency. This holistically implies that cultural competency is considered as a resource that is of utmost importance to environmental health practitioners.

Technical Competencies are behaviours directly related to the nature of training and the technical proficiency required to exercise effective control. Technical competency on a task, requires a match between the operator's competencies and the competencies required to safely and effectively perform that task. (Skybrary Aviation Safety, 2016). This implies that technical competence is the knowledge and skill in the exercise of certain task and practices that are required for successful accomplishment of a job or task.

Politically and geographically, Delta State is made up of several communities in diversity with heterogeneous cultural background. They include among others, the Anioma, Urhobo, Isoko, Itsekiri and Ijaw speaking people in the state, respectively. The Anioma speaking people occupies Oshimili North, Oshimili South, Ika South, Ika North East, Ndokwa West, Ndokwa East and Ukwuani, Aniocha South and Aniocha North which is senatorially recognized as Delta North. The Urhobo speaking people

occupy the following: Ughelli South, Ughelli North, Udu, Uvwie, Ethiope East, Ethiope West, Okpe and Sapele Local Government Areas, which is also senatorially recognized as Delta Central. The Isoko speaking people occupy Isoko South and Isoko North. The Itsekiri consist of Warri South, Warri North and Warri South West, while the Ijaw speaking people occupies Bomadi, Burutu and Patani, all of which are senatorially recognized as Delta South. Each of these ethnic groups has a royal father or traditional ruler that governs their subjects. There are also some people in Delta State who have migrated from other states with their ethnic and cultural diversities. Therefore, the people in Delta State may be engaging in diverse ethnic and cultural practices that negatively influence the environment in entirety as well as the performance of environmental health practitioners and optimally needs the services of a culturally and technically competent environmental health work force to strive.

Statement of the Problem

Most people in Delta State live in clustered or rural communities where the disposal of human faeces and other wastes are grossly inadequate. It is quite obvious that the system of human faecal matter and other waste disposal methodology adopted in most of the communities, encourages indiscriminate defecation, dumping of waste and spread of communicable diseases. For instance, backyard dumping of waste in the rural areas and absence of approved dump sites in the urban areas result in unhealthy environment.

Significantly, there are diverse cultural bereavement practices in some parts of Delta State such as when a woman loses her husband or a man happens to lose his wife, the bereaved would be taken to a secluded area in the community, to stay for

about a period of three months. The plates with which food is served to either the woman or man to eat, would not be washed but kept dirty during period of bereavement. Within the stipulated period of bereavement, the environment in which such a bereaved person dwells, may not be swept or rather maintained. There are also some kind of packaged punishment for an individual who has committed an abominable act like adultery in some cultural practice. In this regard, heaps of refuse that could form a pyramid in the premises, are dumped into the house of the victims. The heap of waste or refuse would remain in the home of such individual for such a stipulated long period of time without evacuation in order to appease the gods of their land culturally and traditionally. The said heap of waste or refuse may comprise both solid and liquid substances, thus could serve as a breeding ground for some necrotizing disease bearing organisms that have the capability of sporadic spreading of infectious diseases to the entire populace. It would therefore be an onerous task or duty for environmental health practitioners who are culturally and technically competent, to dexterously apply the principles of behaviour change communication skill in enlightening the entire members of each community of the health implication of their unhealthy cultural practices.

Therefore, in the sanitation of an environment with such environmentally unfriendly bereavement, taboo or punishment practices, it would holistically be an onerous task for Environmental Health Officers who are culturally and technically competent, to proactively enlighten the members of the communities on the health consequences of their cultural practices. This research therefore, was prominently carried out to critically assess the cultural technical competencies of environmental health officers in Delta State. This was borne out of the fact that the curriculum of

Environmental Health Officers training is deficient as it lacks cultural technical competencies content. The problem of this study therefore, put in a question form: "What are the cultural technical competencies profile of Environmental Health Officers in Delta State?" Specifically, this study is focused on the cultural technical competencies levels or profiles of Environmental Health Officers in the State.

Research Questions

The following research questions were generated to guide the study:

1. What is the cultural competency level of male and female environmental health officers in Delta State?
2. What is the technical competency level of male and female environmental health officers in Delta State?
3. What is the extent to which young and old environmental health officers have awareness with regards to the diverse cultural practices in Delta State?
4. What is the extent to which urban and rural environmental health officers are skilled about the diverse cultural practices in Delta State?
5. What is the extent to which more experienced and less experienced environmental health officers training with regards to the diverse cultural practices in Delta State?
6. What is the attitude of male and female environmental health officers towards the diverse cultural practices in Delta State?
7. What is the extent to which more experienced and less experienced environmental health officers technical competency level required for dealing with the diverse cultural practices in Delta State?

Hypotheses

The following hypotheses were formulated to guide the study:

1. There will be no significant gender difference in cultural competency level of environmental health officers in Delta State.

2. There will be no significant gender difference in technical competency level of environmental health officers in Delta State.

3. There will be no significant age difference in awareness of the diverse cultural practices among environmental health officers in Delta State.

4. There will be no significant location (urban and rural) difference of environmental health officers skillfulness about the diverse cultural practices in Delta State.

5. There will be no significant difference between more experienced and less experienced environmental health officers training with regards to the diverse cultural practices in Delta State.

6. There will be no significant gender difference in attitude towards the diverse cultural practices among environmental health officers in Delta State.

7. There will be no significant difference between more experienced and less experienced environmental health officers technical competencies level required for dealing with the diverse cultural practices in Delta State.

Purpose of the Study

The major purpose of this study is to assess the cultural technical competencies level of environmental health officers in Delta State. Other specific purposes are to:

- ❖ Examine gender difference on the cultural competency level among environmental health officers in Delta State.
- ❖ Determine gender difference on the technical competency level among environmental health officers in Delta State.
- ❖ Identify the extent to which age difference on awareness of the diverse cultural practices among environmental health officers in Delta State.
- ❖ Find out the location difference (urban and rural) on skillfulness of the diverse cultural practices among environmental health officers in Delta State.
- ❖ Examine the extent to which more experienced and less experienced environmental health officers are trained with regards to the diverse cultural practices in Delta State.
- ❖ Determine the gender difference in attitude towards the diverse cultural practices among environmental health officers in Delta State.
- ❖ Find out the extent of more experienced and less experienced environmental health officers technical competencies level required for dealing with the diverse cultural practices in Delta State.

Significance of the Study

The extent to which beliefs, values and cultural practices in diversity, influences environmental sanitation practices of the people of Delta State, is not readily seen in the literature. This is despite the fact that some of the cultural practices such as

backyard dumping of refuse, throw-away syndrome, bereavement rituals and punishment of taboo offenders in some part of Delta State, among others are capable of breeding filthy environments that encourages breeding of mosquitoes and other disease causing organisms. Therefore, since these facts regarding the cultural influences of environmental practices of the Delta State people are scarce in the literature, the chances of the training of Environmental Health Officers in the state, may not consider cultural technical competencies as important. This study seeking to establish the cultural technical competencies of Environmental Health Officers in Delta State, therefore becomes optimally significant. This is due to the fact that what was hitherto unknown, is now being brought to lime-light by this study.

This study should emphatically be beneficial to Environmental Health Officers, other health professionals, policy formation and policy implementation in the service of the state, in that they would find the need to empower themselves by taking cultural technical competencies courses and so enhance their performance generally. The diverse cultural communities in the state would also concomitantly benefit from this study through the services and practices of Environmental Health Officers as their environments would be more health friendly with the enhanced performance of the Environmental Health Officers.

Environmental Health Officers training institutions would also benefit from this study, in that they would now find the necessity to revise their curricular to include cultural technical competency units. The study should in this manner not only be very significant, but also contribute to the advancement of knowledge.

Scope and Delimitation of the Study

The scope of this study covers Delta Central Senatorial District which consist of Ethiope East, Ethiope West, Ughelli South, Ughelli North, Udu, Uvwie, Okpe and Sapele Local Government Areas and Delta South Senatorial District which also consist of Isoko South, Isoko North, Warri South, Warri North, Warri South West, Bomadi, Burutu and Patani Local Government Areas while Delta North Senatorial District consist of Oshimili North, Oshimili South, Ika South, Ika North East, Ndokwa West, Ndokwa East and Ukwuani,Anioch South and Aniocha North respectively. The study also was delimited to all the Environmental Health Officers engaged, either full time or part time as Environmental Health Officers, Environmental Health Technicians and Environmental Health Assistants in the Local Government Area of Delta State. The cultural technical competencies variables studied in this work, are the levels of cultural competency awareness of male and female Environmental Health Officers, the levels of technical competency awareness of male and female Environmental Health Officers, young and old environmental health officers awareness with regards to the diverse cultural practices, urban and rural environmental health officers' skillfulness; more experienced and less experienced environmental health officers training; attitude of male and female environmental health officers and more experienced and less experienced male and female environmental health officers technical competencies level.

Limitations of the Study

Attitude of some Environmental Health Officers could not allow them to completely and properly fill the questionnaire and this had adverse effect in their

respective responses. Some of the respondents were uncooperative and thus asked for some kind of gratifications or remuneration before responding to the items in the questionnaire. This affected the outcome of the research.

Operational Definition of Terms

The following terms are operationally defined in accordance with their usage in this study.

Cultural Competency: The knowledge, inter-personal skills and behaviours that enable an Environmental health practitioner to work effectively across different cultures by understanding, appreciating, honouring and respecting cultural differences and similarities within and between cultures is described as cultural competency.

Technical Competency: This refers to a skill or area of knowledge used in the occupations of a specific industry. It is a behaviour directly related to the nature of training and the technical proficiency required to exercise effective control.

Ethnic Background: This implies a social group that are based on certain characteristics such as customs, lifestyles, language, religion, history and state of origin. The social group sees themselves with certain unique identity, just as other people sees them distinctively. Ethnic background in this study are the Urhobos, Anioma, Isoko, Ijaw and Itsekiri including other states.

Table 3, showed the criteria for chosen More Experienced and Less Experienced Environmental Health Officers (EHO's) which was based on years of engagement. That is, those with less than 6 months and 2 to 5 years were taken as less experienced while those with more than 5 years and above, were taken as More Experienced.

Table 5. The criteria for chosen young and old Environmental Health Officers (EHO's) was based on age. That is, ranging from less than 20-24 years, 25-29 years and 30-39 years were considered as young Environmental Health Officers (EHO's) while 40-49 years and 50 years and above, were considered as old Environmental Health Officers (EHO's).

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter reviews related literature used in this study on cultural technical competencies. It was discussed under the following sub-headings:

1. Theoretical Framework
2. Conceptual Framework
3. Concept of Environmental Health, Environmental Health Services and Environmental Health Officers/Professionals
4. Issues in Environmental Sanitation
5. Cultural Practices and Environmental Health.
6. Cultural Competency Level of Gender Environmental Health Officers
7. Technical Competency Level of Gender Environmental Health Officers
8. Young and Old Environmental Health Officers Awareness with regards to Diverse Cultural Practices.
9. Location of Environmental Health Officers Skillfulness about Diverse Cultural Competency
10. More Experienced and Less Experienced Environmental Health Officers Training with regards to the Diverse Cultural Practices.
11. Attitude of Male and Female Environmental Health Officers towards Diverse Cultural Practices.
12. More Experienced and Less Experienced Environmental Health Officers Technical Competency Level Required for Dealing with the Diverse Cultural Practices.
13. Overview of Cultural Practices that affects Environmental Health in Delta State.
14. Roles of Environmental Health Officers
15. Traits and characteristics of an effective environmental health officer
16 . Typical responsibilities of environmental health and protection programmes

17. Cultural and Technical Competencies as resources for meeting Environmental Health Officers Roles.
18. Appraisal of the reviewed literature.

Theoretical Framework

This empirical study is basically hinged on the theories of Reasoned Action and Planned Behaviour. These theories were propounded by Fishbein and Ajzein, (1975). The theories posited that most socially relevant behaviours are under volitional control and that a person's intention to perform a particular action is determined by both the immediate determinant and single best predictor of that behaviour or action.

According to Stroebe, (2000) and Ajzein, (1975), intention is influenced by subjective norms including perceived expectations of others like family and friends with regard to a person's behaviour and the motivation for a person to comply with other wishes.

In the words of Ajzein (1985), Fishbein and Ajzein, (1975), the theory of reasoned action indicate that if people evaluated the suggested behaviour (attitude) as positive and if they think there is significant others who wanted them to perform the behaviour (subjective norms), this would result in a higher intension (motivation); therefore, they are most likely to do so. The theory of planned behaviour also stipulates that attitude towards behaviour, subjective norms and perceived behaviour control, together shape an individual's behavioural intentions and behaviour (attitude).

The above theories are extremely relevant to this present study for the fact that the Environmental Health Officers' active (positive) and passive (negative) attitude towards diverse cultures, norms, customs and traditions, could be based on their previously held instance or knowledge of the importance of cultural and technical

competencies as premium resource for effective performance including perceived circumstances that may serve as motivation or hindrance to the performance of their duties by understanding, appreciating, honouring and respecting cultural differences and similarities between and within cultures.

According to Belmont, (1999), cultural competence brings together the previous stages and adds operational effectiveness. He posited further that a culturally competent organization has the capacity to bring into its system many different behaviours, attitudes and policies and work effectively in cross-cultural settings to produce better outcomes. He affirmed that cultural competence is non- threatening because it acknowledges and validates who people are and maintained that by focusing on the organization's culture, it removes the need to place blame and assume guilt.

