

Assessment of the Impact of Parks and Open Spaces on Residential Property Values in Awka, Anambra State Nigeria.

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ABSTRACT

Parks and open spaces are equally as productive contributors to a local economy as roads, utilities and other infrastructure elements. Parks and open spaces have now become a prominent feature in the planning of residential area. The area or the neighbourhood where parks and open spaces are located goes to affect the value of the residential property. The aim of this study is to assess the impact of parks and open spaces on residential property values in Awka. The objective of the study is to identify the location of parks and open spaces, to identify the benefits of parks and open spaces on the welfare of residents, to determine the state of maintenance of parks and open spaces and to determine the impact of parks and open spaces on residential property values in the study area. From the stated objectives, research questions were formulated which formed the basis for the drafting of the research hypothesis that were tested for the purpose of the research work. The population of the study includes Residents and Estate Surveyors and Valuers in Awka. The hypotheses one and two were tested using Mann-Whitney U Test with the aid of Statistical Package for Social Science (SPSS version 25). Frequency tables and percentages were used to present the data. The study reveals that a greater percentage of respondents affirm that Parks and Open Spaces have a positive impact on the residential property values. The Study recommends additional well designed landscape Parks and Open Spaces to enhance the aesthetics of the environment.

Keywords: *impact of parks, open spaces, residential property and values*

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I. INTRODUCTION

Open spaces, such as public parks, natural areas and golf courses provide numerous amenities for nearby residents including recreation opportunities and attractive views. The importance of preserving parks and other open space lands has been a major concern in recent years. Governments, environmentalists and many others have recognized the value of parks and open spaces. These values can be categorized in terms of environmental, economic, social and public health. They contribute to the protection of biodiversity and ecological services such as flood, drought reduction, wind controlling and moderating temperatures. In addition, the value of parks can enhance aesthetics values, increasing benefits of education and nature study. It also provides residents an opportunity for social contact and creating a sense of place (Sportza, 2006). Previous studies have found that many communities are designed with a variety/types of parks, primarily to enhance the recreational opportunities for the residents engaging in active or passive recreation activities (Fakhrudin, 2004; Cho, Bower and Park, 2006). According to Dehring and Dunse (2006), providing and maintaining parks are important because there are economic benefits as revealed through house prices. The value of a property is related to the number of factors such as the characteristics of the house, the characteristics of the residential environment and the location of the house. A recent study by Visser and Dam (2006) found that the sales price of a house is the sum of the value of

its different attributes or characteristics. The influence of these attributes is important on house prices. They all have a positive effect on house prices and account for a premium depending on the way characteristics have been measured. Given that different attributes or characteristics will result in differences in property values, parks may have a positive impact on housing sales prices. The argument that parks and open spaces have a positive impact on property values derives from the observation that people frequently are willing to pay a larger amount of money for a home located close to these types of areas, than they are for a comparable home further away. Crompton (2004) concludes that effects on property values reflect people's willingness to pay. Thus, real estate dealers have always drawn attention to green space near their properties for sale or rent and show that recreational features contribute to increased values for property near parks. The value of a residential property is also affected by the availability of facilities, infrastructure, market price, economic conditions, property status, and the surrounding environment.

A number of studies make effort to relate park benefits to economic values. For example, studies have reported the economic value of parks on reducing environmental related spending such as reducing the cost for stormwater treatment and air pollution reduction (Gies, 2009; Harnik and Welle, 2009). In addition, by making urban neighborhoods more livable, park advocates believe that parks help to attract residents, businesses, and tourists, which bring revenues in the forms of taxes (e.g., property and sale taxes), economic development and job opportunities, and park-related spending (Crompton, 20014). By recognizing the diverse benefits of urban parks, private and non-profit sectors promote the development of such green amenities. However, over the past two centuries public parks have grown to become an integral part of the complex urban infrastructure that supports our very existence. In addition to recreational benefits, these open spaces provide myriad social and cultural, environmental, aesthetic, and economic benefits.

Myles (2012) stated that Parks and open space promote physical and mental health, build social capital and stronger communities, while providing employment and educational opportunities and reducing crime. Many reduce stormwater runoff, filter water, recharge underground aquifers, reduce erosion, promote increased biodiversity, provide habitat for wildlife, sequester carbon, reduce air pollutants, reduce the heat island effect, and increase opportunities for pollination. Parks can create a sense of place, provide focal points and visual interest, hide unattractive or distracting land uses, and create opportunities for art, architecture, and urban design. Finally, parks offer economic benefits through the generation of tax revenue through increased property values and by attracting and retaining businesses, tourists, and new residents. While most people, including elected officials, understand that parks and open space create some value, it is often the social, cultural, environmental, and aesthetic values that are typically highlighted. Perhaps because the primary motivations for building a park or preserving open space have not historically been financial, these spaces are often not evaluated in economic terms (Crompton 2004).

