

# Socio-Economic Impacts of Cemetery on Residents of Port Harcourt Metropolis, Rivers State, Nigeria.

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**Abstract-** Death is the inevitable and ultimate end of human beings on earth. When this happens, there is a need to safely dispose of the remains of the diseased in order to avoid public health hazards. Apart from providing other roles, cemeteries function majorly as a place of interment for corpse. Cemeteries also have negative impacts that affect the socio-economic well being of residents especially when they are not properly managed. The present study examined some of the impacts of the Military and Port Harcourt City cemeteries on the residents of cemetery area. Both primary and secondary data were utilized. The Hazards and Effects Management Process (HEMP) was used in the identification and rating of the impacts. Findings revealed that, though there are some positive impacts of cemetery (they promote social interactions and ensure closure for bereaved family members, friends and acquaintances and increase in financial flow from burial fees), the negative impacts on the socio-economic well-being of residents are weighty. The impacts identified were among others are: Threat to safe and secure living environment; decrease in night life activities; intense fear of encountering paranormal being /ghosts among others. To enhance safety in the area, there is need to engage the services of security agencies to extend security services to the cemetery environment especially at night to prevent harassment and address the issue of threat to safe and secure living environment. Improving on the visual aesthetics of cemeteries in the Port Harcourt metropolis using the instrumentality of land-use planning is another way of reducing the fear and ugly scene that characterise cemeteries in the study area. There is also the need for increased enlightenment among the populace that cemeteries after all are not only areas for inhumation of corpses, but places of economic, aesthetic, spiritual and recreational significance.

**Index Terms-** Cemetery, socio-economic impacts, death, environment, fear, Corpse, inhumation

## I. INTRODUCTION

One of the characteristic features of all living beings is that they die; death being an inevitable and ultimate physical end of human beings on earth. When deaths do occur, there is a need to safely dispose of the remains of the diseased in order to avoid public health hazards. In most cases, the cemetery is an area set apart for burial. Cemeteries are historic sites where leaders, followers, icons, wealthy, poor, local and national heroes etc. lay still and unable to take part in the activities of daily living in the

society (Okusanya 2013). Cemeteries promote social interactions and ensure closure for bereaved family members, friends and acquaintances.

Cemeteries function majorly as a place of interment; they are also revenue yielding ventures. Cemeteries may add economic value to owners, reason being that tourists patronize the cemeteries if the cemeteries have historical import, is properly developed, manicured and attractive. Apart from being a profitable source of income, the luxuriant vegetation within and around cemeteries also serves as a source of carbon sink, oxygen generation, Phytoremediation and aesthetic enhancement. Cemeteries also have negative impacts on the environment especially when they are not properly managed. Several studies (Terms,2016;, Thorsheim,2011; Tudor et al. 2013; Practice Guide,2016; Neckel et al. 2016; and Üçisik & Rushbrook, 1998, for example) conducted in different parts of the world have identified the existence of natural process of multidimensional interaction and cause-effect relationship between cemetery places and adjacent environment. Those scholarly researches pointed out that the decomposition of humans body remains in cemetery places have tendency to impose deteriorative pollution and contaminating impacts on the environment including water bodies which in turn result in health problems to the people in the residential areas. Onwuanyi, Ndinwa and Chima (2017), Kale (2016) and Douglas (2013) also observed that public cemeteries are potential locations where miscreants operate and take advantage of vulnerable people working or living adjacent to the cemeteries. These miscreants may include sane and insane people who lurk around the cemetery and indulge in all kinds of illicit drug, illicit relationship, dead human parts trafficking and tobacco smoking. These anti-social behaviours are usually considered unsafe for residents living around the cemetery area,

There are principally two public cemeteries in Port Harcourt metropolis: the Military and Port Harcourt city cemeteries which at inception were cited far away from areas of residence. Over time, Port Harcourt has witnessed rapid urban growth leading to location of settlement close to the cemetery area with attendant implications on the socio-economic status of residents. At the moment, there is no set back or buffer separating the cemetery and areas of residence as cemeteries are found adjoining areas of residence. The presence of cemeteries very close to areas of residence may have some socio-economic effects such as strange feeling that goes along with the presence of cemeteries either from psychological point of view, as in perception of ghostly environment or source of apparitions that

triggers fear among citizens. The present study examined some of the socio-economic impacts of the Military and Port Harcourt City cemeteries on residence living in cemeterial areas in Port Harcourt metropolis.