Technical Competency, according to Zamboni (2016), technical competency refers to a skill or area of knowledge used in the occupations of a specific industry. Different fields of work emphasize different skills and thus require different technical competencies. Mastering the technical competencies of a field and occupation is important for a worker to become a skilled employee. Technical competencies are not the same as foundational competencies which has to do with basic skills that are required in any career field. The United State Department of Labor, (2015), identifies three levels of competencies that are needed before a worker can begin to build technical competencies. The most basic level includes:

1. Personal effectiveness competencies, such as professionalism, inter-personal skills, dependability and reliability. These are the general attitudes of an effective worker.

2. Academic competencies, such as writing, mathematics and basic computer skills; and workplace competencies, like teamwork, problem solving and organization. The competency model emphasizes that these basic skills are important in any industry and need to be developed before a worker can begin developing more specialized technical competencies.

Technical competency is the knowledge of, and skill in the exercise of, practices required for successful accomplishment of a business, job or task. (Skybrary Aviation Safety, 2016). The Medical Dictionary defined technical competence as the ability of the practitioner, during the treatment phase of dental care and with respect to those procedures combining psychomotor and cognitive skills, consistently to provide services at a professionally acceptable level.

The Skybrary Aviation Safety, (2016), opined that technical competencies are behaviors directly related to the nature of training and the technical proficiency required to exercise effective control. Competency on a task requires a match between the operator's competencies and the competencies required to safely and effectively perform that task.

According to Investopedia, (2018) technical skills are the knowledge and abilities needed to accomplish mathematical, engineering, scientific or computer-related duties, as well as other specific tasks relating to technology. Technical skills can be referred to the ability to perform tasks that require the use of certain tools, whether tangible or intangible and technology to complete them. In this regard, the knowledge in a technical skills area, is seen as practical in nature as it allows a person to complete designated task in a real, not theoretical way.

Knowledge, according to Wikipedia, is a familiarity, awareness, or understanding of someone or something, such as facts, information, descriptions or skills, which is acquired through experience or education by perceiving, discovering or learning. Merriam-Webster (2010), also defined knowledge as the fact or condition of knowing something with familiarity gained through experience or association. It is an acquaintance with or understanding of a science, art or technique and also the fact or condition of being aware of something.

Cultural Technical competencies therefore, are intricately determined by Environmental Health Officers' skillfulness, knowledge and behaviour which is directly or indirectly affected by their attitudes that are either positive or negative. In light of the above therefore, negative attitude deters effective performance of Environmental Health Officers or practitioners while positive attitude, enhance effective performance optimally. As a matter of fact, Environmental Health Officers' attitude towards the diverse cultural values is affected by several factors which are either internal and external. Internal factors therefore, could be related to government commitment and policies, motivation, waste storage and disposal facilities, sanitary equipments, attitude of local and state government authorities, trained environmental health personnel and many more. External factors in the same vein, could be the influence of peer group, family members, diverse cultural dictate and training of environmental health practitioners on cultural technical competencies. These facts made the theory very important to this study.

Concepts of Environmental Health, Environmental Health Services and Environmental Health Officers/Professionals

Environmental health basically and substantially, is the branch of public health that is concerned with all aspects of the natural and built environment that may affect

human health. This branch of public health is focused on the natural and built environments for the benefit of human health, where as environmental protection is concerned with protecting the natural environment for the benefit of human health and the entire ecosystems. In the words of the World Health Organization (WHO, 2014). Environmental health addresses all the physical, chemical and biological factors external to a person, and all the related factors impacting behaviours. They further asserted that it encompasses the assessment and control of those environmental factors that can potentially affect health. It is targeted towards preventing disease and creating health-supportive environments. This definition excludes behaviour not related to environment, as well as behaviour related to the social and cultural environment, as well as genetics.

According to Novice (1999), the concept of environmental health had since shown that environmental health has several meanings. He posited that environmental health implies those aspects of the human health and disease that are determined by factors in the environment. It also refers to the theory and practice of assessing and controlling factors in the environment that can potentially affect health. It includes both the direct pathological effects of chemicals, radiation and some biological agents and the effects (often direct) on health and well being of the broad physical, psychological, social and cultural environment, which includes housing, urban development, land use and transport.

The World Health Organization (WHO, 2014), defined Environmental health services as those services which implement environmental health policies through monitoring and control activities. They carry out the role of promoting the improvement of environmental parameters and encouraging the use of

environmentally friendly and healthy technologies and behaviours. They also have a leading role in developing and suggesting new policy areas.

Issues of Waste in Environmental Sanitation.

According to UNICEF (1999a), environmental sanitation is the principle of hygienic conditions in the environment to promote public health and ensure sustainable development. It involves a range of interventions designed to improve the management of excreta, sludge, drainage and solid waste. Environmental sanitation also entails awareness of and capacity for managing all wastes in rural, sub-urban and urban areas. They posited that a clean and healthy environment is important for the reduction of sanitation related diseases, preventable deaths, increased economic productivity, poverty reduction and sustainable environment.

A study was carried out by Ajayi and Osibanjo (1980) on the pollution of surface water by effluent streams. The result revealed that rivers had high values of Ph and were highly coloured and unsuitable for fishing and water supply, especially in Lagos, Kano and Kaduna where textile industries daily discharge liters of untreated effluents as waste water into open public drains that empty into a river. It becomes imperative to note that the major problem to the environment, is the indiscriminate dumping of waste. According to Cleick (1996), a major threat to the environment in Nigeria and other developing countries, is the waste from health care facilities. Cleick further posited that these poorly segregated waste from the health care facilities mixed with household waste in either solid or liquid states, are disposed together. Cleick concluded that the effects of poor environmental sanitation are water pollution, health impacts, urban agricultural impacts and socio-economic impacts.

Iwunze (2007), stated that the haphazard disposal of solid and liquid wastes and the eutrophication of fresh water bodies and contaminated fish catches are enormous. He affirmed that there is a linkage between nitrogen from sewage treatment plants and nitrous oxides in rivers and lakes. Henkdew, Lock and Karen (2007), posited that health risks associated with urban agriculture could be contamination of crops with pathogens, human disease transmitted from disease vectors, crops and drinking water contamination by agrochemicals. WHO (2000), opined that pesticide contamination from urban agriculture, residues from sawmills and manufacturing industries, waste water from urban drains and municipal dumping of waste, especially human excreta pollute drinking water sources that affect the health of the urban and peri-urban populations. They affirmed that the unhealthy environment and overcrowded housing in the slums, expose the urban poor to high rates of infectious diseases such as pneumonia, tuberculosis and diarrhea. Accordingly, Afoke (2012), posited that poor sanitation and communicable diseases are synonymous as a number of gastro intestinal health problems results from unsanitary conditions of the environment.

Adedipo (2000), postulated that the cost of sanitation is high and that water-related sanitation requires huge supplies of fresh water to transport human wastes to another location. He further posited that most cultural practices do not permit improved sanitation. Many remote areas do not accept having toilets inside their houses but preferred the place of their toilets in the bush or cleared open lands. In a similar development, Encarta (2008), defined waste management as the collection, transportation, processing or disposal of waste materials usually produced by human activity in an effort to reduce their effect on human health. Encarta concluded that the essence of proper waste management is to create healthy atmosphere for people.

Environmental health is about taking preventive approach to tackling diseases and ill-health rather than a curative approach.

A need was identified by the African Academy for Environmental Health (AAEH) (2010), to develop a generic Curriculum through the financial assistance of the British Council as the development of a curriculum was one of their main objectives. The main purpose of this curriculum is to impart and generate knowledge that pertains to effective recognition and response to environmental health problems (AAEH, 2010). According to the African Academy for Environmental Health (2010), the curriculum is based on a specific cluster of related knowledge, skills and attitudes that are appropriate to the practice of environmental health in Africa.

Emeharole (1993), posited that even where Degree programmes do exist, concern has been expressed that the curriculum for training of Environmental Health practitioners in West Africa lagged behind the skills required to cope with the challenge of environmental monitoring and control. Emeharole reviewed the existing curriculum for the training of Environmental Health practitioners at the diploma and degree levels in the sub-region and concluded that both Curricula lack sufficient credit weight to impart the desired skills to perform the highly scientific task of environmental monitoring, which is a problem we envisage exist in other African countries.

The lack of appropriately qualified professionals in this area, inevitably leads to inadequate environmental health practice and enforcement, inappropriate environmental health policy and strategy for action, the lack of sound information for priority setting and planning, the absence of a suitable set of environment and health indicators, and the lack of appropriate performance indicator system (Emeharole,1993,

WHO,1998, Thomas et. al, 2002; Cairncross et. al, 2003 and WHO, 2005). The deficiency of the curriculum as stated by the above authorities is a serious factor in the inefficiency of environmental health officer's practice.

Wikipaedia, (2014), posited that Environmental health professionals may be known as environmental health officers, public health inspectors, environmental health specialists, environmental health practitioners or sanitarians. It is quite interesting to note that policy makers and researchers also play important roles on how environmental health is practiced in the field. According to the National Careers Services UK, (2014), in many European countries, physicians and veterinarians are involved in environmental health. In the United Kingdom, practitioners must have a graduate degree in environmental health and be certified and registered with the chartered institute of Scotland. Also, in Canada, practitioners in environmental health are required to obtain an approved bachelor's degree in environmental health along with the national professional certificate – the Certification Public Health Inspection (Canada).

The Califonia Health and Safety Code, (2014), opined that many states in the United States also require that individuals have a bachelor's degree and professional licenses in order to practice environmental health. They also averred that their state law clearly defined the scope of practice of Environmental health as follows; "Scope of practice in environmental health" means the practice of environmental health by registered environmental health specialists in the public and private sector and includes, but is not limited to, organization, management, education, enforcement, consultation and emergency response for the purpose of prevention of environmental health hazards and the promotion and protection of the public health and the

environment in the following areas: Food protection, housing, institutional environmental health; land use, community noise control, recreational swimming areas and waters; electromagnetic radiation control, solid, liquid and hazardous materials management, underground storage tank control; onsite septic systems; vector control; drinking water quality, water sanitation; emergency preparedness and milk and dairy sanitation.

However, three basic disciplines generally contribute to the field of environmental health programme: - They are environmental epidemiology, toxicology and exposure science. Wikipedia, (2014), posited that each of these disciplines contributes different information to describe problems in environmental health, but there is some overlap among them.

Accordingly, Environmental epidemiology studies the relationship between environmental exposures (including exposure to chemicals, radiation, microbiological agents, etc) and human health. It should be noted that observational studies which simply observe exposures that pe ople have already experienced, are abysmally common in environmental epidemiology because humans cannot ethically be exposed to agents that are known or suspected to cause disease. The inability of environmental epidemiology to use experimental study designs, is a serious limitation, thus this discipline directly observes effects on human health rather than estimating effects from animal studies.

As a matter of fact, Toxicology studies how environmental exposures lead to specific health outcomes generally in animals, as a means to understand possible health outcomes in human. It also has the advantage of being able to conduct randomized controlled trials and other experimental studies as they are capable of

using animal subjects. However, there are numerous differences in animal and human biology – that can result or lead to a lot of uncertainty when interpreting the results of animal studies for their implications for human health.

According to Wikipedia, (2014), Exposure science, studies human exposure to environmental contaminants by both identifying and quantifying exposures. Exposure science can be used to support environmental epidemiology by better describing environmental exposures that may lead to a particular health outcome, identify common exposures whose health outcomes may be better understood through a toxicology study, or can be used in a risk assessment to determine whether current levels of exposure might exceed recommended levels. Wikipedia further noted that exposure science has the advantage of being able to very accurately quantify exposures to specific chemicals, but does not generate any information about health outcomes like environmental epidemiology or toxicology.

According to Frumkin, (2010), information from these three disciplines are combined in conducting risk assessment for specific chemicals or mixtures of chemicals, to determine whether an exposure poses significant risk to human health. Frumkin further averred that this can in turn be used to develop and implement environmental health policy that regulates chemical emissions or imposes standards for proper sanitation. Specifically, environmental health addresses all human health related aspects of the natural and built environment.

Frumkin, (2010), opined that Environmental Health concerns include the following:

- Air quality, including both ambient outdoor air and indoor air quality which also concerns about environmental tobacco smoke.

- Body art safety, including tattooing, body piercing and permanent cosmetics.
- Climatic change and its effects on health
- Disaster preparedness and response
- Food safety, including agriculture, transportation; food processing, wholesale and retail distribution and sale.
- Hazardous materials management, including hazardous waste management, contaminated site remediation, the prevention of leaks from underground storage tanks and the prevention of hazardous materials releases to the environment and responses to emergency situations resulting from such releases.
- Housing, including substandard housing abatement and the inspection of jails and prisons.
- Childhood lead poisoning prevention
- Land use planning, including smart growth.
- Liquid waste disposal, including city waste water treatment plants and on-site waste water disposal systems, such as septic tank systems and chemical toilets.
- Medical waste management and disposal
- Noise pollution control
- Occupational health and industrial hygiene.
- Radiological health, including exposure to ionizing radiation from x-rays or radioactive isotopes.
- Recreational water illness prevention, including swimming pools, spas and ocean and fresh water bathing places.
- Safe drinking water

- Solid waste management, including landfills, recycling facilities, composting and solid waste transfer stations.
- Toxic chemical exposure whether in consumer products, housing, workplaces, air, water or soil.
- Vector control, including the control of mosquitoes, rodents, flies, cockroaches and other animals that may transmit pathogens.