Crompton, (2004) noted that Parks and open spaces are equally as productive contributors to a local economy as roads, utilities and other infrastructure elements. The cost of investing in these elements is justified by the economic value that derives from their availability. Unfortunately, many communities which are experiencing growth lack the foresight to set aside land for inclusion in a parks system in the same way as they do for other infrastructure elements. They frequently claim there is a lack of resources for what they regard as a discretionary investment. Public parks and open spaces traditionally have not been evaluated in economic terms, because there are many other appealing and rational justifications for acquiring and providing them. Open spaces are valuable resources. Open space provides a range of benefits to citizens of a community, beyond the benefits that accrue to private landowners. Parks and natural areas can be used for recreation; wetlands and forests supply stormwater drainage and wildlife habitat; farms and forests provide aesthetic benefits to surrounding residents. In fast growing urban and suburban areas, any preserved land can offer relief from congestion and other negative effects of development. Both publicly held and privately held lands can provide open space benefits. Although the primary purpose of acquiring park land or encouraging the preservation of open space may not be financial, financial justification for these actions is nearly always required. The difficult fiscal environment that prevails in many cities, and the escalation of urban land values, have made the economic justification of parkland and open space increasingly necessary in order to rebut the persuasive rhetoric of those who say: "I am in favor of parks and open space but we cannot afford either the capital acquisition and development costs because of more pressing priorities, or the loss of operational revenue that will accrue if the land is removed from the tax rolls" (Crompton (2001). Anderson (2010) opined that open space areas may provide a number of benefits, including opportunities for recreation, privacy, a barrier to adjacent development, nice views, wildlife habitat, and protection of natural areas and native vegetation. Like many environmental amenities, however, there is no explicit market for these benefits. However, the benefits of parks on addressing environmental problems and public and social health are not strong enough to make parks stand out from the decision makers' lists, especially with the strict condition of recent public funding opportunities. In order to be more persuasive, it is suggested to understand the economic benefit of parks, which includes both saving money and bringing revenues to the communities and governments (Harnik and Crompton, 2014). However, the lack of park provision still is an issue in many cities which Awka is

one of them. With the economic difficulty in recent decades, lack of funding has been one of the major problems that make park development difficult. In particular, financial support from the public sector, especially at the federal level, is not promised. Local elected officials have kept pushing the federal government to support urban park programs with promised funding. Unfortunately, many communities which are experiencing growth lack the foresight to set aside land for inclusion in a parks system in the same way as they do for other infrastructure elements. They frequently claim there is a lack of resources for what they regard as a discretionary investment. In Awka, there is inadequate consideration and neglect of parks and open spaces development. It was observed that these parks and open spaces have been converted to other more demanding land uses like housing, industry and commercial areas due to pressures from increased population and economic condition in the area. Also the available parks and open spaces are not well maintained. There is an increased demand for land from the public for various human activities. This has led to open spaces being misused by being converted illegally for other uses like refuse dumps, corner shops, mechanic workshops, residential buildings, squatter homes and other uses other than that which it was initially developed for (Alabi, 2009; Ayatamuno, 2010). The objectives include; To identify the location of parks and open spaces in the study area; to ascertain the benefits of parks and open spaces on the welfare of residents in the study area; to determine the state of maintenance of parks and open spaces in the study area; to determine the impact of parks and open spaces on residential property values in the study area.

II. LITERATURE REVIEW

Parks and Open Spaces

Parks and open spaces are vital to the quality of life. They provide space for recreation, conservation, and contemplation. They enhance the aesthetic quality of the city, create a link to local history, and provide a connection to nature. Open spaces such as urban parks, wetlands, farms, golf courses, baseball fields, and a variety of other land uses. Open spaces are even less-developed types of land use, such as woodlands, forests, wildlife refuges, or nature conservancy's (Anderson, 2001). Open spaces have significant importance in the life of the settlements.

The open spaces have increasingly greater roles in the sustainable city development processes because of the expansion of the city and also of the growing number of residents' number. Based on the contemporary processes and trends, cities and their neighborhoods can, by means of open space developments, enhance their appeal to tourists and residents alike. In this way their values can be increased significantly. Unfortunately, the actual situation shows that this opportunity to enhance parts of the city and the feedback of the adjoining areas' increased values to city development is not known or acknowledged by local leaders and planners. The research and the analysis of these problems and the share of results regarding the issue with the target audience have become opportune (Balogh and Takacs, 2011). There are two ways to measure the economic value of urban parks and open spaces. The first type of measure captures the capitalization worth of parks by measuring their impact on the value of land and property in their immediate catchment zone. The second type of measure is the economic value which residents in the urban area receive from visitors, and from businesses and retirees, whose decisions to come to the area are at least in part predicated on the availability of parks and open space. However, the use of both measures will provide only a minimum estimate of the economic value of parks and open space because the measures are not able to capture some dimensions of the benefits these amenities provide to a whole urban area. Such benefits include air cleansing, ground water storage, flood control, elimination of waste, alleviation of environmental stress and pleasing vistas (Crompton, 2000).

Open spaces serve as an important tourist attraction and is why it is being integrated into the development plans of both the federal and state governments of every country as a strategy to improve their economy, beautify the environment and raise the social standards of the people. Therefore, one way of developing tourist centers is by developing open spaces. This can be achieved by developing them to international standards like New York City Parks which are known to attract people from far and near. That is to say, that apart from such known tourist centers like zoological gardens, hotels, holiday resorts etc, the government should realize that open space is also one of such agents with which it could boost tourism. Therefore, one can rightly say that tourism overlaps with recreation as a way of using leisure.

Residential Properties

Residential properties are properties that provide housing for accommodation, Residential properties cover the whole area of property types such as condominiums, residential houses, service apartments, townhouses and bungalows. They are characterized by providing shelter, security, comfort, privacy and investment. They are types of properties meant for living purposes. It is ranked second in the hierarchy of human needs, being most important after food (Lerano, 2003).