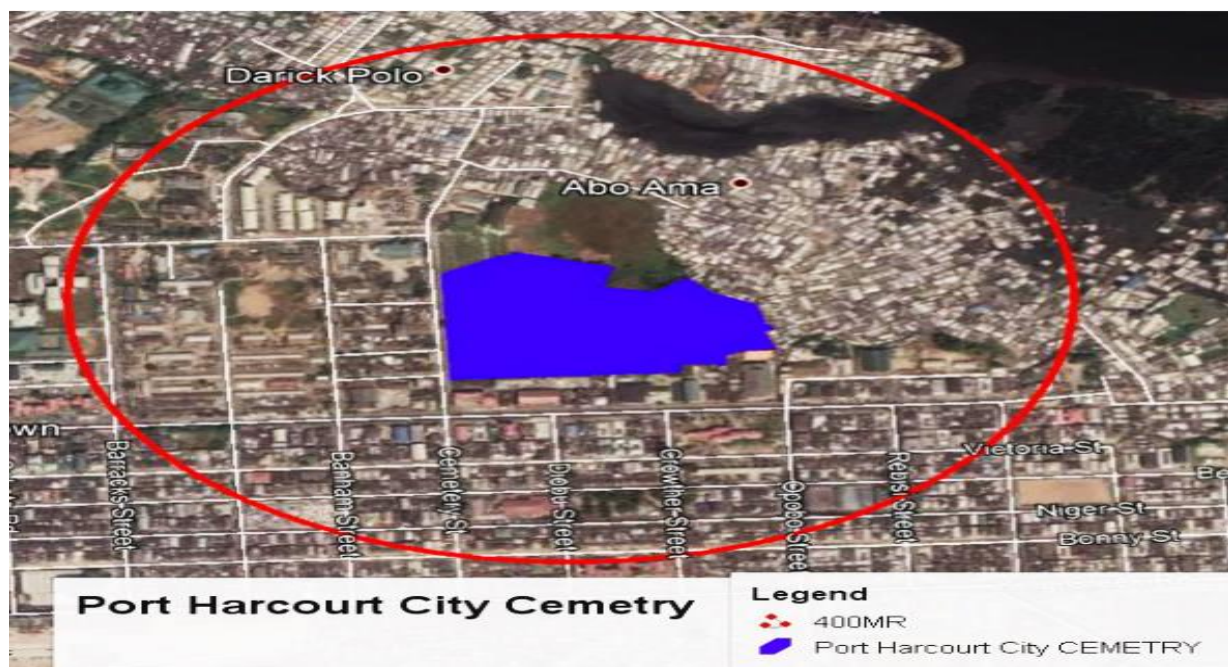
## II. STUDY AREA

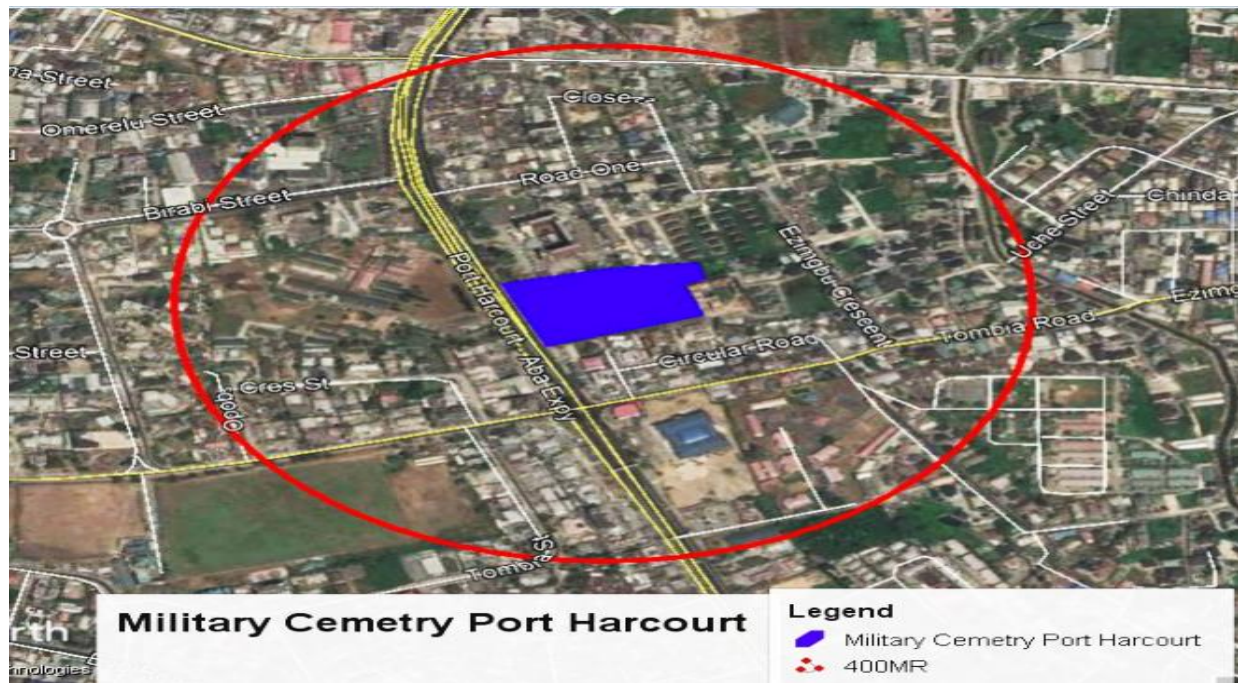
Port Harcourt metropolis as used in this study comprises of Port Harcourt city and Obio/Akpor Local Government Area (LGAs) of Rivers State Nigeria. It locates on Latitude: 4°42'0" N to 4°57' 0" N and Longitude: 6°54'0" E to 7°9'0" East of Greenwich Meridian. It is bounded in the North by Ikwerre and Etche Local Government Areas, in the South by Okrika Local Government Area, in the East by Eleme and Oyigbo Local Government Areas and in the West by Emohua and Degema Local