According to the National and Regional Story Netherlands, (2014), recent estimate has it that about five(5) to ten percent (10%) of disability adjusted life years (DALYS) lost, are due to environmental causes in Europe. They stressed that the most important factor is fine particulate matter pollution in urban air. Similarly, Pruss-Ustin, Vickers, Haefliger and Bertollini, (2011), posited that environmental exposures have been estimated to contribute to 4.9 million (8.7%) deaths and eighty six (86) million (5.7%) disability adjusted life years (DALYS) globally.

Schleicher, (1995), opined that in the United States, superfund sites created by various companies, have been found to be hazardous to human and environmental health in nearby communities. Schleicher, further asserted that it was this perceived threat, raising the specter of miscarriages, mutations, birth defects and cancers that most frightened the public. Ogbalu, (2012), posited that the environment is a major determinant of health and has been estimated to account for almost twenty (20%) percent of all deaths in Europe. He further affirmed that in 1989, concerned about the growing evidence of the impact of hazardous environments on human health, World Health Organization (WHO) and Europe, initiated the first ever environment and health process, towards primary prevention and indicated the need for intersectoral approach. According to Ogbalu, (2012), environment means one's surroundings, or

external conditions affecting the growth, existence and welfare of an organism. These conditions in his words, may be physical, biological or socio-cultural. As a matter of fact, man lives in the biosphere and concomitantly relate or interact with the physical and socio-cultural environment, thus affect the health of man in different ways.

Cultural Practices and Environmental Health

The United State Environmental Protection Agency (U.S. EPA, 2012), postulated that many traditional populations all over the world, maintain intricate and ecologically interdependent relationships with the natural environment. They stressed that to restore and protect the health and knowledge based of their communities, most societies encourage traditional diets, religious practices, customs and language use. This emphasis on traditional, healthy lifestyles for the community, according to them, requires that the unique health and environmental impacts of pollution, dietary explosive, cumulative risk and climate change be identified, to reduce communal health risks.

The United State Environmental Protection Agency, (USEPA, 2014), asserted that the relationships between tribal citizens and their environments are being affected adversely by a variety of stressors such as industrial chemical pollution, climate change, the availability of processed foods, social and political isolation threaten the health, wellness and lifestyles of all communities. USEPA (2012), further affirmed that contaminated sites, pesticide drift, bioaccumulation and rights of access issues have an effect on exposures from subsistence lifestyles and diets. In the same vein, Ogbalu, (1997), posited that environmental pollution is the introduction into the environment of contaminants which quantities, characteristics and duration are likely to be injurious to human, animal or plant life. He objectively affirmed that pollution

has been and continues to be recognized and attacked as a public health problem, thus almost every community in every state has been confronted with difficulties associated with contaminations of his environment.

In the words of Emodi, (2015) in Okudaye and Uloko, (2015), human societies continue to change from traditionalism to modernism with rapid technological advancement and increasing industrial production to satisfy growing human needs and comforts to improve civilization, new lifestyles and increased production activities, have created unexpected industrial pollution. Emodi, further asserted that the environment is highly polluted in the process of execution, processing and disposal of minerals.

Acknowledging and appreciating the various cultural demands of any given community or society and working in conformity with the cultural beliefs and customs, enhances the performance of environmental health officers optimally in the rural and urban communities. Moreso, understanding the cultural beliefs and customs of the communities, serves as guidance in the formulation of tangible objectives and result oriented that are to be achieved in the diverse cultural communities.

Chamberlain, (2005), averred that culture represents "the values, norms and traditions that affect how individuals of a particular group perceive, think, interact, behave and make judgements about their world." Similarly, Taylor, (1996), defined culture as "an integrated pattern of human behaviour including thoughts, communication, ways of interacting, roles and relationships, expected behaviours, beliefs, values, practices and customs." In the same vein, Nine-Curt, (1984), also defined culture as "The bearer of human wisdom that includes a wealth of human behaviours, beliefs, attitudes, values and experiences of immense worth." Nine-Curt

affirmed that “culture also carries things that are offensive to a person’s dignity and well-being, and certainly to others whose cultural framework is different.”

In the words of California Cultural Competency Task Force, (1994), in Chin (2000), “ a culturally competent environmental health educator, has cultural humility and is culturally sensitive in that he uses non-authoritarian, cross-cultural communication and applies cultural brokering.” It is for this reason that he engages in participatory decision making with community partners and uses culturally appropriate skills in addressing health issues. Therefore, a culturally competent environmental health officer has positive cultural humility such that he acknowledges and appreciates his barriers and limitations to diverse cultural understanding and striving to overcome those barriers to enhance optimal performance of his duties.

According to Bentacourt, Green and Carrilo, (2002), culture is the integrated pattern of human behaviour that includes thoughts, communications, languages, practices, beliefs, values, customs, courtesies, rituals, manners of interacting, roles, relationships and expected behaviours of a racial, ethnic, religious or social group, and the ability to transmit the above to succeeding generations. They further opined that several cultures are therefore identifiable within every society including the culture of parents, peers, partners and neighbours; those with whom we worship, work and vote; our media market and socio-economic class. Peoples cultural identities usually influence their health behaviour either directly or indirectly. The knowledge, interpersonal skills and behaviours that enable an environmental health practitioner to work effectively across different cultures by understanding, appreciating, honouring and respecting cultural differences and similarities within and between cultures is

described here as cultural competency and it is also considered as a resource that is of utmost importance to environmental health practitioners.

Cultural Competency Level of Gender Environmental Health Officers.

Wikipedia, the free encyclopedia (2011), posited that while our gender may begin with the assignment of our sex, it doesn't end there. A person's gender is the complex interrelationship between three dimension as follows:

- **Body**: Our body, our experience of our own body, how society genders body and how others interact with us based on our body.
- **Identity**: Our deeply held, internal sense of self as male, female a blend of both or neither; who we internally known ourselves to be.
- **Expression**: How we present our gender in world and how society, culture, community and family perceive, interact with, and try to shape our gender. Gender expression is related also to gender roles and how society uses those roles to try to enforce conformity to current norms.

Accordingly, most societies view sex as a binary concept, with two rigidly fixed options; male or female, both based on a person's reproductive functions (genitals, sex chromosomes, gonads, hormones, reproductive structures). But a sex binary fails to capture even the biological aspect of gender. While most bodies have one of two forms of genitalia, which are classified as "Female" or "Male", there are naturally occurring inter sex conditions that demonstrate that sex exists across a continuum of possibilities. This biological spectrum by itself should be enough to dispel the simplistic notion of the "Gender binary", there are not just two sex. People tend to use the term "sex" and "gender" interchangeably. They assign a born's sex as either male

or female, based on their genitals. Someone born with penis will be a boy and someone with a vulva will be a girl. In their words, gender is the range of characteristics pertaining to, and differentiating between masculinity and femininity. Depending on the context, these characteristics may include biological sex (i.e. the state of being male, female, or an intersex variation), sex based on social structure (i.e. gender roles), or gender identity.

In the light of the above, male Environmental Health Officers tend to have different values, attitudes and aims as regards cultural practices from those of female Environmental Health Officers and therefore has variations in their cultural competency levels. This is strongly supported by Dimensions of Gender (2017) which stated that traditionally, in rural areas, specific tasks are done either by men or women. Men and women could work in the same fields but carry out different tasks.

Technical Competency Level of Gender Environmental Health Officers.

According to Zamboni (2016), technical competency refers to a skill or area of knowledge used in the occupations of a specific industry. Zamboni further affirmed that it is a behaviour directly related to the nature of training and the technical proficiency required to exercise effective control. The technical competency level of male and female Environmental Health Officers are at variance based on the expression of Dimensions of Gender (2017), which has complex interrelationship such as body, identity and expression. Wikipedia, the free encyclopedia, (2012), posited that Gender expression is related also to gender roles and how society uses those roles to try to enforce conformity to current norms.

Young and Old Environmental Health Officers Awareness with regards to Diverse Cultural Practices.

People of the same age usually have similar attitudes. Young people tend to have different attitudes, values and aims in life from those of older people. Accordingly, in many societies, elderly people are treated with great respect, and their advice is listened to carefully. Dictionary.com (2018), defines age as the length of time during which a being or thing has existed; length of life or existence to the time spoken of or referred to. It is also a period of human life, measured by years from birth, usually marked by a certain stage or degree of mental or physical development and involving legal responsibility and capacity: the age of discretion; the age of consent. It maintained that age is a particular period of life at which a person becomes naturally or conventionally qualified or disqualified for anything. According to the British Dictionary (2012), age is the period of time that a person, animal or plant has lived or is expected to live. It is period of existence of an object, material, group, etc.

Awareness, according to Wikipedia,(2012), is a familiarity, knowledge or understanding of someone or something, such as facts, information, descriptions or skills, which is acquired through experience or education by perceiving, discovering or learning. It simply implies that both young and old Environmental Health Officers are on the same page as it borders on understanding, experiencing, perceiving and discovering facts and information with regards to diverse cultural practices of the people they serve. Martins & Vaughn, (2007), averred that awareness is consciousness of one's personal reaction to people who are different.

Location of Environmental Health Officers Skillfulness about Diverse Cultural Competency.

Location encompasses rural and urban areas assigned to Environmental Health Practitioners to perform their professional duties. Location could also be known as place of engagement which are known as Urban, Rural communities, Zonal and Environmental health beats, assigned to the Environmental Health Officers for execution of their lawful duties.

Rural Area:

Wikipedia, the free encyclopedia (2012), posited that in general, a rural or countryside is a geographic area that is located outside towns and cities. The Health Resources and Service Administration of the US Department of Health and Human Services, defines the word "rural" as encompassing "all population, housing and territory not included within an urban area. Whatever is not urban is considered rural". Typical rural areas have a low population density and small settlements. They affirmed that agricultural areas are commonly rural, as are other types of areas such as forest and concluded that different countries have varying definitions of rural for statistical and administrative purposes. Accordingly, German is among the largest agricultural producers in the European Union. More than half of Germany's territory – almost 19 million hectares is used for farming and are located in the rural areas. Almost 10% of employees in Germany has work linked directly or indirectly with the agricultural, forest and fisheries sectors; approximately a fifth of them are employed in primary production. The implication is that, unlike in some other European countries, where rural areas are known for being backward when compared to urban areas in Germany, the trend is changing. Due to the country's policy of equal living conditions,

this is not the case in Germany. Rural areas receive equivalent attention as the urban do.

In Britain, “rural” is defined by the government department for Environment, Food and Rural Affairs (DEFRA), using population data from the latest census, such as the United Kingdom census 2001. These definitions have various grades, but the upper point is any local government area with more than 26% of its population living in a rural settlement or market town (“market town” being defined as any settlement which has permission to hold a street market). In India, rural area are also known as the countryside or a village. It has a very low population density. In rural areas, agriculture is the chief source of livelihood along with fishing, cottage industries, pottery etc. According to the 2017 census, about 64% Pakistanis live in rural areas. Most rural areas in Pakinstan tend to be near cities and are peri-urban areas. This is due to the definition of a rural area in Pakinstan being an area that does come within an urban boundary. The remote rural villagers of Pakinstan commonly live in houses made of bricks, clay or mud. Socio-economic status among rural Pakinstani villagers is often based upon the ownership of agricultural land, which also may provide social prestige in village cultures.

Urban Area

Martina, Zelenakova, Pavol, Helena and Blistana (2015), posited that the urban environment has distinctive bioclimatical factors in relation to rural areas. The process of urbanization alters natural surface and atmospheric conditions. Urban areas are characterized by increased rain water surface run off, increased temperatures and decreased evaporation. Evaporation warms the rural surface more than the urban. It therefore implies that there is much skillfulness of urban Environmental Health

Officers about the diverse cultural practices. This study supports the studies of Ajayi and Osibanjo (1980), on the pollution of surface water by effluent streams**.**

More Experienced and Less Experienced Environmental Health Officers Training with regards to the Diverse Cultural Practices.

According to Nine-Curt, (1984), culture is the bearer of human wisdom that includes a wealth of human behaviours, beliefs, attitudes, values and experiences of immense worth. Also Nine-Curt affirmed that culture carries things that are offensive to a person's dignity and well-being and certainly to others whose cultural framework is different. This indicates that more experienced Environmental Health Officers has cultural humility and capacity for environmental monitoring despite their not being trained on cultural technical competencies. Therefore, the above assertion has established the fact that there exist significant difference between more experienced and less experienced Environmental Health Officers training with regards to the diverse cultural practices.

Attitude of Male and Female Environmental Health Officers towards Diverse Cultural Practices.

Fishbein and Ajzein (1975), Ajzein (1985), opined that the theory of reasoned action indicated that if people evaluated the suggested behaviour (attitude) as positive and if they think there is significant others who wanted them to perform the behaviour (subjective norms), this will result in a higher intension (motivation); therefore, they are most likely to do so. In the same vein, the theory of planned behaviour stipulates that attitude towards behaviour, subjective norms and perceived behaviour control; together shape an individual's behavioural intensions and behaviour (attitude). The attitude of male and female Environmental Health Officers towards the diverse cultural practices, could be negative or positive. Negative attitude deters effective

performance which in turn hinders understanding, appreciating, honouring and respecting cultural differences and similarities between and within cultures.

More Experienced and Less Experienced Environmental Health Officers Technical Competency Level Required for dealing with the Diverse Cultural Practices.