Types of residential properties

According to Lerano (2003), residential properties cover a wide range of properties which are categorized into the following:

- a. Bungalow (detached/semi-detached)
- b. Block of flats
- c. Detached houses
- e. Duplex (detached/semi-detached)
5. Service apartments

Residential Property Values

Various studies have examined factors affecting residential property values and have identified the following; age, location, size, neighbourhood characteristics, economic activity, population, transport etc. (Joslin, 2005) and Kauko, 2003). Kamali, Hojjat, and Rajabi, (2008) group the variables determining property values into; environmental variables, neighbourhood variables, accessibility (location) variables and property variables. They further classified factors affecting property values as follow:

- a) Structural attributes e.g. numbers of bedrooms, bathrooms, fireplaces, garages, square footage of house, lot size, age of structure, existence of pool.
- b) Neighbourhood attributes e.g. socio-economic characteristics of neighbouring residents, quality of neighbouring structures, ownership/rental, ethnic composition.
- c) Community attributes e.g. school and tax districts.
- d) Locational attributes e.g. proximity and accessibility to various amenities including waste sites, powerlines, highways, shopping centers, churches, schools, cultural opportunities, airport, public.
- e) Environmental attributes e.g. view from property, noise levels, pollution levels, storm water.
- f) Time-related attributes e.g. month and year of sale, number of days on market.

Management and Maintenance of Open Spaces

Management is simply defined as planning, directing, controlling and co-coordinating individual, group or organizational goals and objectives with the ultimate aim of achieving maximum benefit. In the view of Baridam (2012), management literally means getting things done through and with people, which has to do with the planning and direction of effort towards a common objective. The traditional functions of a manager reflect the activities involved in managing, planning, decision-making, organizing, staffing, leading, motivating and controlling. These functions constitute a circle of action in which each component leads to the next.

According to Joroff (2009) there is no single best model that could suggest the type of property management activities that can be organized and related to other management functions within a large organization particularly in the public sector. Maintenance is defined as the combination of all technical and associated administrative actions intended to retain an asset in or bring it to a state in which it can perform its required function. This implies that there are two processes to be considered, 'retaining', i.e. work carried out in anticipation of failure and 'restoring', i.e. work carried out after failure (British standard Institute BS, 2006).

Management is concerned with efficiency in the conversion of opportunity and resources into wealth. It is a vital aspect of realization of set goals and objectives of any organization, institution or government especially in the case of those in charge of development of open spaces and it is the pre-design stage of the park planning process for the effectiveness of the recreational area. As people, management comprises those who guide actions in organization towards the achievement of the ends or goals for which the organization is established. However, it is observed that inadequate recreational opportunity could be made productive with good administration, but that the best result could not be achieved without it. It goes a long way in influencing the extent and quality of recreational programs, services and available opportunities.

It is obvious that management has become an important field in complex modern organizations like open space. Since, Fadiro and Atolagbe (2006); Ahinmba, Dimuna and Okogun (2008) have identified that the major problem of open space development in Nigeria is the poor quality and mismanagement of open spaces in the built environment. There is a need for the formulation of better policies and strategies for managing both new and old ones; preventing further degradation of the environment through proper planning, design and development.

Benefits of Parks and Open Spaces

Parks and open space can economically benefit a community by increasing property income from out-of-town visitor spending, increasing direct use value, increasing health value (reducing medical expenditures), increasing community cohesion (a proxy of social capital), reducing the cost of managing urban stormwater, and the removal of air pollution by vegetation (Harnik and Welle, 2009).

Parks not only provide leisure spaces but are also profitable investments (Pine, 2009). Therefore, besides many other kinds of park benefits, economic benefits that a park provides become crucial, especially under current economic conditions (Pine, 2009). It is believed that parks can be the economic booster benefiting the whole

neighboring community, not merely its direct users. Its economic benefits include attracting tourists, businesses/jobs, and retirees, enhancing real-estate values/tax base, stimulating urban revitalization, and reducing the cost of public services (safety, environmental protection, and public health care) (Crompton, 2004). Scholars have been trying to quantify the various economic benefits of parks, and the increase of property value is the one commonly studied topic to quantify the economic benefit of parks (Harnik and Welle, 2009).

Open space can be thought of as providing a set of particular benefits and amenities. This set includes (but is not limited to) opportunities for recreation, privacy, a barrier to adjacent development, nice views, habitat for wildlife, and the protection of natural areas and native vegetation. While open space areas share many of the same or similar attributes, however, the benefits provided by different types of open areas are not identical. For example, urban parks may provide countless recreational opportunities, but may fail to protect native vegetation. Similarly, the benefits conferred by distinct areas of a particular classification may also be diverse. For example, one urban park may have a baseball diamond and volleyball net, while another may have a swing set and a merry-go-round. The benefits of open space can be broken down into those that provide use value and those that provide non-use value. Use value is derived from current use of the resource, such as use of the area for recreation, scenic views, privacy, or as a barrier to adjacent development. Nonuse value is derived from considering the possible future use of the area. Nonuse value may take one of several forms: Option value represents an individual's willingness to pay to maintain the option of utilizing a resource in the future.

Beyond the connection of parks and physical activity, usage of park services is associated with reductions in various negative health outcomes and illnesses. Spending even 120 minutes in green spaces has been associated with higher levels of reported good health and well-being (White et al. 2019). Evidence has associated time spent in parks and green spaces with reductions in complications caused by chronic diseases such as diabetes and heart disease (NRPA 2015). Evidence from a large-scale Dutch survey suggests that proximity to green space has a positive effect on self-perceived general physical health, with a larger effect for the elderly, youth, and families with low incomes (Maas et al. 2006)

Open spaces have tremendous benefits, beyond simply scenic beauty and recreational opportunities. Some of these benefits include:

- i. **Quality of life:** They contribute grossly to the quality of life. It unusually attracts high quality of life, encourages the springing up of new business, retains existing ones and sustains local and regional economic growth of jobs and income.
- ii. **Property Values:** It enhances property values. As homes adjacent to these community assets are increased and equally provide recreational opportunities.
- iii. **User utility:** The user utility provided by these parks yields unquantifiable satisfaction to the park users at no cost or below the actual cost of provision.
- iv. **Ecosystems:** Preservation of open spaces and natural resources ensures that the area enjoys multi ecosystem services. Without an ecological life support system, including clean air, fresh water, fertile soil and an amenable climate, communities and their economy will suffer. Ecosystem services include climate regulation, water supply, erosion control, nutrient recycling, waste treatment, food production and genetic resources aside from the land's recreational and cultural values. These services have an economic value. Without the maintenance and preservation of open spaces the quality and value of the environment in which open space is located will decline.
- v. **Health, education and public benefit:** They provide a variety of benefits that accrue to other public sector service providers, to individual park users and to the broader community. These include health benefits through recreational opportunities, educational benefits through wild land, fire fuel reduction activities.
- vi. **Tourist attraction:** it serves as a tourist attraction that is why it is being interpreted into development plans of both the federal and state governments as a strategy to improve their economy, beautifies the environment and raises the social standards of the people.