Government Area. The area falls within the tropical climate with average annual temperature of 26.4 °C( 79.5 °F). (Climate-Data.Org 2020). This region is typified by two major seasons - wet and dry seasons. (Figure 1)

The area falls within the niger delta. The stratigraphy of the Niger Delta Basin formations consists of three major units: the Akata, the Agbada and the Benin formations from base to top. The Benin formation is an extensive stratigraphic unit in the southern Nigeria sedimentary basin composed of continental flood plain sands and alluvial deposits. (Ukpaka&Ukpaka 2016).

The relief of the study area is generally lowland. Its elevation varies between 3m and over 15m above mean sea level. The low relief of the area is gently inclined towards the sea; thus, discharges are into the major natural drainage, through the Bonny River (Ukpaka&Ukpaka, op cit).





**Figure 1: Study Area showing cemetery**  
Source: Google Image (2020)

### III. CONCEPTUAL ORIENTATION/ LITERATURE REVIEW

#### 3.1 The Concept of Fear

Fear is an emotional response to a perceived threat, either real or imagined (North Western Medicine, 2020). Fear is an unpleasant emotion caused by the threat of danger, pain, or harm. We fear things that are perceived to be dangerous such as ferocious animals, ghosts, manic men, snakes, heights or closed spaces etc. Cemeteries have long been viewed as spooky, mostly due to the mysterious nature of death. Graveyards and tombs have provided the setting for countless tales of ghosts, devils, and crimes, leading many to fear cemeteries as haunted places filled with danger. Fear is experienced in the mind, but it causes a strong physical reaction in the body. Fear activates the stress hormones like cortisol and adrenaline are released; this causes blood pressure, heart rate and respiration to increase. Blood flow changes; blood flows away from the heart into limbs.

In some cases, this fear reaction can become so severe that people experience a panic attack, characterized by symptoms such as a pounding heartbeat, shortness of breath, shaking, feelings of choking, tingling sensations, feelings of unreality or detachment, chills, and a fear of losing control or dying. Consequently, one might shout, swing arms for defense or run, also known as fight-or-flight response. In the case of cemetery, a tomb, a human, an apparition etc. encountered in the night may be perceived as dangerous; the perception sends fear signal. Unable to rationalize that the threat may not be real, due to the cerebral cortex action at this moment (impaired judgment), fear would cause one to flee. Fear can graduate to phobia. Phobia is a heightened state of fear to an extent that activity of daily living is interfered with. The fear of cemetery is known as coinmetrophobia. Someone with coinmetrophobia may alter their behavior in an attempt to avoid

seeing or thinking of cemeteries. For instance, they may refuse to drive or walk on roads where they cross path with a cemetery. Some who reside close to the cemetery sometimes find it hard in engaging commercial vehicles to convey them to their residence at night because they are assumed to be ghosts, ancestral spirits or living dead as Ndisya (2015) called the dead. Fear is one of the negative impacts of a cemetery.

#### 3.2. The Concept of Social Infrastructure

Vazonienė and Kiaušienė (2018), defines Social infrastructure as "the interdependent mix of facilities, places, spaces, programs, projects, services and networks that maintain and improve the standard of living and quality of life in a community." A social infrastructure is a set of physical places and organizations that shape our interactions (Richard 2018). As a social infrastructure, a cemetery is a resting place, a last home for friends, parents, spouses etc. whose love was once shared in the community. For those who desire to keep memory of such beloved ones, the cemetery offers that opportunity and continuity and bring solace and closure to the affected.

As a place that fosters social interactions, during interment of the dead, friends, relatives, acquaintances from diverse places, of all works of life and caliber gain the opportunity to meet, associate and interact. The cemetery space enables social interaction, being development of new relationship or rekindling of the old one for the present and future. In some cemeteries, a multipurpose hall is built for funeral and memorial services where these interactions take place. Also, during the process of interment in the cemetery, the clergy seizes the opportunity to comfort and support the bereaved, evangelize the masses and give some words of encouragement and upliftment. Other religious institutions carry out rituals that pertain to their religion in honor of their dead to bring solace. Cultural activities pertaining to the burial rituals

that may enhance social interaction are sometimes carried out during the process of interment in the cemetery. Finally, the cemetery facility serves as the last home, a physical place, to accommodate the remains of the deceased and bring closure to the relatives.