According to Skybrary Aviation Safety (2016), technical competency is the knowledge of, practices required for successful accomplishment of a business, job or tasks. They affirmed that technical competencies are behaviours directly related to the nature of training and the technical proficiency required to exercise effective control. In light of the above therefore, more experienced and less experienced Environmental Health Officers , lacks technical skills or competency in dealing with the diverse cultural practices as they were not formally trained. Investopedia (2018), opined that technical skills are the knowledge and abilities needed to accomplish mathematical, engineering, scientific or computer related duties as well as other specific tasks that are related to technology.

Overview of Cultural Practices that Affects Environmental Health in Delta State

According to Ojua and Omono, (2012), Nigeria is one of the biggest countries in Africa and it is a multi-ethnic society with its peculiar nature and diverse practices. In the same vein, Delta State is a multi-ethnic state as it comprises of the Anioma, Urhobo, Isoko, Itsekiri and Ijaw speaking people. The Anioma speaking people include Oshimili, Ika, Ndokwa and Aniocha which is senatorially recognized as Delta North. Each of these communities or ethnic group has a royal father or traditional ruler that governs their subjects. The Anioma speaking communities are being inhabited by the Oshimili North, Oshimili South, Ika South, Ika North East, Aniocha South, Aniocha North, Ndokwa West, Ndokwa East and Ukwuani Local Government Areas.

In the midst of these people, are some people who migrated from other states with their own ethnic and cultural diverse communities and thus denotes her heterogeneity. In spite of her heterogeneity, the various clan and communities are being governed by a royal father or traditional ruler, recognized as their king or the Okpala-Uku-in-Council.

The Urhobo speaking people consist of Ethiope East, Ethiope West, Ughelli North, Ughelli South, Udu, Uvwie, Okpe and Sapele Local Government Areas, and these are senatorially recognized as Delta Central. Each of the ethnic group in Urhobo land is ably represented and governed by a royal father or a king. The Isoko speaking people also consist of Isoko South and Isoko North respectively. Each community in these Local Government Areas, has their royal father or traditional ruler that governs their subjects, often called “Odio Ologbo”.

It has become imperative to mention here that in each of the communities in the various Local Government Areas, there exist an established cultural leadership quality of their royal father or traditional ruler which might be rotational or hereditary. The king or traditional ruler governs the entire subjects in the various or diverse communities.

The main occupation of the people in the rural communities is farming, palm produce, fishing, hunting expedition, timber business and petty trading while the urban communities are richly endowed with oil exploration and oil companies, construction companies, manufacturing companies, commercial enterprises, civil and or public services. As a matter of fact, these occupations have serious cultural inclinations that impacts on the environment and so should be of concern to environmental health officers. Some of the cultural practices, which have endured centuries of practice,

work for the people. It is not uncommon to think of something crude and bad whenever one talks about cultural practices as it concerns health. Not all cultural and traditional practices are bad, however, some have stood the test of time and have positive values, others are uncertain and negatively harmful (Asu, Gever and Joshua, 2013). It is essential to have an idea about cultural practices of some communities because the practices a community adopts, fulfill certain purposes for the culture bearers (Idehen, 2007).

The World Health Organization (WHO, 2007) postulated that the cultural practices of people not only affect their environmental health but also affect all aspects of life including social relationships, contribution to societal functioning and disease condition. Man living in an interactive society is affected by what happens in his environment and how he reacts to it. They further opined that all people, no matter the race, have their beliefs and practices concerning health and disease. Each society or community has its peculiar way of doing things and these practices go a long way in influencing the people's perception, attitudes and behaviour in the management of diseases and health related problems that befall them. Ostensibly, one therefore looks at the Delta State experience over the years as one of the largest and most populous pluralistic states, which harbours diverse ethnic groups and enduring different operation of cultural practices.

Roles of Environmental Health Officers

According to Gordon, (2001), Environmental health officers are expected to perform the underlisted duties in every society:

A1. Assessment/Information Gathering: The capacity to identify sources and compile relevant and appropriate information when needed and the knowledge of where to go to obtain the information. Example:

i) Literature search in response to a request for information. Consult with experts in the field, such as toxicologists, epidemiologists, forensic specialists, and/or environmental engineers.

ii) Identify, locate and use appropriate reference material (statutes, regulations, reference books, journals).

A2. Data Analysis and Interpretation: The capacity to analyze data, recognize meaningful test results, interpret results, and present the results in an appropriate way to different types of audiences.

Examples:

i) Read and summarize technical papers, understand tabular and graphical presentations of data, and translate them for a non-technical audience. For example, translate data from papers published in academic journals into public information materials.

ii) Analyze data generated internally using simple statistics (e.g. percentages, averages medians).

iii) Understand how statistical surveys are performed and what results mean.

iv) Communicate results to a variety of audiences, using appropriate media.

A3. Evaluation: The capacity to evaluate the effectiveness or performance of procedures, interventions and programs.

Examples:

i) Evaluate the agency's procedures against a given set of standards, such as state requirements.

ii) Evaluate the results of particular interventions, such as providing information to a group of restaurant managers to resolve food service problems and determine what improvements have been made after a specified time.

iii) Evaluate the overall environmental health program in which the practitioner is working, in terms of inputs (such as number of inspections, number of hotline calls processed) or outcomes (real-world results, progress).

B. Management

B1. Problem Solving: The capacity to develop insight into health problems and proffer appropriate solutions to environmental health problems.

Examples:

i) Determine the nature of a problem in broader context by asking appropriate question and reviewing documentation.

ii) Clearly articulate problem

iii) Take appropriate measures to resolve the problem and/or present a range of solutions.

iv) Collaborate in decision – making process.

B2. Economic and Political Issues: The capacity to understand and appropriately use information about the economic and political implications of decisions.

Examples:

i) Understand and maintain awareness of basic economic issues. For example, in interacting with small business owners and communities.

ii) Understand local history and community demography, as well as cultural and political issues and sensitivities.

iii) Enforce regulations equitably and consistently but with an awareness of the political realities of the work.

iv) Develop and present options and recommendations that demonstrate an understanding of economic and political conditions in an effort to find appropriate solutions and prioritize actions.

v) Understand the economic and political underpinnings and implications of broader agency priorities/ decisions.

B3. Organizationational knowledge and behaviour: The capacity to function effectively within the culture of the organization and to be an effective team player.

Examples;

i) Understand the formal legislative/administrative system within the agency operates.

ii) Be aware of internal agency functions, priorities and dynamics.

iii) Identify and recognize how agenda are set and pursued and how they affect public health.

iv) Inform supervisor and other appropriate persons about political issues as they arise.

B4. Project management : The capacity to plan, implement and maintain fiscally responsible programs and projects using skills and prioritize projects across the employee's entire workload.

Examples:

i) Formulate goals and objectives. Understand what's necessary to get things done, internally and externally.
ii) Design actions steps using a variety of resources.
iii) Establish appropriate timelines and deadlines.
iv) Balance the workload when involved in multiple projects.
v) Measure outcomes for the program.
vi) Understand and work effectively within the constraints of fisical realities.
vii) Manage programs within budgetary constraints
viii) Prioritize budget decisions
ix) Monitor expenditure and revenues
x) Recognize and pursue opportunities for external funding.
xi) Understand the agency's finance system, including purchase requisitions, purchase orders, unencumbered and encumbered funds, allocations, and budget for revision.

B5. **Computer/Information technology**: The capacity to use information technology as needed to produce work products. For examples:

i) Use software available within the agency to perform research, record keeping, communication (e.g e-,email, work processing programs), data analysis and interpretation {including simple spreadsheet programs) and reporting tasks

ii) Use web based applications, such as searching and retrieving information.

B6. Reporting, Documentation And Record Keeping: The capacity to produce reports to document actions, keep records and inform appropriate parties.

Examples:

i. Generate an inspection report

ii. Produce a periodic (e.g. quarterly) activity report

iii. Generate a progress report for a grant

iv. Maintain organized, accurate and up-to-date files and records (e.g. electronic and or hard copy)

v. Prepare evidence for court cases

B7. Collaboration: The capacity to form partnerships and alliances with other individuals and organizations to enhance performance on the job.

Examples:

i. Indentify key persons in organizations, community and media. Networks can be internal to the agency, (e.g. with epidemiologists, public health nurses and health educators, in-house laboratories, plumbing, electrical and building inspectors) community-wide, (e.g. with non-governmental organizations, industry, academia, labs) or within the government's public health/environmental protection system (EPA, CDC, other Federal Agencies, state offices such as state Engineer, Attorney General and local agencies).

ii. Cultivate effective links and partnerships by using communications skills, maintaining regular and or periodic contact; participating in practitioner organizations; providing reciprocal help, service and support.

C1. Education: The capacity to use the environmental health practitioner's front-line role to effectively educate the public on environmental health issues and the public health rationale for recommendations.

Examples:

i. Identify "teaching moments" as part of regulatory function and opportunities to share "lessons learned". Provide accurate information and demonstrate desired action. Present information in a culturally and technically appropriate manner.

ii. Recognize the dynamic state of knowledge and information in the field, stay abreast of, and appropriately use new information.

iii. Emphasize prevention, for example, in explaining to home owners and grounds managers on how to minimize use of pesticides and fertilizers

iv. Seek continual learning, educational and mentoring opportunities.

C2. Communication: The capacity to effectively communicate risk and exchange information with colleagues, other practitioners, clients, policy-makers, interest groups, media, the public through public speaking, print and electronic media and interpersonal relations.

Examples:

i. Handle all forms of communication promptly, politely and professionally. These include letter and e-mail correspondence, telephone calls, site visits, group discussions, meetings and presentations.

ii. Explain complicated issues and procedures simply and accurately. Identify the target audience and deliver the message appropriately.

iii. Handle interactions with the public and media using tactful, objective, non-confrontational, culturally sensitive language. Interactions include receiving complaints and providing feedback to complainants, sharing information with clients and citizen groups, motivating clients to bring about desired changes, resolving conflicts within a community on the use of natural resources and presenting to a hearing officer in court, a case against a restaurant that has been closed.

iv. Seek opportunities for public speaking to broaden the audience on environmental health issues. Examples include making speeches to school groups on food safety or to swimming pool and apartment building owners and managers, conducting food safety or to swimming pool and apartment building owners and managers, conducting food handler training and giving presentations to the chamber of commerce. Public speaking skills can be enhanced through a variety of resources, including participation in Toastmasters, learning Power-point and other slide presentation software and mentoring.

C3: Conflict Resolution: The capacity to facilitate resolution of conflicts within the agency, in the community and with regulated parties.

Examples:

i. Know when conflict resolution can be used and when it cannot, either because of a lack of authority or because of the intractable nature of the conflict.

ii. Recognize the limits of authority and flexibility.

iii. Typical conflicts involve complaint investigations or disagreements over a regulation, where clients might inform the practitioner that they have conducted business a certain way for years and see no reason to change, and then announce their intention to seek redress from elected officials.

iv. Use effective listening skills.

v. Exhibit respect for diversity

vi. Understand the history and context of the conflict

vii. Identify the nucleus of problem, separate from symptoms

viii. Find common ground and areas of agreement, as well as non-negotiable areas.

ix. Determine the willingness of the parties involved to negotiate and promote that willingness

x. Obtain the necessary resources to resolve conflict (e.g. use of facilitators or mediators).

C4. Marketing: The capacity to articulate basic concepts of environmental health and public health and convey an understanding of their value and importance to clients and the public.

Examples:

i. Articulate the goals, purposes, problems and needs of environmental health.

ii. Provide solutions to environmental health problems that obtained support from clients and increase their understanding of environmental health issues and concerns.

iii. Explain the rationale for environmental health regulatory requirements and the value produced by a healthy environment (e.g. less disease, lower health care costs).

Traits and Characteristics of an Effective Environmental Health Officer

The group indentified additional traits and characteristics thought to be common among effective environmental health practitioners. The group after identifying these traits and characteristics, wanted to document them for use by managers, academicians and practitioners as important to the practice of local environmental health. These traits and characteristics identified include the following:

- *Positive attitude*
- *Versatility and flexibility*
- *Practical perspective and common sense*
- *Strong principles and ethics*
- *Practitional integrity*
- *Strong work ethics*
- *Tenacity*
- *Willingness to learn*
- *Focus on fair solutions*
- *Collaborative spirit*
- *Willingness to embrace change*
- *Involvement with community*
- *Calmness during conflict*
- *Understanding of their points of view*

- *Ability to observe*
- *Focus on team accomplishments*
- *Appropriate appearance and body language*
- *Ability to lead*
- *Big –picture perspective*
- *Respect for diversity*
- *Knowledge of when to ask for help*

Typical Responsibilities of Environmental Health and Protection **Programmes**

Environmental health and protection practitioners should educate, think and act in terms of risk assessment, risk communication and risk management activities, to protect human health and the environment relating to the following problems:

1. Ambient air quality, indoor air quality, including radon water pollution control (i.e. a chemical substance or element that is a colourless radioactive gas, used in the treatment of diseases such as cancer), including thermal pollution, safe drinking water, including public, semi-public and private sources, noise pollution, radiation control, including ionizing and non-ionizing food, including eating and drinking establishments, food processing establishments, fish and shellfish, pure food, meat and poultry milk.
2. Industrial hygiene childhood lead poisoning, Acid deposition, Disaster planning and response cross-connection elimination, Healthy housing institutional environmental control, including schools, health-care facilities, correction facilities and day care centres. Recreational area environmental control, including swimming pools, camp-grounds and beaches. Solid waste management, hazardous waste management, including hazardous spills, Vector

control, including insects and rodents. Pesticide control, Toxic chemical control, including community right-to-know, On-site waste disposal, Unintentional injury control. Bioterrorism, Global environmental issues, such as global warming, stratospheric ozone depletion and planetary toxification.