Impact of Parks and Open Spaces on Residential Property Values

The premise that parks and open spaces have a positive impact on property values derives from the observation that people frequently are willing to pay a larger amount of money for a home located close to these types of areas, than they are for a comparable home further away. If this observation is empirically verified, then owners of the enhanced property are likely to pay higher property taxes to governments because of the increase in the property's appraised value. In effect, this represents a "capitalization" of park land into increased property values for proximate land owners. Conceptually, it is argued that the competitive market will bid up the value of property just equal to the capitalized value of the benefits that property owners perceive they receive from the presence of the park or open space. Economists refer to this approach as "hedonic pricing." It is a means of inferring the value of a non-market resource (a park) from the prices of goods actually traded in the marketplace (surrounding residential properties). In some instances, if the incremental amount of taxes paid by each property that is attributable to the presence of the park or open space is aggregated, it will be sufficient to pay the annual

debt charges required to retire the bonds used to acquire and develop the park. In these circumstances, the park is obtained at no long-term cost to the jurisdiction. The impact of parks and open spaces on property values have been examined by many studies, and, indeed, evidence can be found as early as in the 1800s in the US and European countries (Crompton, 2001a, 2001c, 2005 and Woolley, 2003).

To examine the economic effect of parks on surrounding property values, proximate principle can be used. Given that people are willing to pay more to live close to parks, the proximate principle is defined as the process of capitalization of parks into increased property values due to close to parks, and therefore leads to the increase of tax revenue to be generated from those properties, and the increased tax revenue can be used to pay off the cost of park development and maintenance (Crompton, 2004).

The value of open space to nearby residents to some degree is reflected in private property and real estate markets, because the prices of residential properties surrounding open space often reflect the value property owners assign to the amenities provided by open space in the vicinity, such as recreation opportunities, aesthetics, and air quality (Kroeger, 2008).

Empirical Review

Anderson and West (2006) examined Open Space, Residential Property Values, and Spatial Context. They selected neighborhood parks, special parks, golf courses, cemeteries, and lakes in the Minneapolis-St. Paul metropolitan area and studied the effect of proximity to open space by type on the sales price. They use hedonic analysis of home transaction data from the Minneapolis-St. Paul metropolitan area to estimate the effects of proximity to open space on sales price. They find that the amenity effect of proximity to open space is larger in dense, high crime, high income neighborhoods near the central business district and that sample mean effects may misrepresent substantially the amenity effect of open space in particular neighborhoods. Their results suggest that planners and developers need to consider spatial context when providing or protecting open space amenities.

Anderson (2002) examined the effect of open space on residential property values in St. Paul, MN. Using home transaction data from the St. Paul, MN area, he employs hedonic regression analysis to estimate the effect of proximity to open space (parks, golf courses, and cemeteries) on home sales price, controlling for home structural attributes, neighborhood characteristics, home location, and other amenities. He opined that Proximity measures were derived from regional land use data using geographic information systems (GIS) software. He found out that proximity to parks and cemeteries has a negative effect on home value, while proximity to golf courses has a positive effect.

Lin, (2016) assessed the effect of parks on surrounding property values using hedonic models and multilevel models. Among them, the economic benefit has been suggested as the crucial one to support park development and management. A number of studies have studied the economic impact of parks on surrounding property values and suggested that park proximity brings an increment in property values. Some studies further considered park characteristics. The general suggestion from the literature was that parks primarily for passive recreation tend to have a positive impact on nearby property values and parks mainly for active recreation are more likely to introduce disturbance and therefore a negative impact on adjacent property values. However, studies on how individual park facilities influence property values are rarely found. While park facilities are essential for providing diverse recreational opportunities, their economic impacts should also be considered when designing a park system. This study applied the hedonic pricing model to examine the impact of park facilities on nearby property values.

Myles (2012) examined the return on investment of parks and open space. The study used a qualitative meta-analysis to examine and interpret the existing empirical evidence on the impact of parks and open space on residential property values. He stated that data relating to park attributes, neighborhood characteristics, and surrounding demographics are gleaned and interpreted from hedonic pricing studies to offer designers and planners a comprehensive set of design and development considerations when attempting to maximize the return of investment of parks and open space.

Mbaka (2018) carried out a study on the economic impact of pocket parks on residential property values. The study uses hedonic analysis to determine the value attached to pocket parks when valuing residential property. The findings show that park size does have value and it is translated into the value of property. The magnitude of the impact is biggest on parks that are not more than 1.5 acres. He noted that for park sizes, houses near parks that are 0.1 acres bigger value dollars more, above 1.5 acres the magnitude to the impact on house value decreases. Proximity to the park also does increase the value of a house. Also, the further the distance from the house to the nearest park, the lower the value of that house. Therefore, it is important to preserve open spaces even in metropolitan areas for their value on property prices. He opined that increased value equally increases income of homeowners and also this benefits the local government because as the home value increases, property tax they receive from these homes go up.