This concept of social infrastructure is relevant to this study because a social infrastructure is necessary for the emotional and social development of people as well as a nation. One of the concerns of Urban and Regional planners is the social impact of any development on communities. Though cemeteries play important roles in enhancing the social and psychological well-being of society, proper attention have not been given to its development and maintenance to attain its maximum utility in Nigeria.

#### IV. EMPIRICAL REVIEW

##### 4.1 State of Public Cemeteries in Nigeria

There are lots of works in literature on cemetery among scholars. This may be due to the importance attached to places of inhumation across diverse cultures, Although there appears to be divergent opinion among scholar on issues relating to cemetery, there appears to be consensus among scholars that cemeteries appears to be properly manage in developed world compared to developing parts including Nigeria. Writing on the state of cemetery, Cosmas (2016), described the Ita-Marun public cemetery in Epe, east of Lagos as being overgrown by bushes where hoodlums hide to carry out nefarious activities.

Unah's (2021) findings on the state of cemetery corroborates those of Comas (2016). Writing on the state of Hawkins road cemetery, Calabar which houses the final abode of several kings, (Obongs), Margaret Ukpo (the famous activist), early missionaries and other notable personalities Comas (op cit) observed that the cemetery is overgrown with wild weeds as over the years, tombs, graves and vaults completely covered with overgrown grass, has made the place hardly accessible (see plate1). He further observed that, criminals have turned the cemetery to a safe haven and hideout for armed robbers, secret cult groups who convene there at night to carry out heinous plan and other nocturnal activities (Unah, op cit).

Onwuanyi, et al., (2017), investigated the state of cemeteries in Benin and also that most cemeteries in the area are overgrown with grass, broken fences, absence of paved paths, tombstones barely visible, unkempt surroundings, devoid of security personnel etc.

The poor conditions of the cemeteries give opportunity to hoodlums to take advantage, carry out immoral activities that may endanger residents and commuters.

Furthermore, Tudor et al. (2013) in their study observed that cemeteries are microbiologically contaminated sites that can affect people psychologically, especially those who are living close to cemeteries. To mitigate the often negative impacts cemetery places need preplanned effective management to mitigate the pollution and other socioeconomic impacts (Sagaye Santime, 2019). There has not being any empirical study on the likely socio-economic impacts of cemeteries on the well-being of residents in Port Harcourt metropolis. This is the gap that the present study sought to fill.

#### V. METHODS AND MATERIALS

This study adopted the qualitative research approach. The unit of analysis of interest relevant to this study is the population of the cemetery area, which covers settlements within 400 meters radii of Port Harcourt City and the Military cemeteries. These settlements include: Amatari Polo and Abo Ama communities, a portion of Barrack, Banham, Cemetery, Diobu, Crowther, Opobo and Rebisi in the Port Harcourt City cemeterial area. The military cemeterial area includes part of new Government Reserved Area phase four.

Giving that the population of the said area (400-meter radii of the cemeteries) is not published by the National Population Commission (NPC) as a unit, an estimated population was derived using a predetermined average household per building multiplied by average household size multiplied by the number of buildings that fall within 400 meters radii of the cemeteries. Using average household per building of 6, and number of household 6, the population of the study area was estimated to 76,950 persons.

Taro Yamane method was used to determine the sample size of 398 respondents for the administration of questionnaires. A systematic sampling technique was utilized where every 4th building in each cemeterial area was chosen and a head of house selected as respondent. Interviews were also granted to selected key informants and cemetery workers to complement the data from gotten through questionnaire. To examine the socio-economic impacts of cemeteries on the residents of the study area, the Hazards and Effects Management Process (HEMP) developed by SHELL was used. The technique entails identifying, qualifying and rating impact significance. An interaction matrix was used to identify impacts. With the presence of the cemetery, the following impacts, (table1), were identified.

Identified impacts were further qualified as positive or negative, reversible or irreversible, direct or indirect, short term/temporary or long-term/permanent, local and/or regional, incremental/non-incremental. The rating of potential impacts was carried out using the method of the "probability of the impact happening and their consequence. (table 2)

**Table 1: Hazard (Sources of Effects) and Psycho-Socio and Economic impacts**

S/N	Sensitivities	Impacts
1	Safe and secure living environment	Threat to safe and secure living environment
2	Fear	Intense Fear from perception of paranormal being encounter/ghosts
3	Night life activities	Decrease in night life activities
4	Contamination of groundwater	Abundance of Lead and heterotrophic bacteria
5	Water acidity	High level of acidity
6	Personal health	Infective disease
7	Financial flow	Increase in financial flow from burial fees

Source: Researcher's Field Survey,(2021)