3. Program activities to solve or ameliorate the foregoing problems include: surveillance regulation, including: warnings, hearings, permits, grading, compliance schedules, variances, injunctions, administrative and judicial penalties, embargoes, environmental impact requirements, sampling, education, inspection, complaint response, consultations, networking and community involvements pollution prevention, design and plan review, economic and social incentives, public information and prioritization.
4. Environmental health planning for prevention through effective involvement during the planning, design and decision stages of energy production and utilization, land use, transportation systems, resource development and consumption, production and facility design.
5. Environmental health and protection support services include: epidemiology, Laboratory services, legal services, personnel training information technology, public policy design and implementation, marketing, research and strategic planning. Environmental health and protection practitioners should have a vision, a philosophy and a comprehensive understanding of environmental health and protection, rather than the inspection and reaction approach.

Cultural Technical Competencies as Resources of meeting Environmental Health Officers Roles

The level of awareness of cultural technical competencies refers to the ability in interacting effectively and technically with people of diverse cultures and socio-

economic background, particularly in the context of human resources, non-governmental organization and government agencies whose employees work with persons from diverse cultural and ethnic background.

Wikipedia, (2011) posited that cultural competency comprises of four components thus:

1. Awareness of one's own cultural world view
2. Attitude toward cultural differences
3. Knowledge of different cultural practices and worldview and
4. Cross cultural skills.

Also, Wikipedia, the free encyclopedia, (2010), posited that competency is the ability of an individual to do a job properly and affirmed that competency is a set of defined behaviours that provide a structured guide, enabling the identification, evaluation and development of the behaviours in individual employees. Accordingly, Wikipedia further asserted that the term "competence" first appeared in an article authored by R.W. White in 1959 as a concept for performance motivation. However, some scholars see "competence" as a combination of practical and theoretical knowledge, cognitive skills, behaviours and values to improve performance; or as the state or quality of being adequately or well qualified, having the ability to perform a specific role.

According to Pederson, (1988), cultural competence is a development process that evolves over an extended period and that both individuals and organization are at various levels of awareness, knowledge and skills along the cultural competence continuum. Similarly, Martins and Vaughn, (2007), asserted that in an attempt to offer solutions for developing cultural competence, Diversity Training University International (DTUI) isolated four cognitive components:

(a)Awareness (b). Attitude (c). Knowledge and (d). Skills.

Awareness: - Awareness is consciousness of one's personal reaction to people who are different.

Attitude: - Pederson's multi-cultural competence model emphasized three components: awareness, knowledge and skills. Diversity Training University International (DTUI) added the attitude component in order to emphasize the difference between training that increases awareness of cultural bias and belief in general and training that has participants to carefully examine their own belief and values about cultural differences .

Knowledge: - According to Devine, (2011), social science research indicates that our values and beliefs about equality, may be inconsistent with our behaviours, and we ironically may be unaware of it. This makes the knowledge component an important part of cultural competence development.

Skills: - The skill component focuses on practicing cultural competence to perfection. Hence communication is the fundamental tool by which people interact in organizations. This includes gestures and other non-verbal communication that tend to vary from culture to culture.

In the light of the above four cognitive components, Martins et al (2007), asserted that cultural and technical competencies therefore, are increasingly becoming necessary for work, in the home, community and social lives. Buttressing Martins et al, (2007) assertion, the California Cultural Competency Task force, (1994) in chin, (2000; 26), posited that cultural competency is appropriate and effective communication which requires the willingness to listen and learn from members of diverse cultures, and the provision of services and information in appropriate

languages, at appropriate comprehension and literacy levels, and in the context of an individual's cultural health belief and practices

Orbe and Spellers, (2005), opined that cultural competence may also be associated with diversity and from an organizational communication perspective, a diverse culture. They stressed that diversity must be prevalent and valued before one may be considered culturally competent or diversity competent organization. The term diversity according to them, has evolved to include concepts focusing on organizational culture and the intersections of power, structure and communication, all of which may contribute to diversity initiatives or potentially impede them. Orbe and Spellers further opined that diversity encourages the process of including the perspective of under-represented, non-dominant groups in organizations to ensure they have a voice. In the light of truth, diversity exists in every community and does not refer to race and ethnicity, but to the entire spectrum of human dignity. This may be hinged on the fact that while a community may be relatively homogenous in terms of race or ethnicity, there is other distinct social groups whose needs must be taken into consideration when delivering services. For instance, people with disabilities, people of different religious beliefs and people of differing socio-economic levels, etc. Therefore, one can infer that being culturally and technically competent implies to be competent across the entire range of social differences.

According to the Child Welfare League Of America, (CWLA), (2014) cultural competence is the ability of individuals and systems to respond respectively and effectively to people of all cultures, classes, races, ethnic background, sexual orientations, faiths and religious beliefs, in a manner that recognizes, affirms and values the worth of individuals, families and communities, and protects and preserves the dignity of each. They further posited that the acquisition of cultural competence is

a dynamic and on-going developmental process that requires a long term commitment and is achieved over time. Also, the Child Welfare League of America (2014) asserted that although, shifting in recent times or years, the historical perspective of culture and health had demonstrated how European and North America paradigms underestimated the role of culture in health and defined development in narrow economic terms, and favour medical rather than public health solutions. They finally affirmed that culture should be at the centre of health promotion interventions through the following factors.

1. Understand the relationship between social, political and economic dynamics that result in the community's behaviour/belief
2. Recognize one's own subconscious and conscious bias (including stereotyping, recognition or privilege etc)
3. Identify that mistrust is born from historical and institutional practices.
4. Use non-authoritarian, cross-cultural communication and apply "cultural brokering"
5. Engage in participatory decision making with community partners
6. Identify/analyze manifestations of power distribution in practices/policies.
7. Relinquish the role of the expert through self-reflection.

How to Achieve Cultural Competency

The United States Department of Health and Human Services, (USDHS), (2013), posited that health services that are respectful of, and responsive to the health beliefs and practices, cultural and linguistic needs of diverse population, result in the achievement of cultural competency. They averred that there are certain national standards on culturally and linguistically appropriate services which are primarily

directed at health care organization and professionals, to make their practices more culturally and linguistically accessible. Also, they conceptualized other terms for the achievement of cultural competency as being culturally sensitive, culturally appropriate, having cultural awareness and diversity as well as cultural humility. In the same vein, it was affirmed by them that acknowledgement of one's own barriers and limitations to intercultural understanding and working to overcome those barriers to provide better care, is the essential key in the achievement of cultural competency.

According to the United State Department of Health and Human Services, (2013), cultural humility and health behaviour in any given cultures is basically affected by the following key elements:

1. **Normative Behaviour/life styles**: This has to do with the standard of cultural practices and beliefs that contribute to the level of health in a community
2. **Conceptual frame work**: This implies the typical and preferred thought and course of action in a given cultural context.
3. **Socio-political and Economic Structures:** This shows how the general social normative environment, government policy and the economy contribute to beliefs and practices surrounding health.
4. **Aesthetic Preferences:** This has to do with making health behaviours based on cultural judgments about what looks to be acceptable and preferable.
5. **Environmental:** This incorporates all of the above factors into the systematic contributions of how individuals and communities make choice that affect health and health care delivery, including how the physical environment plays a role.

Adebanjo, (2007), posited that the environment encompasses the biosphere, which covers parts of other segments of the environment such as Lithosphere, Hydrosphere, and Atmosphere. The biosphere according to him, is a capsule

encircling the earth surface where in all the living things exist. This portion known as the Biosphere extends from ten thousand miles (10,000m) below sea level to six thousand miles (6,000m) above sea level. Life forms do not exist outside this zone (Biosphere). He further asserted that life sustaining resources like food, water and oxygen present in the biosphere are being withdrawn and waste products in increasing quantities are being dumped. He averred that it should be noted that you as an individual have a challenge because the Biosphere has been absorbing these wastes and assimilating them. However, according to him, rate of waste dumping has gone beyond the assimilation capability of the biosphere and signals of the environmental stress are becoming evident. Therefore, in the light of the above, the environment in all of its ramifications, requires culturally and technically competent work force to tackle the various environmental problems or stress in Nigeria and particularly in Delta state. It should be noted that cultural competency is a cluster of related Knowledge, skills, and attitudes that affect a major part of one's job (i.e. a role or responsibility), that correlates with performance on the job that can be measured against some accepted standards, and that can be improved through improved training and development.

Appraisal of the reviewed literature

It is apparent from the reviewed literature that Environmental Health practitioners modes of operation in Delta State, appears to be ineffective and failing as regards the observed and seemingly intractable (very difficult to deal with) unhealthy nature of the environment in the state. The literature review has implicated the practice of Environmental Health Officers and suggested post-service training of Environmental Health practitioners on cultural technical competencies as it is one of the major factors that has been responsible for the failing of their professional practice

in Delta State. The environmental health curriculum used in training of environmental health workforce, lacks sufficient credit weight to impart the desired skills to perform the highly scientific task of environmental monitoring which is a serious problem in existence particularly in Delta State, Nigeria as whole and in other African countries. The curriculum of Environmental Health professionals was persistently disconnected from cultural, technical realities and health needs of the people and therefore may not have the capability of enhancing their performance positively in the rural and urban communities.

The reviewed literature unveiled that the lack of appropriately qualified professionals in this area of cultural technical competencies, inevitably leads to inadequate environmental health practice and enforcement, inappropriate environmental health policy and strategy for action. This also leads to lack of sound information for priority setting and planning, absence of a suitable set of environment and health indicators as well as lack of appropriate performance indicator system. It was also found from the reviewed literature that in an attempt to safeguard against air, food and water contaminants, radiation, toxic chemicals, wastes, disease vectors, safety hazards and habitat alterations, laws were enacted and several bodies were established such as Federal Environmental Protection Agency (FEPA) and Federal Ministry of Environment (FME), to tackle environmentally related issues in Nigeria and thus needs the services of environmental health practitioners who are capable of anticipating and responding quickly with flexibility to environmental health threats.

The reviewed literature also demonstrated that cultural technical competencies were found to be essential resources that enable environmental health practitioners to work effectively across different cultures through understanding, appreciating, honouring and respecting cultural differences and similarities within and between

cultures. It was shown in the literature that Delta State as a political and geographical entity which is made up several diverse communities with heterogeneous cultural background, requires the services of environmental health practitioners with high levels of cultural technical competencies to strive. The literature was rather scanty regarding the cultural technical competencies level of environmental health officers in Delta State and therefore did not establish in any way and anywhere, the cultural technical competencies level of environmental health practitioners in the State. It could not be concluded therefore, from the reviewed literature, that the cultural technical competencies level of environmental health officers or practitioners is known or unknown. These facts therefore, are the gaps that this study has filled through the awareness and demographic variables on cultural technical competencies profile among Environmental Health Officers in Delta State of Nigeria.

CHAPTER THREE

RESEARCH METHOD AND PROCEDURES

This chapter holistically describes the research method and procedures used in this study. The descriptions are discussed under the following sub-headings:

- Research Design
- Population of the Study
- Sample and Sampling Techniques
- Research Instrument
- Validity of the Instrument
- Reliability of the Instrument
- Data Collection
- Method of Data Analysis

Research Design

This study adopted the descriptive research design to help in eliciting information for assessing the awareness and demographic variables on cultural technical competencies level of environmental health officers in Delta State. The descriptive research design was adopted for this study because, it is concerned with the collection of data for the purpose of describing and interpreting existing conditions, prevailing practices, attitude and on-going processes (Nworgu,1991, Egbule and Okobia, 1998). Kerliger and Lee's (2003), highlighted that the descriptive design is economical for independent researchers as it has a wide range of scope, great deal of information as well as representative samples, which permit inferences

and generalization to an entire population. This prompted the researcher in adopting the descriptive research design in this study.

Population of the Study

The population for the study comprised one thousand two hundred (1,200) Environmental Health Professionals in Delta State.(Environmental Health Officers Association of Nigeria, Asaba, 2017). This include all categories of Environmental Health Practitioners, males and females, who are engaged, either on full time or part-time, as Environmental Health Officers, Environmental Health Technicians and Environmental Health Assistants, in all the local government areas from the three Senatorial Districts of Delta State.

Source: (Environmental Health Officers Association of Nigeria, EHOAN, Asaba, 2017). See table 1 below.

Table 1: List of Local Government Area and Population of Environmental Health Officers in Delta State.

S/N	Local Government Area	Male Environmental Health Officers	Female Environmental Health Officers	Total Number of Male and Female Environmental Health Officers
1	Aniocha North	13	19	32
2	Aniocha South	17	26	43
3	Bomadi	11	14	25
4	Burutu	19	11	30
5	Ethiope East	22	26	48
6	Ethiope West	19	24	43
7	Ika North East	22	38	60
8	Ika South	20	32	52
9	Isoko North	15	21	36
10	Isoko South	16	19	35
11	Ndokwa East	13	18	31
12	Ndokwa West	23	31	54
13	Okpe	23	27	50
14	Oshimili North	20	26	46
15	Oshimili South	31	43	74
16	Patani	17	22	39
17	Sapele	27	39	66
18	Udu	21	26	47
19	Ughelli North	28	45	73

20	Ughelli South	25	43	68
21	Ukwuani	23	39	62
22	Uvwie	31	42	73
23	Warri North	13	16	29
24	Warri South	22	41	63
25	Warri South West	9	12	21
	Total	**500**	**700**	**1200**

Source: *Environmental Health Officers Association of Nigeria (EHOAN), Asaba (2017).*

Sample and Sampling Techniques

The sample of this study consists of one thousand two hundred (1200) Environmental Health Officers from the twenty five Local Government Areas in the three Senatorial Districts of Delta State by means of Purposive Sampling Technique.