III. METHODOLOGY

The research method adopted was survey research in which questionnaires were developed and administered to the study subject. The target population for the study consists of the Estate Surveying and Valuation firms in Awka and residents of Awka. The population of the study consisted of 17 Estate Surveying and Valuation firms in Awka as obtained from the (Anambra State Secretariat of the Nigeria Institution of Estate Surveyors and Valuers, 2021) and 301,657 residents of Awka (Nigeria census, 2006). Purposive or Expert Choice sampling techniques will be employed in selecting the respondents of this study. This technique will be a success because it reflects larger groups with reference to one or more given characteristics. In other words, since the study population encompasses Estate Surveying and Valuation firms in Awka and residents of Awka, the sample in each case is identified as representatives. This study will purposively distribute 200 questionnaires to professional Estate Surveyors working in the 25 Estate Surveying and Valuation firms and Estate Surveyors working in the Ministry of Lands and 500 questionnaires for Awka residents to represent the population. The population/sample size of the respondent is shown in table 3.1 below.

Table 1: Population Distribution

Population	Sample Size
Estate Surveyor and Valuer	200
Residents	500
Total	700

Estate Surveyors and Valuers were not sampled because their population is small. The questionnaire format was in the “likert-Scale of Responses”. This has the advantage of flexibility for several choice responses. The responses were 5-point scale i.e., strongly agree – 5, Agree – 4, Undecided- 3 Disagree – 2 and Strongly Disagree – 1.

IV. DATA PRESENTATION AND ANALYSIS

4.1 Questionnaire administration

The total number of questionnaires administered to the Estate Surveyor and Valuers, and Awka Residents was 200 and 500 respectively while 613 questionnaires were successfully filled and returned. Table 4.1 shows how the percentage of questionnaires returned.

Table 4.1: Questionnaire Distribution in the Study Area

Respondent	No. distributed	No. Returned	Percentage returned (%)	No. not Returned	Percentage not returned (%)
Estate Surveyor and Valuers	200	134	67.0%	66	33.0%
Awka Residents	500	480	96.0%	20	4%
Total	700	614	87.7%	86	12.3%

Source: Researcher’s Field Data (2023)

From Table 4.1, the proportion of the questionnaires returned is 87.7% against those unreturned (12.3%). This implies that the data collected from the returned questionnaires has a higher precision; however, it is adequate and sufficient for this study.

TABLE 4.2 RESPONDENT CHARACTERISTICS

Variables		Frequency	Percent	Cumulative Percent
Gender	Male	320	52.1	52.1
	Female	294	47.9	100.0
	Total	614	100.0	
Academic Qualification	FSLC	232	37.8	37.8
	SSCE/WASC	237	38.6	76.4
	HND/BSc	74	12.1	88.4

	Masters/PhD	71	11.6	100.0
	Total	614	100.0	
Age	18-22	134	21.8	21.8
	23-27	186	30.3	52.1
	28-32	218	35.5	87.6
	32 and above	76	12.4	100.0
	Total	614	100.0	
Class of Resident	Estate Surveyor/Valuer	134	21.8	21.8
	Awka Resident	480	78.2	100
	Total	614	100.0	
	0-2 years	93	15.1	15.1
Duration of Resident	2-5years	301	49.0	64.2
	5years and above	220	35.8	100.0
	Total	614	100.0	

Regarding gender, the survey study shows that out of 614 respondents that participated in the study, 320 were males with a percentage of 52.1% and 294 were females with a percentage of 47.9%. Considering the academic qualification, out of 610 respondents, 232 had First School Leaving Certificate (FSLC) with percentage of 37.8%, SSCE/WASC has 237 respondent with 38.6% while 74 respondent had HND/BSc with 12.1%, then Masters/PhD had 71 respondents with 11.6%. On Age, 18 – 22 year had 134 respondent keying in to that category with 21.8%, while 186 respondent responded to 23 – 27 years of age with 30.3%, similarly, 28 – 32 years of age had 216 (35.5%), and finally, 32 years and above had 76 (12.3%) respondent who participated in the exercise. The respondents were categorized into Estate Surveyor/Valuer with 134 (21.8%) while Awka Resident was 480 (78.2%). Finally, the duration of respondents resident at Awka had 0-2 years to be 93 (15.1%), 2.5 years to be 301 (49.0%) and 5 years and above to be 220 (35.8%).

Table 4.3: The respondents’ view on whether parks and open spaces make houses more comfortable in Awka.

	Responses	Frequency	Percent	Cumulative Percent
Do you think Parks and Spaces make houses more comfortable?	Yes	312	50.8	50.8
	No	302	49.2	100.0
	Total	614	100.0	

The respondent's perception on parks and open spaces making houses to be comfortable was high as the percentage of Yes is greater than No. The result from the table shows that 312 (50.8%) respondents said Yes while those that said No had 302 (49.2%).

Table 4.4: The respondents’ view on whether parks and open spaces on residential properties promote welfare of residents.

Do you agree that parks and open spaces on residential properties promote the welfare of residents?	Frequency	Percent	Cumulative Percent
Yes	256	41.7	41.7
No	196	31.9	73.6
not sure	162	26.4	100.0
Total	614	100.0	

Table 4.4 presents the views of respondents on whether they agree that parks and open spaces on residential properties promote welfare of residents. Out of 614 respondents who returned their questionnaires, 256 (41.7%) agree that parks and open spaces on residential properties promote welfare of residents, against 196 (31.9%) respondents who disagree.