**Table 2: Impacts Identification, Qualification and Rating**

Interaction Code	Hazard (source of effects)	Sensitivity	Impact description	Qualification	Likelihood	Consequence	Impact Rating
1	Cemetery	A safe and secure living environment	Threat to safe and secure living environment	Negative	Medium probability	Little	Minor
2		Intense Fear	Fear of paranormal being encounter/ghosts	Negative	Medium probability	Little	Minor
3		Night life activities	Decrease in Night life activities	Negative	Medium probability	Little	Minor
4		Contamination of groundwater	Presence of lead in groundwater	Negative	High conti/hourly	Great	Major
5		Contamination of groundwater	Abundance of Heterotrophic bacteria in groundwater	Negative	High conti/hourly	Great	Major
6		Water acidity	High level of Water acidity	Negative	High	Great	Major
7		Personal health	State of acidity and exposure to lead in water	Negative	High	Great	Major
8		Cost of living	Increase in cost of detergent/soap	Negative	Low	Hardly Any	Negligible
9		Access to learning	Increase in access to learning about past values, heroes/icons	Positive	Low	Hardly Any	Negligible
10		Financial flow	Increase in financial flow from burial fees	Positive	Low	Hardly Any	Negligible
11		Aesthetics of the environment	Improved beauty of the immediate environment	Positive	Low	Hardly Any	Negligible

Source: Researcher’s Field Survey, (2021)

Data analysis was achieved through the use of univariate statistics such as percentages. Results were presented in tables, charts and graphs for easy comprehension.

VI. RESULTS AND DISCUSSION

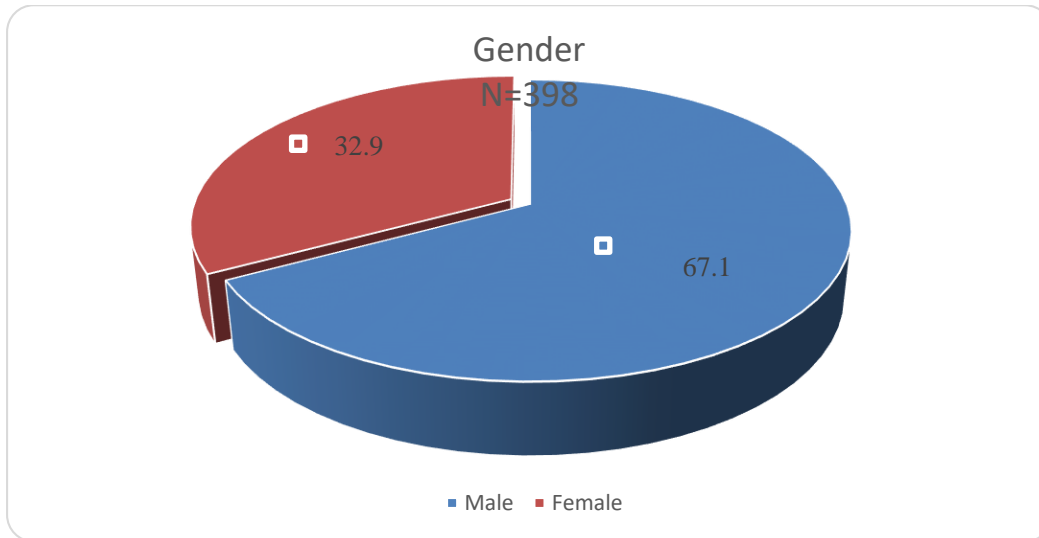
**6.1. Socio-economic characteristics of respondents**

The gender distribution of respondents is as shown in Figure 2. Male accounted for 67.1% of respondents while female accounted for 32.9%. The high number of male respondents may

be due to the fact that within an urban area, males are prone to migrate in search of greener pastures compared to their female counterparts. The age distribution of respondents indicates that those in age bracket 41-50 years were more and accounted for 38.7%. Age brackets of 18-30 years, 31-40, 51-60 and 61+ accounted for 3%, 34.3%, 18.9% and 5.1% respectively.

In terms of monthly income, the modal income category was “N30,000 – N 129,999”, this represents 30.9% of the

distribution. Other categories are Less than N30,000; N130,000 - N 229,999; N230,000-N329,999; N330,000-N429,000; N430,000+ and Not Applicable representing 22.7%, 18.1%, 12.1%, 3.4%; 3% and 9.3% respectively. Not Applicable are number of people who do not have income such as the unemployed and the house wives. (Table 3)



**Figure 2: Percentage Distribution of Respondents' Gender**  
Source: Researcher's Field Survey, (2021)

**Table 3: Percentage Distribution of Monthly Income Category of Respondents**

S/N	Monthly Income Level	No	%
1	<N30,000	91	22.7
2	N30,000 – N 129,999	123	30.9
3	N130,000- N 229,999	72	18.1
4	N230,000- N 329,999	48	12.1
5	N330,000- N 429,000	15	3.4
6	N 430,000 +	12	3
7	Not Applicable	37	9.3
	<b>Total</b>	<b>398</b>	<b>100</b>

Source: Researcher’s Field Survey, (2021)

In terms of educational status, household members who have completed tertiary education accounted for 52.7%. Secondary, Primary, Others, No formal education accounted for 41.2%, 2.3%, 2% and 1.8 respectively (table 4)

**Table 4: Level of Education of Respondents**

S/N	Educational Level	No	%
1	No formal education	7	1.8
2	Primary education	9	2.3
3	Secondary education	164	41.2
4	Tertiary education	210	52.7
5	Others	8	2
	<b>Total</b>	<b>398</b>	<b>100</b>

Source: Researcher’s Field Survey, (2021)

The modal occupation of respondents was “Civil service” accounting for 41.5%, followed by “Trading” accounting for 24.9%. Other categories are fishing, Business /contractors, Artisan and “others category”, which accounted for 16.6%, 10.9%, 6.1% and 0% respectively. This distribution has total response of 458 instead of 398 because there are multiple responses to the options.