Purposive sampling technique was used because it select sample on the basis of knowledge of the research problem to allow selecting of appropriate persons for inclusion in the sample. In this method of sampling, the researcher simply picks the sample because to his judgment, they are typical to what he wants. In essence, the researcher select a sample which simply satisfies his specific needs.

Firstly, this was done by dividing the Local Government Areas into their various Senatorial Districts. In the second stage, the Local Government Areas were grouped based on location (Urban and Rural areas as well as Zonal). The third stage, the Local Government areas were also grouped based on Environmental Health post or beat. Finally, at the fourth stage, all the Local Government areas in the three Senatorial Districts were selected through purposive sampling technique. (See Table 2 below)

Table 2: Distribution of Local Government Areas and Sampled Environmental Health Officers Population.

Table 1: Sample Frame.

S/N	NAME OF LOCAL GOVERNMENT AREAS	SENATORIAL DISTRICTS	NO. OF ENVIRONMENTAL HEALTH OFFICERS POPULATION SELECTED	MALE	FEMALE	SAMPLED MALE EHOs	SAMPLED FEMALE EHOs	TOTAL SAMPLED EHOs
1.	Aniocha North	Delta North	32	13	19	13	19	32
2	Aniocha South	Delta North	43	17	26	17	26	43
3	Ika North East	Delta North	60	22	38	22	38	60
4	Ika South	Delta North	52	20	32	20	32	52
5	Ndokwa East	Delta North	31	13	18	13	18	31
6	Ndokwa West	Delta NOrth	54	23	31	23	31	54
7	Oshimili North	Delta North	46	20	26	20	26	46
8	Oshimili South	Delta North	74	31	43	31	43	74
9	Ukwuani	Delta North	62	23	39	23	39	62
10	Ethiope East	Delta Central	48	22	26	22	26	48

11	Ethiope West	Delta Central	43	19	24	19	24	43
12	Okpe	Delta Central	50	23	27	23	27	50
13	Sapele	Delta Central	66	27	39	27	39	66
14	Udu	Delta Central	47	21	26	21	26	47
15	Ughell North	Delta Central	73	28	45	28	45	73
16	Ughelli South	Delta Central	68	25	43	25	43	68
17	Uvwie	Delta Central	73	31	42	31	42	73
18	Bomadi	Delta South	25	11	14	11	14	25
19	Burutu	Delta South	30	19	11	19	11	30
20	Isoko North	Delta South	36	15	21	15	21	36
21	Isoko South	Delta South	35	16	19	16	19	35
22	Patani	Delta South	39	17	22	17	22	39
23	Warri North	Delta South	29	13	16	13	16	29
24	Warri South	Delta South	63	22	41	22	41	63
25	Warri South West	Delta South	21	9	12	9	12	21
	Total		1200	500	700	500	700	1200

A total of four hundred and fifty four (454) respondents were selected from Delta North Senatorial District comprising Nine (9) Local Government Areas of Delta State, which represent the total study population of EHOs in these LGAs. In Delta Central which consists of eight (8) Local Government Areas, a total of four hundred and sixty eight (468) respondents were selected from the Senatorial District, representing the total study population of EHOs in these LGAs. In Delta South Senatorial District, which comprises eight (8) Local Government Areas, a total of two hundred and seventy eight (278) respondents were selected from all the Local Government Areas which represent the total population of EHOs in these LGAs.

Research Instrument

The instrument used in this study was a self-structured questionnaire titled "Awareness and Demographic Variables on Cultural Technical Competencies among Environmental Health Officers' Questionnaire (ADVCTCEHOQ)". The questionnaire consists of two sections. Section "A" comprised of items on socio-demographic characteristics of the respondents, such as age, gender, place of assignment, and years of service . Section "B" consisted of forty one (41) items on Awareness and Demographic Variables on Cultural Technical Competencies among Envronmental Health Officers in Delta State of Nigeria which were selected under the following sub-headings: Awareness of the diverse cultural practices and beliefs; Skills on the diverse cultural practices and beliefs; Attitudes towards the diverse cultural practices and beliefs; Training in diverse cultural practices and beliefs; Cultural Competency level or profile of Environmental Health Officers and Technical Competency level of Environmental Health Officers. Four points Likert type rating scale of Strongly agreed 4 points, Agree 3 points, Disagree 2 points and Strongly disagree 1 point was used to score the responses in the instrument.

Validity of The Instrument

The instrument was given to the researcher's supervisor and two other experts in the Department of Human Kinetics and Health Education, Faculty of Education, Delta State University, Abraka for the purpose of scrutiny or vetting. Some of the items in the questionnaire were modified to reflect the views of Environmental Health

Officers on cultural - technical competencies in Delta State. The face and content validity of the instrument were established by expert judgment from the researcher's supervisor and two other experts in the Department.

Reliability of the Instrument

The reliability of the instrument was established by using Crombach alpha for estimating the internal consistency of the instrument. The instrument was administered to thirty (30) Environmental Health Officers in Oredo Local Government Council in Edo State who were not part of the study area. This yielded a reliability co-efficient alpha of 0.83, Awareness= 0.90, Skills = 0.72, Attitude = 0.55, Training = 0.75, Cultural Competency = 0.82 and Technical Competency =0.59. This shows that the instrument had a good psychometric properties of reliability. See Appendix : 3.

Method of Data Collection

Data were collected by the researcher and three trained research assistants. The researcher obtained an official letter from the Head of Department, Human Kinetics and Health Education, Faculty of Education, Delta State University, Abraka, to the studied areas. The researcher and the trained assistants administered the questionnaire to the respondents in the three Senatorial Districts, based on agreed date and time, at their respective offices. The respondents were able to complete their questionnaire on

the agreed date and time and the questionnaire were collected from them immediately on the spot. The exercise took a period of six weeks.

Method of Data Analysis

Mean and Standard deviation was used to analyze or answer the research questions and a mean of 2.50 was taken as the cut-off point or bench mark. That is, a mean of 2.50 and above was considered as the level of agreement while the mean that is below 2.50 was taken as disagreed and t- test was used to test the stated null hypothesis at 0.05 level of significance.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION

This study was aimed at the awareness and demographic variables on cultural technical competencies among Environmental Health Officers in Delta State. In this chapter, data were presented on the basis of the research questions and hypotheses that guide the study.

Research Question One: What is the cultural competency level of male and female Environmental Health Officers in Delta State?

Table 1: Mean and Standard deviation of Male and Female Environmental Health Officers on cultural competency level. Criterion mean of 2.50 is taken as the bench mark.

		N=500 MALE			N=700 FEMALE		
S/N	Environmental Health Officers Cultural Competency Level	Mean	SD	Decision	Mean	SD	Decision
1.	Demographic situations of different ethnic groups to whom you serve.	2.50	0.93	Agree	3.00	0.93	Agree
2.	Socio-cultural characteristics of the diverse ethnic group	2.14	0.63	Disagree	2.54	1.20	Agree
3.	Health risks inherent in the diverse cultural practices	2.46	0.96	Disagree	2.23	1.14	Disagree
4.	Health risks inherent in bereavement practices in some cultural settings	2.70	0.76	Agree	3.14	0.68	Agree
5.	Health promotion and disease prevention	2.82	0.99	Agree	3.39	0.96	Agree
6.	Reproductive health, child spacing and unwanted pregnancy	4.00	0.00	Agree	2.21	1.09	Disagree
	Total Grand Mean	2.77			2.75		

Table 1, showed the cultural competency level of male and female Environmental Health Officers, with a total grand mean of 2.77 for male and 2.75 for female. The table indicated that Male Environmental Health Officers agreed to items 1, 4, 5 and 6 with mean range of 2.50 – 4.00 which were above the cut off mark of 2.50 while items 2 and 3 with mean range of 2.14 – 2.46 were below the cut off mark of 2.50. The female Environmental Health Officers agreed to items 1, 2, 4 and 5 with

mean range of 2.54 – 3.39 which were above the cut off mark of 2.50 and above while items 3 and 6 with mean range of 2.21 – 2.23 were below the cut off mark.

Research Question Two: What is the technical competency level of Male and Female Environmental Health Officers in Delta State?

Table 2: Mean and Standard deviation of Male and Female Environmental Health Officers on Technical competency level. Criterion mean of 2.50 is taken as the bench mark.

		N=500 Male			N=700 Female		
S/N	Technical Competency Level	Mean	SD	Decision	Mean	SD	Decision
7.	Engagement in the supply of waste disposal facilities to individuals	3.78	0.65	Agree	3.16	0.69	Agree
8	Involvement in the supply of waste storage facilities to individual and public	3.78	0.54	Agree	3.11	0.75	Agree
9.	Issuance of abatement notices to individuals and corporate premises	2.68	0.47	Agree	3.43	0.98	Agree
10	Regular inspection of private and public premises/ fumigation exercises	3.90	0.46	Agree	2.49	1.03	Disagree
11.	Enforcement of Public Health Law on sanitary offenders	1.88	0.33	Disagree	2.91	0.73	Agree
	Total Grand Mean	3.20			3.02		

The technical competency level in table 2, Male Environmental Health Officers agreed to items 7, 8, 9 and 10 with mean range of 2.68-3.90 and a grand mean of 3.20 which was above the cut-off mark for agreement while item 11 with a mean of 1.88 was disagreed. The female environmental health officers agreed to items 7, 8, 9 and 11 with mean range of 2.91 – 3.43 which was above cut-off mark of 2.50 while item 10 with a mean of 2.49 was disagreed.

Research Question Three: What is the extent on which young and old environmental health officers are aware of the diverse cultural practices in Delta State?

Table 3: Mean and Standard deviation of young and old environmental health officer's awareness with regards to the diverse cultural practices. Criterion mean of 2.50 is taken as the bench mark.

		N=400 Young			N=800 Old		
S/N	**Awareness of the diverse cultural practices**	**Mean**	**SD**	**Decision**	**Mean**	**SD**	**Decision**
12.	I have awareness of cultural demography	3.15	1.04	High	3.03	0.88	High
13.	I have awareness of social cultural characteristics	2.93	1.06	High	2.54	1.14	High
14.	I have awareness of environmental health risks	2.78	1.04	High	2.85	0.88	High
15.	I have awareness of people's waste storage practices	3.30	0.56	High	3.13	0.68	High
16.	I have awareness of the people's source of sewage disposal practices	3.08	1.13	High	3.43	0.92	High
17.	I have awareness of the people's source of water supply	2.88	0.75	High	3.11	0.59	High
18.	I have awareness of the people's burial rites practices	2.73	1.07	High	2.98	0.92	High
19.	I have awareness of the people's bereavement practices	2.80	0.60	High	3.95	0.31	High
20.	I have awareness of sociological issues in specific community	2.80	0.87	High	3.75	0.54	High
21.	I have the awareness of environmental taboos in the community	3.20	0.75	High	2.83	1.38	High
	Total Grand Mean	2,97			3.17		

Table 3, revealed that both young and old environmental health officers agreed to items 12 – 21 with mean range of 2.54 – 4.00 which were above the cut-off mark of 2.50 as high extent. Therefore, all the items under awareness were considered high extent. This indicated that both young and old environmental health officers are aware of the diverse cultural practices in Delta State.

Research Question Four: What is the extent on which urban and rural Environmental Health Officers skilled about the diverse cultural practices in Delta State?

Table 4: Mean and Standard deviation of Urban and Rural Environmental Health Officers Skillfulness about the diverse cultural practices. Criterion mean of 2.50 is taken as the bench mark.

		N=850 Urban			N=350 Rural		
S/N	Skill in the diverse cultural practices	Mean	SD	Decision	Mean	SD	Decision
22	I am skillful in cultural greeting manner	2.78	0.71	High	2.71	0.70	High
23	I have the skillfulness in culturally eliciting clients perspectives	3.39	0.49	High	2.43	1.08	Low
24	I have the skillfulness in negotiating culturally sensitive house to house inspection plan	3.20	0.40	High	3.34	0.75	High
25	I have the skillfulness in culturally eliciting relevant information during regulated premises inspection	3.62	0.48	High	3.03	0.85	High
26	I have the skillfulness in culturally performing sensitive house to house inspection	3.21	0.49	High	2.83	1.46	High
27	I have the skillfulness in culturally negotiating sensitive regulated premises inspection plan.	3.51	0.50	High	2.97	0.91	High
28	I am skillful in culturally negotiating sensitive regular sweeping of the roads/ streets.	3.24	0.43	High	2.86	0.80	High
29	I have the skillfulness in culturally eliciting relevant information during regular sweeping of roads/ streets	3.78	0.42	High	2.89	0.82	High
30	I am skillful in performing culturally sensitive regular sweeping of the roads/ streets.	2.64	0.57	High	3.46	0.50	High
31	I have the skillfulness in performing technically sensitive regular sweeping of the roads/streets.	3.19	0.50	High	3.31	0.46	High
	Total Grand Mean	**3.26**			**2.98**		

The result in table 4, revealed that urban Environmental Health Officers agreed to items 22- 31 with Mean range of 2.64- 3.78 and a grand Mean of 3.26 as high extent on Skill in the diverse cultural practices in Delta State, since the mean were above the cut off mark of 2.50. However, rural Environmental Health Officers agreed to items 22,24, 25, 26, 27, 28, 29, 30, and 31 with mean range of 2.71- 3.46 as high extent, while item 23 with a mean range of 2.43 as low extent on skill in diverse cultural practices.