Table 4.5: The respondents' view on whether the merits of parks and open spaces on residential properties in Awka is high

		Frequency	Percent	Cumulative Percent
Do you think that the merits of parks and open spaces on residential properties, Awka, is high?	Yes	331	53.9	53.9
	No	283	46.1	100.0
	Total	614	100.0	

Table 4.5 presents the views of respondents on whether the merits of parks and open spaces on residential properties in Awka is high. Out of 614 respondents who returned their questionnaires, 331 (53.9%) respondents believe that the merits of parks and open spaces on residential properties in Awka is high, against 283 (46.1%) respondents who said they do not believe

Table 4.6: The respondents' view on whether the parks and open spaces affect rental values of residential properties in Awka

		Frequency	Percent	Cumulative Percent
Do you think parks and open spaces affect rental values of residential properties in Awka?	Yes	314	51.1	51.1
	No	300	48.9	100.0
	Total	614	100.0	

Table 4.6 presents the views of respondents on whether parks and open spaces affect rental values of residential properties in Awka. Out of 614 respondents who returned their questionnaires, 314 (51.1%) respondents believe that parks and open spaces affect rental values of residential properties in Awka, against 300 (48.9%) who said they do not believe or think so.

Table 4.7: The respondents' view on the state of maintenance of parks and open spaces in Awka

		Frequency	Percent	Cumulative Percent
What is the state of maintenance of parks and open spaces in Awka?	Very good	91	14.8	14.8
	Good	291	47.4	62.2
	Very poor	172	28.0	90.2
	Poor	60	9.8	100.0
	Total	614	100.0	

Table 4.8 presents the views of respondents on the state of maintenance of parks and open spaces in Awka. Out of 614 respondents who returned their questionnaires, 91 (14.8%) respondents said the state of maintenance of parks and open spaces in Awka is very good, 291 (47.4%) said the state of maintenance is good, 172 (28.0%) said the state of maintenance is very poor, and 60 (9.8%) said the state of maintenance is poor. However, a high number of respondents said the state of maintenance of parks and open spaces in Awka is good.

4.3: Where are the locations of parks and open spaces in the study area?

Table 4.8: location of parks and open spaces in Awka, Anambra state.

S/N	LOCATION	PARKS AND OPEN SPACES
1	Ngozika Estate	Lumen Amusement Park
2	Agu-Awka, GRA	Wonderland Awka
3	High Court Avenue	Treasure Land Park, Awka.
4	Alex Ekwueme Square	House of Assembly Road.

Awka has three parks and Table 4.8 shows the location of parks and open space in Awka, Anambra state. The First Park and open space is named Lumen Amusement Park and it is situated at Ngozika Estate. The second park is named Wonderland Awka and is found at Agu-Awka, GRA then the third park is located at High Court Avenue and it is called Treasure Land Park, Awka. The fourth Park/Open space is named Alex Ekwueme Square and it is situated at House of Assembly road, Awka.

4.4: What are the benefits of parks and open spaces on the welfare of residents in the study area?

The study achieved the second objective by collecting data on benefits of parks and open spaces on the welfare of residents in the study area. The study establishes eight (8) variables from the literature. The data is segmented into two categories of respondents adopted in this study which is the professionals in Estate Surveying and Valuation Firms and the free Resident of Awka. The data were analyzed using the mean item score (MIS) and the result is presented in Table 4. And table 4.9 respectively.

Table 4.9: perception of professionals in Estate Surveying and Valuation Firms on benefits of parks and open spaces on the welfare of residents

Variables	Frequency					N	Estate Surveying and Valuation firms(Mean)	Rank
	1	2	3	4	5			
Attracts high quality of life enhancing real-estate values	0	24	20	61	29	134	3.71	1 st
Provide recreational opportunities	0	0	86	15	33	134	3.61	5 th
stimulating urban revitalization	0	0	53	75	6	134	3.65	2 nd
Increasing health value	0	13	64	19	38	134	3.61	4 th
the removal of air pollution by vegetation	0	16	61	52	5	134	3.34	8 th
Protection of natural areas and native vegetation.	0	19	44	49	22	134	3.55	6 th
Educational opportunities	0	0	65	51	18	134	3.65	2 nd
	0	0	80	40	14	134	3.51	7 th

The results presented in Table 4.9 shows the descriptive perceptions of the professionals Estate Valuers regarding benefits of parks and open spaces on the welfare of residents in the study area. The result presented shows that the eight variables were significant benefits of parks on open spaces, these are Attracts high quality of life which ranked first with a mean item score of 3.71, Provide recreational opportunities, and Protection of natural areas and native vegetation ranked second with mean item score of 3.65, stimulating urban revitalization is ranked fourth with mean item score of 3.61, and enhancing real-estate values is ranked fifth with mean item score of 3.61. Furthermore, the removal of air pollution by vegetation ranked sixth with mean items of 3.55, Educational opportunities ranked seventh with mean of 3.51, and increasing health value as the eight benefits of parks and open spaces on the welfare of residents with mean of 3.34.

Table 4.10: perception of the free Resident of Awka on benefits of parks and open spaces on the welfare of residents.

Variables	Frequency					N	Awka Resident Mean	Rank
	1	2	3	4	5			
Attracts high quality of life	0	96	103	140	141	480	3.68	3
enhancing real-estate values	0	0	277	79	124	480	3.68	3
Provide recreational opportunities	0	0	174	280	26	480	3.69	2
stimulating urban revitalization	0	49	149	121	161	480	3.82	1
increasing health value	0	45	214	210	11	480	3.38	8
the removal of air pollution by vegetation	0	72	108	198	102	480	3.69	5
Protection of natural areas and native vegetation.	0	0	270	166	44	480	3.53	7
Educational opportunities	0	0	239	151	90	480	3.69	5

The results presented in Table 4.10 show the descriptive perceptions of the residents regarding benefits of parks and open spaces on the welfare of residents in the study area. The result presented shows the eight variables as being significant benefits of parks and open spaces, these benefits are stimulating urban revitalization ranked first with a mean item score of 3.82, Provide recreational opportunities ranked second with mean item score of 3.69, enhancing real-estate values and Attracts high quality of life is ranked third with mean item score of 3.68, Educational opportunities and the removal of air pollution by vegetation is ranked fifth with mean item

score of 3.69. Furthermore, Protection of natural areas and native vegetation is ranked seventh with a mean of 3.53 and increased health value is ranked eight with mean of 3.38 as benefits of parks and open spaces on the welfare of residents.

