



JUXTAPOSING CONSEQUENCES OF VULNERABILITY TO OVERCROWDING IN SELECTED SLUMS OF SOUTHWESTERN STATES OF NIGERIA

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ABSTRACT

This work compares the effects of vulnerability on the slum residents of capital cities in Southwestern states of Nigeria. Slum areas were identified and worst slums were spastically picked using Indices Scoring Method. Google Earth was used to mark out the study areas in each city. Buildings in each study area were counted and copies of questionnaire administered on the 20% of the house heads in residential dwellings. A total of 1226 copies of questioner were administered in proportion and 1057 were retrieved. The latest version of ANOVA was used to compare the thresholds across the study areas. It was discovered that overcrowding exacerbates health risks, high rate of spread of communicable diseases and domestic accidents. It results in physical and emotional overburden and directly impacts on the physical, emotional and psychological wellbeing of children. After the analysis, the P=value is greater than α (0.05) which implies that there is no statistically significant difference in residents' vulnerability to the consequences of overcrowding in the study areas. The work therefore recommends paradigm shift in our approaches to seeking solutions to slum problems; economic, social and environmental interventions, smart city, provision of bigger, better and more affordable housing in planned environments, "one child" family concept and environmental education among.

Key Words: Slum, Overcrowding, Vulnerability, Consequences, Southwestern Nigeria

1. INTRODUCTION

Inadequate living space is synonymous to crowding or overcrowding and used interchangeably. It is a situation whereby more people are crowded in a place than was intended or designed for and can safely accommodate. Global shift in human residence from rural to urban and consequential increases in housing density have exacerbated overcrowding in our cities (Zhang *et al.*, 2023). Overcrowding may arise temporarily and or regularly at homes, neighbourhood as well as in the wider build environments. Inadequate living space has resulted in "shrinking homes" and this housings shortages has been argued in the literature to constitute potential danger to the lives of affected residents (Kohl *et al.*, 2024).

Overcrowding is principally a product of governance and policy failure, economic and social problem, physical and environmental factors that manifest in rapid and uncontrolled urbanization, poor urban planning and outright lack of enforcement, bad housing policies, inadequate and unaffordable housing, limited and unaffordable land, urban poverty, high birth rate and large family sizes, family and social ties, inadequate job opportunities, shortage of social services and corruption. Effects of living in a crowded slum environment is all encompassing; physical health, social, economic and environmental that also presents increased risk of infection, malnutrition, stress and anxiety, mental fatigue, decrease in self-esteem and productivity, increase and perpetuate poverty, degenerate environment and overburden the already overstressed infrastructure, increase risk of natural to disaster and reduces access to green and open space.

Overcrowding or inadequate living space negates basic principles of planning; convenience, livability and beauty. It discourages convenient and free movement/circulation in the living environment. It results in gradual declines of areas where streets and utility infrastructure already exist. It disallows open space and plays ground; it makes worse other forms of congestion. It reduces or denies availability of air space and needed ventilation. It jeopardizes people's privacy because people's perceived violation of their personal space in crowded places can increase their stress level. It also compromises security and safety and increases pressure on the already overstressed housing infrastructure in slum areas and makes living stressful (Zhang *et al.*, 2023; Chiarantoni, 2025).

Crowding in the household exacerbates the effects of high density in the surrounding area (Mona, 1999). Density is a factor of number of persons which may be connected to family size. This is what translates to the degree or extent of crammed condition experienced and the higher the propensity to vulnerability. The number of families in the social setting of the study areas will ordinarily determine the number of persons residing in each dwelling of the study areas. The higher the number of the families, the higher the number of residents and the more crowded the homes and the more vulnerable the people. It must also be stated that different families shearing one dwelling unit opens the occupants up to different unrelated families with diverse social backgrounds, personalities, behavioral and attitudinal dispositions that others are vulnerable to and need to endure and cope with.

Children and young adults pick some of the possible bad habits and social vices like smoking, dirty languages, and all forms of immorality that may not be acceptable in by their parents. There is also vulnerability to assaults, rape and other social vices which may result in injury and stressor among different families cohabiting in the same houses. A few of the children are teenagers of opposite sex sharing room and bed with even parents, some are toddlers with fragile bodies and



minds vulnerable to social, health and physiological perturbation and their implications. Most vulnerable or vulnerable sub-population includes Infants less than 12 months, families with young children, people and household land on low income, older people, indigenous people, migrant groups, ethnic minorities, and people with disabilities. Invariably, age, gender, ethnicity, land tenure, socio-economic status, exposure to second-hand smoke single-storey, multi-storey or multi-family.

The concept and measurement of overcrowding vary greatly between continents, countries, regions, and communities, and it depends on cultural, social, economic, seasons, geographical, and political factors (Clauson-Kaas, 1996). Studies of overcrowding are usually conducted at two main levels: the household level; measured in persons per area of living space; and area level that is measured in people per area of land. Other levels of crowding that are also pertinent, especially in studies of health effects of crowding, are room-level (including ‘bed crowding’) and building-level crowding (Mona, 1999).

Potential indicator for exposure to consequences of overcrowding includes but not limited to persons per room, persons per dwelling, family per dwelling unit, number of persons per building, or living area per person UN Centre for Human Settlements (2025). World Bank (2025) considers indicators like percentage of people living in dwellings; more than two persons per room in the both rural and urban areas. American Crowding Index (2025) uses the number of usual household residents divided by the number of bed-rooms for continuous or categorical measures. Official Eurostat (2025) adopted and uses more than one person per room but Canadian Household Crowding Index (2025) agrees with persons per bedroom, accounting for age, sex and relationship while European Union (2025) do continuous or categorical measure. Room size, socioeconomic status, region and population density were considered by USA International Property Maintenance Code (2025) and USA International Building Code (2025).