Research Question Five: What is the extent on which more experienced and less experienced Environmental Health Officers training with regards to the diverse cultural practices in Delta State?

Table 5: Mean and Standard deviation of More and Less Experienced Environmental Health Officers Training with regards to the diverse cultural practices. Criterion mean of 2.50 is taken as the bench mark.

		N=900 More Experienced			N=300 Less Experienced		
S/N	Training in Diverse Cultural Practices	Mean	SD	Decision	Mean	SD	Decision
32	I had formal training in socio-cultural diversity at School of Health Technology previously	3.69	0.50	High	2.27	1.00	Low
33	I have training from peer groups	3.33	0.47	High	1.73	0.82	Low
34	I have training in several seminars/workshops	3.47	0.50	High	1.70	0.78	Low
35	I training in academic conferences	3.07	0.44	High	3.60	0.55	High
36	I had training in the University	3.57	0.50	High	3.30	0.59	High
	Total Grand Mean	3.43			2.52		

The result in table 5, showed that more experienced Environmental Health Officers agreed to items 32- 36 with Mean range of 3.07- 3.70 as high extent on training with regards to the diverse cultural practices. The less experienced Environmental Health Officers agreed to items 35 and 36 with Mean range of 3.30- 3.60 as high extent, while items 32, 33 and 34 with Mean range of 1.70- 2.27 on training with regards to the diverse cultural practices as low extent.

Research Question Six: What is the attitude of Male and Female Environmental Health Officers towards the diverse cultural practices in Delta State

Table 6: Mean and Standard deviation of Male and Female Environmental Health Officers towards the diverse cultural practices. Criterion mean of 2.50 is taken as the bench mark.

		N=500 Male			N=700 Female		
S/N	Attitude towards the Diverse Cultural practices	Mean	SD	Decision	Mean	SD	Decision
37	I have positive attitude towards socio-cultural issues in interactions with clients and colleagues	3.64	0.48	Agree	3.84	0.36	Agree
38	I have positive feeling towards people with limited English proficiency	3.22	0.41	Agree	3.63	0.43	Agree
39	I have positive attitude towards aligning with the cultural inclination of the people in the community.	3.10	0.61	Agree	3.09	0.28	Agree
40	I have important feeling for being attentive to non-verbal cues or the use of culturally specific gestures that might have different meanings in different cultures	2.82	0.65	Agree	3.80	0.40	Agree
41	I have positive attitude towards the interpretation of different cultural expressions of pain, distress and suffering	2.80	0.83	Agree	3.03	1.05	Agree
	Total Grand Mean	3.12			3.48		

Table 6, indicated that Male Environmental Health Officers agreed to items 37- 41 with Mean range of 2.80- 3.64 and a grand mean of 3.12 which was above the cut off mark of 2.50. The Female Environmental Health Officers also agreed to items 37, 41 with mean range of 3.03- 3.84 and grand mean of 3.48 on the attitude towards the diverse cultural practices.

Research Question Seven: What is the extent on which more experienced and less experienced Environmental Health Officers technical competency level required for dealing with the diverse cultural practices in Delta State?

Table 7: Mean and Standard deviation of More and Less Experienced Environmental Health Officers Technical Competency level required for dealing with the diverse Cultural Practices. Criterion mean of 2.50 is taken as the bench mark.

		N=900 More Experienced			N=300 Less Experienced		
S/N	Technical Competency Level	Mean	SD	Decision	Mean	SD	Decision
7	Engagement in the supply of waste disposal facilities to individuals and public premises	3.43	0.54	High	2.80	1.09	High
8	Involvement in the supply of waste storage facilities to individuals and public premises	3.39	0.61	High	2.67	0.91	High
9	Issuance of abatement notices to individual and corporate premises	3.37	0.48	High	3.67	0.47	High
10	Regular inspection of private and public premises/ fumigation exercise	3.18	0.59	High	3.00	0.37	High
11	Enforcement of the Public Health Law on sanitary offenders	3.54	0.56	High	2.67	0.47	High
	Total Grand Mean	3.38			2.96		

Table 7, showed that both more experienced and Less experienced Environmental Health Officers agreed to items 7 – 11 with mean range of 3.18 – 3.54 and grand mean of 3.38 for more experienced Environmental Health Officers, while the less experienced Environmental Health Officers had a grand mean of 2.96 as high extent on the technical competency level required for dealing with diverse cultural practices.

Hypothesis One: There is no significant gender difference in cultural competency level of Environmental Health Officers in Delta State.

Table 8: t- test of independent sample of Male and Female Environmental Health Officers on Cultural Competency level. Criterion mean of 2.50 is taken as the bench mark.

Variable	N	Mean	SD	DF	t-Cal	Sign (2-tailed)

Male	500	16.62	1.84		0.614	0.540
Female	700	16.51	3.52	1198		

Table 8, showed the t- calculated value of 0.614 and a p- value of 0.540. Therefore, the p- value of 0.540 was greater than the alpha level of 0.05. Hence the null hypothesis was accepted or retained. This implies that there was no significant gender difference in cultural competency level of Environmental Health Officers in Delta State.

Hypothesis Two: There is no significant gender difference in technical competency level of Environmental Health Officers in Delta State.

Table 9: t- test of independent sample of Male and Female Environmental Health Officers on the Technical Competency level. Criterion mean of 2.50 is taken as the bench mark.

Variable	N	Mean	SD	Df	t- Cal	Sign (2-tailed)
Male	500	16.02	1.94	1198	7.651	0.000
Female	700	15.10	2.13			

In table 9, the t- calculated value of 7.651 and p-value of 0.000 were shown. Testing the hypothesis , the p- value of 0.000 was less than the alpha level of 0.05. Hence the null hypothesis was rejected. This indicated that there is significant gender difference in technical competency level of Environmental Health Officers in Delta State.

Hypothesis Three: There is no significant age difference in awareness of the diverse cultural practices among Environmental Health Officers in Delta State.

Table 10: t- test of independent sample of young and old Environmental Health Officers Awareness with regards to the diverse cultural practices. Criterion mean of 2.50 is taken as the bench mark.

Variable	N	Mean	SD	Df	t-Cal	Sign (2-tailed)
Young	400	29.63	3.30	1198	-10.032	0.000

Old	800	31.58	3.11			

Table 10, showed the t- calculated value of -10.032 and a p- value of 0.000. Testing the hypothesis at, the p- value of 0.000 was less than the alpha level of 0.05. However, the null hypothesis was rejected. This showed that there is significant age difference in awareness of the diverse cultural practices among Environmental Health Officers in Delta State.

Hypothesis Four: There was no significant locaton (urban and rural) difference in skillfulness about the diverse cultural practices among Environmental Health Officers in Delta State.

Table 11: t- test of independent sample of Urban and Rural Environmental Health Officers Skillfulness about the diverse cultural practices. Criterion mean of 2.50 is taken as the bench mark.

Variable	N	Mean	SD	Df	t- Cal	Sign (2-tailed)
Urban	850	32.54	1.72	1198	20.863	0.000
Rural	350	29.83	2.68			

Table 11, revealed the t- calculated value of 20.863 and a p- value of 0.000. Testing the hypothesis , the p- value of 0.000 was less than the alpha level of 0.05. Therefore, the null hypothesis was rejected. This indicated that there was significant location (urban and rural) in skillfulness about the diverse cultural practices among Environmental Health Officers Skillfulness about the diverse cultural practices in Delta State.

Hypothesis Five: There is no significant difference between more experienced and less experienced Environmental Health Officer's training with regards to the diverse cultural practices in Delta State.

Table 12: t- test of independent sample of more experienced and less experienced Environmental Health Officer's training with regards to the diverse cultural practices. Criterion mean of 2.50 is taken as the bench mark.

						Sign

Variable	N	Mean	SD	Df	t- Cal	(2-tailed)
More Experienced	900	17.13	1.28		39.359	0.000
Less Experienced	300	12.60	2.65	1198		

The result in table 12, indicated the t- calculated value of 39.359 and a p- value of 0.000 . Testing the hypothesis , the p- value of 0.000 was less than the alpha level of 0.05. Therefore, the null hypothesis was rejected. This revealed that there is significant difference between more experienced and less experienced Environmental Health Officer's training with regards to the diverse cultural practices.

Hypothesis Six: There is no significant gender difference in attitude towards the diverse cultural practices among Environmental Health Officers in Delta State.

Table 13: t- test of independent sample of Male and Female Environmental Health Officers attitude towards the diverse cultural practices. Criterion mean of 2.50 is taken as the bench mark.

Variable	N	Mean	SD	Df	t- Cal	Sign (2-tailed)
Male	500	15.09	2.56	1198	4.193	0.000
Female	700	14.48	2.44			

Table 13, showed the t- calculated value of 4.193 and a p- value of 0.000. Testing the hypothesis , the p- value of 0.000 was less than the alpha level of 0.05. Hence the null hypothesis was rejected. This showed that there is significant gender difference in attitude towards the diverse cultural practices among Environmental Health Officers in Delta State.

Hypothesis Seven: There was no significant difference between more experienced and less experienced Environmental Health Officer's technical competency level required for dealing with the diverse cultural practices in Delta State.

Table 14: t-test of independent sample of more experienced and less experienced Environmental Health Officer's technical competency level required for dealing with the diverse cultural practices. Criterion mean of 2.50 is taken as the bench mark.

						Sign

Variable	N	Mean	SD	Df	t- Cal	(2-tailed)
More Experienced	900	14.82	2.95	1198	1.434	0.152
Less Experienced	300	14.55	2.36			

Table 14, indicated the t- calculated value of 1.434 and a p- value of 0.152. Testing the hypothesis , the p- value of 0.152 was greater than the alpha level of 0.05. Hence the null hypothesis was accepted or retained. This showed that there was no significant difference between more experienced and less experienced Environmental Health Officer's technical competencies

level required for dealing with the diverse cultural practices in Delta State.

The general/ overall awareness / demographic variables level of cultural competencies in the various Local Government Areas of Delta State is grossly high. This is based on the fact that Mean and Standard deviation was used to answer the research questions and a mean of 2.50 was taken as the cut off-mark. This indicates that a mean of 2.50 and above was considered as the high level of agreement or high level of awareness on cultural competencies, while the mean that is below 2.50 was taken as disagreement which indicate low level of awareness on cultural competencies.

The level of awareness in technical competencies in all the Local Government Areas of Delta State is low, except the more experienced Environmental Health Officers whose level of technical competencies is on the average. This is line with the mean that is below 2.50 which was taken as low level of awareness or disagreement on technical competencies.

Discussion of Results

The findings of the results were discussed under the following sub-headings:

Male and Female Environmental Health Officers on Cultural Competency level. The findings in hypothesis 1, revealed that there was no significant difference between Male and Female Environmental Health Officers on cultural competency level. This findings supports the view of Emeharole, 1993, WHO, 1998, Thomas et. al, 2002, Cairncross et. al, 2003 and WHO, 2005, that the lack of appropriately qualified professionals in this area of cultural competency, inevitably leads to inadequate environmental health practice and enforcement, inappropriate environmental health policy and strategy for action, the lack of sound information for priority setting and planning, the absence of a suitable set of environment and health indicators, and the lack of appropriate performance indicator system.

Male and Female Environmental Health Officers on Technical Competency levels. The findings in hypothesis 2, indicated that there was significant difference between male and female Environmental Health Officers on technical competency level. The hypothesis was therefore rejected. The study is in support of the assertion of the Skybrary,2016 which stated that technical competencies are behavior directly related to the nature of training and the technical proficiency required to exercise effective control. According to Zamboni,(2016), technical competency refers to a skill or area of knowledge used in the occupations of a specific industry. This implies that different fields of work emphasize different skills and thus require different technical competencies. The male Environmental Health Officers are more determined in

actualizing their technical proficiency required to exercise effective control. The United State Department of Labor, (2015), identifies three levels of competencies that are needed before a worker can begin to build technical competencies. The most basic level includes personal effectiveness competencies, such as professionalism, inter-personal skills, dependability and reliability. These are the general attitudes of an effective worker.

Young and Old Environmental Health Officers Awareness with regards to the diverse cultural practices. In hypothesis 3, the result indicated that there was significant difference between young and old Environmental Health Officer's awareness with regards to the diverse cultural practices. This findings is in agreement with Adedipo (2000), who postulated that most cultural practices do not permit improved sanitation and that many remote areas do not accept having toilets inside their houses but preferred the place of their toilets in the bush or cleared open lands. This implies that the old Environmental Health Officers had more awareness of the diverse cultural practices hence some cultural practices could exist.

Urban and Rural Environmental Health Officers Skillfulness about the diverse cultural practices. In hypothesis 4, there exist a significant difference between Urban and Rural Environmental Health Officers Skillfulness about the diverse cultural practices. This study supports the studies of Ajayi and Osibanjo, (1980) on the pollution of surface water by effluent streams. The result revealed that rivers had high values of Ph and were highly coloured and unsuitable for fishing and water supply, especially in Lagos, Kano and Kaduna where textile industries daily discharge liters of untreated effluents as waste water into open public drains that empty into a river.

Henkdew, Lock and Karen (2007), posited that health risks associated with urban agriculture could be contamination of crops with pathogens, human disease transmitted from disease vectors, crops and drinking water contamination by agrochemicals. According to the National and Regional Story Netherlands, (2014), recent estimate has it that about five to ten percent of disability adjusted life years DALYS lost, are due to environmental causes in Europe. They further stressed that most important factor is fine particulate matter pollution in urban air.