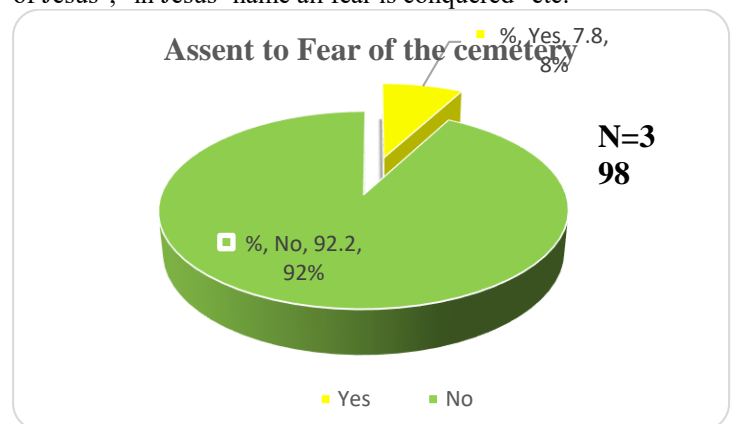
**6.2. Socio-economic Impacts of Cemeteries on the Residents in Port Harcourt Metropolis.**

**6.2.1 Burial in the Cemetery**

Respondents were asked if they had buried any of their family or relation in the cemetery and if they visited the grave sites. Furthermore, respondents were asked to state reasons for the visitation. 24.1% assented to burial of family or relation in the cemetery while 75.9% said they have not buried any family member or relatives in the cemetery. This distribution may be due to the fact that most of the respondents are not indigenes of the cemetery area and probably bury their deceased in their community of origin.

**6.2.3 Fear of Living Close to Cemetery Area**

Respondents were asked if the presence of the cemetery close to their living area scared them. Respondents were asked to give reason for their responses. 7.8% answered yes while 92.2% of the respondents answered “No”. These responses may be related to the belief about the activity of the dead. Some believe that the dead possess supernatural powers and capable of harm while others believe the contrary. Some of the respondents who answered yes claim that they (family members) experience strange feelings when they walk past the cemetery especially during late night hours. Some respondents state that seeing tombs especially in the late evening as one traverse the cemetery street is very scary (Figure 3). Some respondents who answered “No” gave the following reasons: "dead people do not know anything", " dead people are powerless" dead people cannot harm a living person", "it is the devil that impersonate the dead" "the power of God is greater than the power of the devil", "we are covered by the blood of Jesus", "in Jesus’ name all fear is conquered" etc.



**Fig 3: Percentage Distribution of Assent to fear of the cemetery**

Source: Researcher’s Field Survey, (2021).

**6.2.4 Safety along the Cemetery Area.**

Respondents were asked about experiencing any of the following along the cemetery in the day or night: Snatching of personal belongings, Harassment of pedestrians, Group of youngsters smoking, Snakes and Eerie or strange feelings at night. There were ten responses for Harassment of pedestrians, sixteen responses for Eerie or strange feelings at night. Respondents describe the Eerie feeling as "goose bump", "heart racing" and "head swelling walking along the cemetery street mostly at night. The rest of the respondents did not tick any option. This response may be attributed to the status of the Port Harcourt City cemetery at the time of the survey have been fenced, gated and provided with night security personnel, while the day workers watch the cemetery in the day time. So, miscreants may not have access to the cemetery to hide or opportunity to loiter and attack pedestrians as was done prior to the construction of the Port Harcourt City cemetery fence.

**6.2.5 Effect of the Cemetery on daily Sales**

Respondents who are traders were asked if they sold within 400-meters of the cemetery or more than 400 meters of the cemetery area. Out of 114 respondents who are traders, 31.9% sell within 400-meters of the cemetery while 68.1% traded outside the

cemetery area. This behavior may be due to space constraint or personal reasons.