Table 4.11: Mann-Whitney U-test on there is no significant impact of Parks and open spaces on residential property values

Items compared	The extent of difference in perception
Building Professionals	6.75
Artisans	10.25
Z	-1.471
P-value	0.141
Significance level	0.050
Decision	Accept

This hypothesis test sought to determine whether the perceptions of respondents about the impact of Parks and open spaces on residential property values differ or are consistent. The hypothesis states that there is no significant impact of Parks and open spaces on residential property values. To determine this hypothesis, the study adopted consistency using the Mann-Whitney U-test. The test is valid based on the critical p-value where values greater than 0.05 were accepted and values less than 0.05 were rejected. The results presented in Table 4.11 show that the perceptions of the respondents do not vary on the impact of parks and open spaces on residential property value. The critical p-value p (0. 817) is greater than 0.05 and the null hypothesis was accepted. Therefore, respondents' perceptions of the impacts of packs and open spaces on residential property value are similar.

4.5: What is the state of maintenance of parks and open spaces in the study area?

Table 4.12: the responses based on state of maintenance of parks and open spaces in Awka

		Frequency	Percent	Cumulative Percent
Parks and open spaces in good state of maintenance?	Disagree	46	7.5	7.5
	Undecided	257	41.9	49.3
	Agree	198	32.2	81.6
	Strongly Agree	113	18.4	100.0
	Total	614	100.0	

Table 4.12 shows that the respondents affirms that parks and open spaces is in good state of maintenance as 198 (32.2%) responded to agree and 133 (18.4%) responded to strongly agree while 257 (41.9%) were undecided as to if it is in the good state of maintenance or not. Similarly, only a few disagree with it for being in the right state of maintenance.

4.6: What are the impacts of parks and open spaces on residential property values in the study area?

The study achieved the second objective by collecting data on the impacts of parks and open spaces on residential property values in the study area. The study establishes five (5) variables from the literature. The data is segmented into two categories of respondents adopted in this study which is the professionals in Estate Surveying and Valuation Firms and the free Resident of Awka. The data were analyzed using the mean item score (MIS) and the result is presented in Table 4. And table 4.13 Respectively.

Table 4.13: perception of the professionals in Estate Surveying and Valuation Firms on impacts of parks and open spaces on residential property values

Variables	Frequency					N	Estate Surveying and Valuation firms Mean	Ranks
	1	2	3	4	5			
Parks and open spaces contributes to improving residential property value	14	23	48	36	13	134	3.08	2
Parks and open spaces attract people to live close	22	17	45	40	10	134	2.99	4
Parks and open spaces improve the state of	25	14	41	41	13	134	3.02	3

maintenance of residential property								
Parks and open spaces improve the conditions of residential property environment	39	0	26	64	5	134	2.97	4
Parks and open spaces contribute to maintaining residential property prices	8	26	13	34	53	134	3.73	1

The results presented in Table 4.13 show the descriptive perceptions of the estate professionals regarding the impacts of parks and open spaces on residential property values in the study area. The result presented shows the five variables as being significant impacts of parks and open spaces on residential property values, these impacts are Parks and open spaces contribute to maintaining residential property prices ranked first with a mean item score of 3.73, Parks and open spaces contributes to improving residential property value ranked second with mean item score of 3.08, Parks and open spaces improve the state of maintenance of residential property is ranked third with mean item score of 3.02. Finally, Parks and open spaces attract people to live close and Parks and open spaces improve the conditions of the residential property environment and is ranked fourth with mean item score of 2.99. These factors are impacts of parks and open spaces on residential property values.

Table 4.14: perception of the free residents on impacts of parks and open spaces on residential property values

Variables	Frequency					N	Awka Resident Mean	Ranks
	1	2	3	4	5			
Parks and open spaces contributes to improving residential property value	35	79	137	196	33	480	3.24	2
Parks and open spaces attract people to live close	83	31	138	146	82	480	3.24	2
Parks and open spaces improve the state of maintenance of residential property	80	34	142	191	33	480	3.13	5
Parks and open spaces improve the conditions of residential property environment	77	37	111	215	40	480	3.22	4
Parks and open spaces contribute to maintaining residential property prices	21	66	110	152	131	480	3.64	1

The results presented in Table 4.14 show the descriptive perceptions of the residents regarding the impacts of parks and open spaces on residential property values in the study area. The result presented shows the five variables as being significant impacts of parks and open spaces on residential property values, these impacts are Parks and open spaces contribute to maintaining residential property prices ranked first with a mean item score of 3.64, Parks and open spaces contributes to improving residential property value and Parks and open spaces attract people to live close ranked second with mean item score of 3.69, Parks and open spaces improve the conditions of residential property environment is ranked fourth with mean item score of 3.22. Finally, Parks and open spaces improve the state of maintenance of residential property is ranked fifth with mean item score of 3.13. These factors are impacts of parks and open spaces on residential property values.