More Experienced and Less Experienced Environmental Health Officers Training with regards to the diverse cultural practices. The findings in hypothesis 5, revealed that there was significant difference between more experienced and less experienced Environmental Health Officers training with regards to the diverse cultural practices in Delta State. Therefore, the null hypothesis was rejected. This findings is in agreement with Nine-Curt, (1984), definition of culture as the bearer of human wisdom that includes a wealth of human behaviours, beliefs, attitudes, values and experiences of immense worth. Nine-Curt further affirmed that culture also carries things that are offensive to a person's dignity and well-being and certainly to others whose cultural framework is different. This implies that more experienced Environmental Health Officers has the cultural humility and capacity for environmental monitoring despite the fact that the curriculum for the training of Environmental Health practitioners at the diploma and degree levels lack sufficient credit weight to impart the desired skills.

Male and Female Environmental Health Officers Attitude towards the diverse cultural practices. Findings in hypothesis 6, showed that there was significant

difference between Male and Female Environmental Health Officers attitude towards the diverse cultural practices in Delta State. This findings was in agreement with the words of Ajzein, (1985), Fishbein and Ajzein, (1975) on the theory of reasoned action which indicate that if people evaluated the suggested behaviour (attitude) as positive and if they think there is significant others who wanted them to perform the behaviour (subjective norms), this will result in a higher intension (motivation); therefore, they are most likely to do so. Also, the theory of planned behaviour stipulates that attitude towards behaviour, subjective norms and perceived behaviour control, together shape an individual's behavioural intentions and behaviour (attitude). This is in line with the assertion of Stroebe, (2000) and Ajzein, (1975), who stipulated that intension is influenced by subjective norms including perceived expectations of others like family and friends with regards to a person's behaviour and the motivation for a person to comply with other wishes.

More Experienced and Less Experienced Environmental Health Officers Technical Competency level required for dealing with the diverse cultural practices in Delta State. Result in hypothesis 7, revealed that there was no significant difference between more experienced and less experienced Environmental Health Officers technical competency level required for dealing with the diverse cultural practices in Delta State. This findings is in agreement with the Skybrary Aviation Safety, (2016), who asserted that technical competence is the knowledge of, practices required for successful accomplishment of a business, job or task. Moreso, the result indicated clearly that the p- value of 0.477 was greater than the alpha level 0.05, hence the null hypothesis was accepted in the statement item. The criteria for more and less experienced Environmental health officers was based on years of engagement. That is,

those with less 6 months and 2 to 5 years were taken as less experienced while those with more than 5 years and above, were taken as more experienced.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter deals with the summary of the study, findings of the study, conclusions reached and recommendations made under the following sub-headings:

Summary of the Study

This study was carried out to assess the awareness and demographic variables among Environmental Health Officers on cultural technical competencies in Delta State. Seven research questions were raised and seven hypotheses were formulated to guide the study. The research design employed in this study, is the descriptive survey which was designed to collect information or data from the respondents on their demographical awareness and cultural technical competencies levels.

The population of the study was drawn from among all the Environmental Health Officers employed by the Local Government Councils in the state. One thousand two hundred (1200) respondents were sampled from the three senatorial districts in the state. The Purposive sampling technique was used.

The research instrument used for the study is the self- structured questionnaire titled "Awareness and Demographic Variables on Cultural Technical Competencies among Environmental Health Officers' Questionnaire (ADVCTCEHOQ)". The data collected were analyzed using descriptive statistics of mean and standard deviation while t- test was used to test the stated null hypothesis at 0.05 level of significance. The results were presented in tables.

The research findings revealed that :

1. The male and female Environmental Health Officers has no significant difference on cultural competency level as they lack the awareness of the existing cultural practices.

2. There was significant gender difference of Environmental Health Officers on technical competency level as the males seem to have more proficiency in the enforcement of the Public Health Law.
3. There was significant age difference in awareness of the diverse cultural practices among Environmental Health Officers in Delta State, based on the fact that the old Environmental Health Officers had lived long in the environment and therefore understand the cultural practices of the people more than the young ones.
4. There exists significant location (urban and rural) difference in skillfulness about the diverse cultural practices among Environmental Health Officers in Delta State. This is due to the fact that urban sanitation requires more skills than the rural.
5. There is significant difference between more experienced and less experienced Environmental Health Officers training with regards to the diverse cultural practices as they got their training from peer groups and seminars.
6. There exist significant difference between male and female Environmental Health Officers attitude towards the diverse cultural practices.
7. There was no significant difference between more experienced and less experienced Environmental Health Officers technical competencies level as both had no formal training on technical competency.

Conclusions

Based on the findings of this study, both males and females were incompetent in their cultural knowledge of the people's culture, though, the males has better cultural

competency than the females. It was therefore concluded that Environmental Health Officers in Delta State, feel that they are culturally and technically competent despite the fact that they had received little or no formal training in cultural technical competencies. Therefore, their feelings that they were culturally and technically competent may just be parochial and so lacks the credit weight and a holistic worldview of cultural technical competencies. The holistic fact is that the curriculum of Environmental Health professionals, according to Emeharole, (1993), was persistently disconnected from cultural, technical realities and health needs of the people and therefore may not have the capability of enhancing their performance in the urban and rural communities positively.

However, the studied Environmental Health Officers' feelings that they were culturally and technically competent without any formal training in cultural technical competencies, implies that they do not know what cultural technical competencies entail and therefore may not know that they do not know.

Recommendations

The following recommendations were made based on the findings of this study:

1. Experts in the field of Curriculum planning and review, should urgently intensify effort to come up with sound and holistic curriculum that has sufficient credit weight for the training of Environmental Health Officers on cultural-technical competencies in the University and College of Health Technology to impart the desired skills in performing the highly scientific task of environmental monitoring and evaluation. In other words, schools where Environmental Health Officers are trained, should urgently include cultural – technical competency items in their curricula where students will be exposed to the cultural, technical realities and health needs of the people.

2. There is need to urgently start the processes of instituting cultural technical competencies training for environmental health officers who are working in the service of the State, in addition to including cultural technical competencies units into the curricula of environmental health officers training institutions.
3. The Federal, State and the Local Governments, should enforce strategies aimed at penalizing defaulters of the Public Health Law.
4. Health education should be intensified most especially in the rural communities on the importance of improved hygiene practices amidst their diverse cultural practices.
5. Environmental Health Officers and Health educators must make concerted efforts to reach the public with the campaign for improved sustainable use of the environment through creative, proactive and innovative approaches hinged on the current practices of environmental health globally, to compete with the globalized age and technology.

Contribution to Knowledge

1. The study has provided information regarding the Cultural Technical Competencies profiles of Environmental Health Officers in Delta State.

2. The study demonstrated that Cultural Technical Competencies are desirable resources in the achievement of set objectives by Environmental Health Officers.

3. The study established the extent of Cultural Technical Competencies being disconnected consistently from Environmental Health Officers' Curriculum in

the various training institutions at both degree and diploma levels, as well as disconnected from cultural technical realities and health needs of the people.

Suggestions for Further Studies

A more comprehensive and detailed study on the problem that was reviewed in this work, should be carried out to ascertain and confirm the literature reviewed in this study. There is also the necessity or need to carry out a similar study to determine the extent to which cultural-technical competencies are affecting Environmental Health Officers' performance.

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QUESTIONNAIRE

AWARENESS AND DEMOGRAPHIC VARIABLES ON CULTURAL TECHNICAL COMPETENCIES AMONG ENVIRONMENTAL HEALTH OFFICERS IN DELTA STATE.

Dear Sir/Madam,

I am a post-graduate student in the Department of Human Kinetics and Health Education, Faculty of Education, Delta State University, Abraka. I am carrying out a research work on the above topic. This questionnaire is designed to find out the cultural and technical competency level of Environmental Health Officers in Delta State.

There are no wrong or right answers. You are strictly assured that all information supplied, will be treated as confidential and holistically for academic purposes only. Therefore, you should feel free to respond to the questionnaire items as truthfully as possible.

Thank you for your anticipated co-operation.

Uloko, Amos Ifeanyichukwu
800 Level Post Graduate Student
Department of Human Kinetics and Health Education,
Faculty of Education, Delta State University, Abraka.

SECTION A

Instruction: Kindly tick (√) in the appropriate blank space provided.

Socio-Demographic Characteristics:

1. Gender (select one) ( ) Male ( )Female
2. Age (select one) ( )Less than 20-24 years old ( )25-29 years old ( )30-39 years old ( )40-49 years old ( )50 years old and above.
3. Rank (select one) Environmental Health Officer( ) Environmental Health Technician( ) Environmental Health Assistant( ) Health Assistant( ) Health Attendant( )Market Cleaner( )
4. Employment Status (select one) Full Time( ) Part Time( ) Casual Staff( ) Student on Attachment ( ).
5. How long have you been engaged? (select one)Less than 6 months ( ) 6-12months ( ) 1-2 years( )2-5 years ( ) More than 5 years ( ).
6. Please write the name and address of the location of your primary assignment_____

   _____
7. How long have you been working in this particular location? (select one)Less than 6 months( ) 6-12 months( ) 1-2 years( ) 2-5 years ( ) More than 5 years ( )

8. What is your ethnic background? (select one) Urhobo

9. Isoko ( ) Ijaw ( ) Ukwuani ( ) Ika ( ) Ibo ( ) Itsekiri ( ) Yoruba ( ) Benin ( ) Aniocha ( ) Hausa ( ) Others (please specify_____)

10. Indicate your religious background. Catholic ( ) Anglican ( ) Methodist ( ) Pentecostal ( )African Traditional Religion()Others: Specify_____

11. Do you speak the local language fluently? Yes ( ) No ( ).

SECTION B

Environmental Health Officers' Cultural and Technical Competencies Inventory. Please tick (√) on the cells numbered 1- 4 to indicate how knowledgeable, skillful you are about the following subject areas concerning Delta State Ethnic Community (place of your primary assignment) in addition to your attitude and previous education as well as training towards handling of cultural issues in environmental health services.

KEY: Strongly Agree=4, Agree= 3, Disagree= 2; Strongly Disagree= 1

S/N.	The cultural competency level or profile of Environmental Health Officers in Delta State.	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	Demographic situations of different ethnic groups to whom you serve.				
2.	Socio-cultural characteristics of the diverse ethnic groups.				

3.	Health risks inherent in the diverse cultural practices.				
4.	Health risks inherent in bereavement practices.				
5.	Health promotion and disease prevention.				
6.	Reproductive Health: Child spacing and unwanted pregnancy.				

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S/N	Level of Environmental Health Officers' Technical Competency	Strongly Agree	Agree	Disagree	St ly D ee
7	Engagement in the supply of waste disposal facilities				
8	Involvement in the supply of waste storage facilities to individuals and public premises				
9	Issuance of abatement Notices to individual and corporate premises				
10	Regular inspection of private and public premises/fumigation exercises				
11	Enforcement of the Public Health Law on sanitary offenders.				

S/N	Awareness of the Diverse Cultural Practices	Strongly Agree	Agree	Disagree	Strongly Disagree

12	I have awareness of cultural demography				
13	I have awareness of socio-cultural characteristics				
14	I have awareness of environmental health risks				
15	I have awareness of people's waste storage practices				
16	I have awareness of the people's source of sewage disposal practices				
17	I have awareness of the people's source of water supply				
18	I have awareness of the peoples' burial/ Bereavement practices				
19	I have awareness of sociological issues in specific community				
20	I have the awareness of environmental taboos in the community				
21	I have awareness of the people' burial rites practices				

S/N	Skills in the Diverse Cultural Practices and Beliefs	Strongly Agree	Agree	Disagree	Strongly Disagree
22	I am Skillful in a cultural greeting manner				
23	I have the Skillfulness in culturally eliciting clients' perspectives				
24	I have the Skillfulness in Negotiating culturally sensitive house to house inspection plan				
25	I have the Skillfulness in culturally eliciting relevant information during regulated premises inspection.				
26	I have the Skillfulness in culturally performing sensitive house to house inspection				
27	I have the Skillfulness in culturally Negotiating sensitive regulated premises Inspection plan				
28	I am Skillful in culturally Negotiating sensitive regular sweeping of the roads/streets				
29	I have the Skillfulness in culturally eliciting				

	relevant information during regular sweeping of the roads/streets				
30	I am skillful in performing culturally sensitive regular sweeping of the roads/streets				
31	I have the Skillfulness in performing technically sensitive regular sweeping of the road/streets				

S/N	Training in Diverse Cultural Practices	Strongly Agree	Agree	Disagree	Strongly Disagree
32	I had formal training in socio-cultural diversity at the College of Health Technology Previously				
33	I have training from peer Groups				
34	I have training in several seminars/workshops				
35	I had training in academic Conferences				
36	I had training in the University				

S/N	Attitudes towards the Diverse Cultural Practices and Beliefs	Strongly Agree	Agree	Disagree	Strongly Disagree
37	I have positive attitude towards socio-cultural issues in interactions with clients and colleagues				
38	I have positive feeling towards people with limited English proficiency				
39	I have positive attitude towards aligning with the cultural inclination of the people in the community.				
40	I have important feeling for being attentive to non-verbal cues or the use of culturally specific gestures that might have different meanings in different cultures				
41	I have positive attitude				

	towards the interpretation of different cultural expressions of pain, distress and sufferings				