Respondents who are traders were asked if the presence of the cemetery make them sell more, sell less or sales not affected. Out of the 114 respondents who are traders, 31.9% who sell within 400-meters of the cemetery said the presence of the cemetery does not affect the sales of their goods, same as those who sell outside. This may be attributed to the fact that some residents do not have to traverse the cemetery street to purchase food items, so no fear is entertained. Consequently, sale of items is not affected. (figure 4)

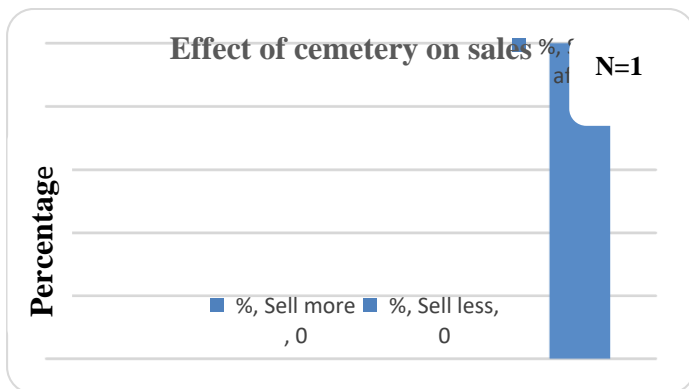


Figure 4: Percentage Distribution of Effect of Cemetery on Sales

Source: Researcher’s Field Survey, (2021)

### 6.2.6. Location of Cemeteries Close to Residential Area

Respondents were asked if it is appropriate to locate a cemetery near a residential area. Furthermore, for those respondents who answered “No”, they were asked to give reasons for their response. Most of the respondents (76%) answered No, 3% answered yes, while 21% said they do not know. (Figure 5)

This distribution may be related to the perception and claims respondents make about a cemetery. Some respondents claim that paranormal beings emanate from the cemetery (apparitions); the cemetery is a ghost land, some claim the site of tombs brings back emotional pain and memories of beloved deceased ones even if the family member or friend was not buried in the cemetery; others assert that the cemetery attract evil people or miscreants, compromising safety of people who live or traverse the cemetery area especially at night etc.

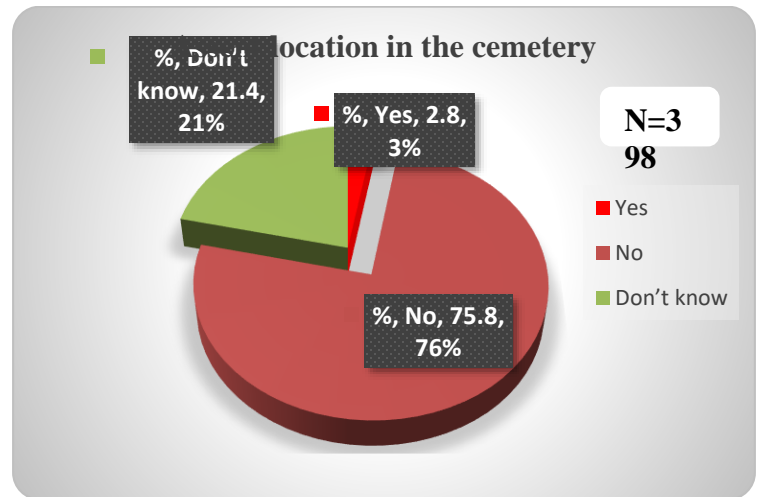


Figure 5: Percentage Distribution of Assent to Location in the Cemetery

Source: Researcher’s Field Survey, (2021)

### 6.3. Cemetery Impacts Assessment Using the Hazards and Effects Management Process (HEMP)

Using the HEMP analytical approach, against each identified sensitivity the following, were identified as impacts of cemeteries on residence:

#### 1. Threat to Safe and Secure Living Environment /Decrease in Night Life Activities

One of the impacts of the cemetery on the cemeterial area is threat to safe and secure living environment; another is decrease in night life activities. These impacts are negative social impacts. Hoodlums take advantage of the serene nature of some cemeteries and commit heinous acts. Respondents asserted that presence of cemetery in the area poses some security threat as cemetery sites have become a hideout for armed robbers who harass passersby, while secret cult groups also use the place as venue for initiation and other nocturnal activities. It was also observed that some hoodlums, take advantage of the lonely street at late night and attempt harassment; 2.5% of the respondents in this Port Harcourt Metropolis study claim that harassment of passersby occur late at night occasionally. Consequently, some residents limit night life social activities time to hours before 8pm at night to avoid confrontation by miscreants.

The HEMP analysis rated secure living environment and decrease in night life activities impacts as a minor impact on the cemeterial area, not because these impacts are unimportant but because they occur occasionally and few people are affected; however, they are still negative social impacts on the adjoining community.

#### 2 Learning about Past Values, Heroes/Icons.

Cemeteries are sites for inhumation as well as places where learning about past values, heroes and icons etc. take place. According to [Tomašević, \(2018\)](#), important people are buried in important cemeteries, and cemeteries become important because of the people who are buried there. The HEMP analysis qualified learning about past values, heroes/icons as a positive impact and rated its impact significance as negligible on the communities. In this study, an interview with the key informants revealed that



school children, scholars or tourists do not visit the Port Harcourt City cemetery for educational purposes; which imply that learning about past values, heroes/icons (buried in the cemeteries) do not take place. This is a missing learning opportunity that may be attributed to unawareness of the benefits cemeteries can provide apart from inhumation of corpses. According to Uslu, Baris and Erdogan (2009), a cemetery is a symbol of the historical memory of a collectivity.