Table 4.15: Mann-Whitney U-test on there is no Significant Effect from the Benefits of Parks and Open Spaces on the Welfare of Residents in Awka

Items compared	The extent of difference in perception
Building Professionals	4.00
Artisans	7.00
Z	-1.571
P-value	0.116
Significance level	0.050

Decision

Accept

This hypothesis test sought to determine whether the perceptions of respondents about the Effect from the Benefits of Parks and Open Spaces on the Welfare of Residents differ or are consistent. The hypothesis states that there is no Significant Effect from the Benefits of Parks and Open Spaces on the Welfare of Residents in Awka. To determine this hypothesis, the study adopted consistency using the Mann-Whitney U-test. The test is valid based on the critical p-value where values greater than 0.05 were accepted and values less than 0.05 were rejected. The results presented in Table 4.15 show that the perceptions of the respondents do not vary on the Effect from the Benefits of Parks and Open Spaces on the Welfare of Residents. The critical p-value p (0.817) is greater than 0.05 and the null hypothesis was accepted. Therefore, respondents' perceptions of the Effect from the Benefits of Parks and Open Spaces on the Welfare of Residents are similar.

4.7: Discussion Of Findings

In this section, the study provides an in-depth discussion of results of data analyses presented in section 4.3 – 4.6 to infer their statistical and theoretical implications based on the respective objective examined as seen in following sections.

The study shows that the respondent views parks and open spaces as a promoter of welfare of residents and it affects the rented values of residential properties in Awka. The findings further show that parks and open spaces provide recreational opportunities to the residents of Awka.

4.7.1: To Identify The Location Of Parks And Open Spaces In The Study Area:

The findings show that parks and open spaces are in four locations in Awka, Anambra State. These locations are Ngozika Estate which has Lumen Amusement Park, Agu-Awka GRA which has Wonderland Awka and at High Court Avenue which has Treasure Land Park and House of Assembly road which has Alex Ekwueme Square.

4.7.2. To Identify and Analyze the Benefits Of Parks And Open Spaces On The Welfare Of Residents In The Study Area:

Considering the benefit of parks and open spaces on the welfare of residents, the study reveals that it attracts high quality of life to the residents which is in consensus with the knowledge of Mass et al., (2006), also it provides recreational opportunities, protect the natural areas and native vegetation which agrees to the knowledge of Harnik and Wille, (2009). Other benefits of Parks and open spaces include; attracting high quality of life, enhancing real-estate values, providing recreational opportunities, stimulating urban revitalization, increasing health value, and the removal of air pollution by vegetation Educational opportunities (Pine, 2009; Crompton 2004; Bowler et al. 2010). This study postulates that the creation of parks and open spaces has a tremendous benefit in the study area. The test of differences on the perception of respondents indicated that those benefits are realistic as there was no variance.

4.7.3: To determine the state of maintenance of parks and open spaces in the study area:

The study reveals that the responses made by respondents regarding the state of maintenance of parks and open spaces in Awka indicates they are properly maintained and kept in good condition to obtain the serenity of the environment and to attract benefits to residents in the environments so as to influence the residential properties value in the environment.

4.7.4: To determine the impact of parks and open spaces on residential property values in the study area:

The study reveals that parks and open spaces have significant impacts. The study highlighted some impact which include; Impacts of parks and open spaces on residential property values, Parks and open spaces contributes to improving residential property value, Parks and open spaces attract people to live close, Parks and open spaces improve the state of maintenance of residential property, Parks and open spaces improve the conditions of residential property environment, and Parks and open spaces contribute to maintaining residential property prices. These significant impacts were strongly rated by respondents and it conforms to the knowledge of (Crompton, 2004; Woolley, 2003; Kroeger, 2008).

4.8 Summary of Findings

The following findings were made from the Analysis:

1. Parks and open spaces have a significant impact on residential property values in Awka.
2. Benefits derived from parks and open spaces have significant effects on the welfare of residents in Awka.
3. The study revealed that the state of maintenance of parks and open spaces in Awka is good.
4. The study found out that the merits of parks and open spaces on residential properties in Awka is high.

5. The study further revealed that parks and open spaces affect rental value of residential property.

CONCLUSION

In conclusion, it can be stated that parks and open spaces affect rental value of residential properties , benefits derived from parks and open spaces have significant effect on the welfare of residents in Awka, the state of maintenance of parks and open spaces in Awka is good and the merits of parks and open spaces on residential properties is high.

Parks and Open space is an essential part of any urban development and serves several functions that are expedient for basic living. However, the continuous growth of urban areas without effective management and monitoring of their use has led to environmental consequences such dilapidated parks that has become hideouts for criminals, illegal structures, lack of adequate facilities/amenity and open space policies, lack of a capable agency in handling development and maintenance, poor intergovernmental relationships, shortage of landscape, financial constraints and lack of citizen inclusiveness in participation. Simply put, these negative effects of mismanagement have resulted in the poor quality and further decay of the built environment. As this study has observed these setbacks in open space management and made suggestions in dealing with the problems, it will become a journey to better prioritizing, channeling of human, finance and functional institutional resources to abate the dire consequences of the city dwindling open space reserve.

5.3 Recommendation

The following recommendations are made;

1. There is a need for proper planning and efficient use of open spaces in Awka Town.
2. There is a need for a more precise approach to urban development in order to achieve efficiency and effectiveness.
3. The strict enforcement of statutory guidelines for development by formulating effective urban planning policy.
4. To combat Open Spaces deformed by degradation and dilapidation of open space structures and facilities; there is need for urban land monitoring, development control and effective management.
5. The need for well-designed and landscaped open spaces to enhance the aesthetics of the environment. This should include tree plantings, shrubs, grassing, ground cover, rocks, and water fountains; these add to the beauty of the environment by providing shade, beauty, serenity and well-being.
6. Provision of amenities and open space policies to guide the maintenance of parks.
7. Conversion of unutilized and empty lands constituting nuisance in the city to be designed as public open spaces in addition to the few existing ones.
8. Proper education and awareness should be delivered to the public about parks and open spaces.

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