Cemeteries are repositories of learning that could be beneficial by the society if the importance of a cemetery, apart from its inhumation function is known. In advanced countries where cemeteries are properly developed and administered, the cemeteries are decorated with flowers, trees, artifacts and manicured. This treatment enhances the physical environment aesthetically; decreases phobia associated with cemeteries and attracts all manner of tourists for leisure and educational purposes where learning takes place. This sensitivity ( learning) was rated positive impact but negligible reason being that learning about past values do not take place in cemeteries found in the study area.

### 3. Fear

Fear is one of the impacts associated with cemeteries. Intense fear is a negative impact, 4.0 % of respondents claim that they and their family members experience eerie feelings walking along the cemetery street at night. These respondents ascribe this feeling to paranormal being encounter. Respondents describe the feelings manifesting as "heart racing", "head swelling" and "goose bump". Some claim that seeing tombs, especially in the late evening as one traverse the cemetery street, is very scary. In a research study conducted by Jimoh and Adeyonu (2019), on effects of cemeteries on the residents of Ondo Metropolis Nigeria, 'increased fear' was the second most prominent effect of cemeteries and accounted for 81.8% respondents in the study area. In our present study, a low percentage of respondents (4.0%) assented to intense fear as against 92.2% who said that the presence of the cemetery close to their living area do not scare them. This finding is in contrast with similar study conducted by Jimoh and Adeyonu (op cit) in Ondo state where majority of the respondents (81.8%) reported that the presence of cemetery in the residential area scare them. The low rate of 4.0% could be attributed to decrease in cultural and ancestral beliefs occasioned by modern day embracement of Christianity that permeates the environment.

Fear is a rated as negative impact on the community due to its health implications. Intense fear triggers many physical symptoms, including increased heart rate, shallow and fast breathing; periods of fear may also temporarily increase blood pressure (Leonard 2019). For those who already have pre-existing health condition of high blood pressure and heart rate, any episode of fear emanating from the cemetery can exacerbate the existing health condition beyond desirable limit;

### 4. Increase in Financial Flow from Burial Fees

Increase in financial flow from burial fees is a positive economic impact. In this study, an interview with the key informants revealed that cemeteries are also a source of revenue generation. It was gathered that the fee chargeable ranges from Fifty Thousand Naira to Seventy-Five thousand Naira per corpse (N50, 000-N70, 000). Apart from fee from burying of corpses, if

properly beautified (introduction of trees, flowers, local sculptures of historical significance etc.), manicured, planned and managed, the cemeteries can also generate funds from other cemetery related activities such as concerts in memory of great icons buried in the cemetery.

Though the HEMP analysis qualifies "Increase in financial flow" as a major positive economic impact. It was however not certain the extent to which generated income from the cemetery benefits the residents and communities in the cemeterial area.

### 5. Contamination of groundwater

Another impact of cemetery in the study area is the contamination of water sources. The accumulation of elements used for embalment and ancillary items increases the risk of contamination to ground water sources in the area.

There is also the tendency for high level of acidity in the drinking water in the area which is deleterious to health. Respondents were further asked about their frequent type of ill-health and nature of diagnosis made. Most reported that, they have been diagnosed with Malaria (51.7%), and Typhoid (47.3 %). The near high percentage of Typhoid in the area may be linked to the contamination of drinking water source by cemetery and related activities.

Harmful microorganisms such as bacteria and viruses thrive in acidic environment. For residents already infected with any disease, drinking more acidic water may exacerbate the infection and prolong healing time. Acidic water also contributes to dental erosion and tooth decay. Ill-health increases the health bill and expenditure of residents in the study. Contamination of groundwater with is rated as negative, major impact

## VII. 7. CONCLUSION AND RECOMMENDATION

The study examined the socio-economic impacts of cemetery on the well being of the residents in Port Harcourt metropolis. Findings showed that the impact of cemetery on residents in the study are both positive and negative to include: Threat to safe and secure living environment; decrease in night life activities; learning about past values, heroes/icons; intense fear of encountering paranormal beings/ghosts; increase in financial flow from burial fees and tendency of contamination of ground water among others.

The findings of this study raise some serious implications that must not be overlooked. Increased fear among residents in the area may further worsen their health situations as mere fear can degenerate to phobia with attendant health implications. More so, reduced night life around cemetery area also affects the tendency of residents to have adequate recreation and associated health benefits. As a way of enhancing safety in the area, there is need to engage the services of security agencies to extend security services to the cemetery environment especially at night to prevent harassment and address the issue of threat to safety. This will also address the problem of reduced night life activities in the area. Improving on the visual aesthetics of cemeteries in the Port Harcourt metropolis using the instrumentality of land-use planning is another way of reducing the fear and ugly scene attached to cemeteries in the study area. There is also the need for increased enlightenment among the populace that cemeteries after all are not only areas for inhumation of corpses but places of economic, aesthetic, spiritual and recreational significance.

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