According to Article 25 of The United Nations Universal Declaration of Human Rights “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family. Similarly, “Housing and Health Guidelines” by the World Health Organization (WHO, 2023) described housing as an important public health issue Lorentzen *et al.* (2022). On a daily basis, the gap between housing demand and supply are accentuating in our cities as a an aftermath of social-demographic change and diversification of lifestyle (Chiarantoni, 2025) Living in suffocating overcrowded environment, surrounded by mounds of uncollected waste is tantamount to denial to human right. Residents of slum environments are susceptible to psychological, social and health related dangers at personal, domestic, family and community levels in not just common but also particular ways. The authors are spurred to do a comparative analysis of vulnerability to the consequences of inadequate living space in the slum areas of six southwestern states of Nigeria.

2. MATERIALS AND METHODS

The capital cities of Southwestern states were selected on purpose. Five slums areas were identified in each of the cities and one of them was statistically selected by applying ‘Indices Scoring Method’ by Dung-Gwom and Oladosu (2004). Slum definitions given by National Sample Survey Organization (NSSO) (2000) that is “compact settlement with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions” and the one given by United Nations Habitat (2022) that describes slum as any living space with two or more of the above. These criteria were used to evaluate and rank slums on the aggregate of 10. The least represents the worst slums in the selected cities and were selected as sample frame.

Data were obtained via questionnaire, interview, observation, as well as photo snap. Google Earth was used to mark out the study areas in each city. Numbers of buildings were counted and questionnaires were administered on the 20% of the house heads in residential dwellings (as shown in Table 1). Because the sizes of the study areas are different, the number of questionnaire administered and retrieved were also different. After the analysis, when the P= value is greater than α (0.05), there is no statistically significant difference in the households the degree of vulnerability to the consequences of overcrowding in the study areas.

Table 1: Sample and Sampling Methods

Cities	No. of Buildings	Commercial Buildings	Residential Buildings	Quest. Administered	Quest. Retrieved
Ibadan	5013	251	5066	238	200
Oshogbo	3914	306	3608	180	170
Abeokuta	4193	80	4093	204	176
Lagos	4616	130	3886	224	191
Akure	3796	106	3090	195	160
Ado-Ekiti	3964	172	3715	185	160

Source: Authors’ Compilation (2025)



3. DATA PRESENTATION AND DISCUSSION

An overcrowded household makes the residents vulnerable to social risks. Residents of overcrowded household suffer from stress, lack of privacy, decreased ability to concentrate on schooling or training, increasing expenses as a result of greater health risks, inability to invite friend over, misunderstanding among children and adults alike, health risks and as a result of poor ventilation, accelerated spread of diseases and other psychological effects (Liam, 2005).

Most respondents both strongly agreed/agreed that their sleeping hours are strained 83.5% at Ibadan, 68.8% at Osogbo, 68.2% at Abeokuta, 81.1% at Akure and 82% in Ado-Ekiti. Respondents almost unanimously (98.2%) claim they do not have permanent bed; they only sleep wherever they can find space at a time especially in Lagos. Many Ibadan slum residents complained that their homes are also their shops that they pack their wares late in the night and got up very early. Inadequate rest poses serious health risks on the residents. The brains that do not rest enough cannot function optimally; it can lead to stress making the people vulnerable to mental disorder.

A good number of residents opined that overcrowding affects children's health; 66.5% of Ibadan slum residents, 49.4% of Osogbo slum dwellers, 50.8% of Lagos slum residents, 48.8% of Abeokuta slum residents and 60.6% of Ado-Ekiti slum residents. Children with fragile immune systems, they are ignorant of the fact that they reside in disease carrying places, events, and occurrences. Children in overcrowded households and environments are at the risk of acquiring communicable diseases. Infants are more potent carriers of diseases and transmitters than older children and adults (UNCHS, 2024). Inadequate shelter and overcrowding are major factors in the transmission of diseases with epidemic potential such as acute respiratory infections, meningitis, typhoid, cholera and scabies.

Between 40 and 50% in average attested to the fact that overcrowding aids the spread of disease in all the study areas. Researches noxious have presented growing evidences of quick spread of disease in overcrowded and high population density areas (Randa 2020, Sharon 2016 and WHO, 2024). Crowded living conditions increase the risk of the spread of infectious diseases such as meningococcal disease, rheumatic fever, tuberculosis and many other respiratory infections. In a crowded house it can also be more difficult to access health hardware, such as hot water, showers and clothes washing facilities. Regular bodies contacts, shearing of household utilities like spoons, plates, dirty toilets and bathrooms, rooms and beds.

Majority of the respondents 65.5% in Ibadan, 57.6% in Osogbo, 58.1% in Lagos, 68.3% in Akure and 63.1% at Ado-Ekiti slums agrees that overcrowding in their neighbourhood is dynamic; celebration and festive seasons, weekends, market days, and seasonal business may influence fluctuation of overcrowding. Crowding for households with high numbers of children may also be temporary as children grow and leave home. However, the demands on space are likely to increase through the teenage years, as teenagers require more privacy than younger children. This condition affects length of exposure to the effects of overcrowding and degree of vulnerability. It is also possible for the residents to have experienced changes of overcrowding over the years of staying in the study areas that may result in change of land use in the neighbourhood. For instance, the construction of Fayose Market in Ado-Ekiti, urban beatification program in Osogbo, expansion of urban roads in Abeokuta and slum clearance in Lagos.

General safety of dwellers is hampered as overcrowding poses risks and open doors to hazards is the opinion expressed by the majority of the respondents in the study areas; 66.5% in Ibadan and Ado-Ekiti, 50.8% and 50.6% in Lagos and Ado-Ekiti and 50.6% in Akure. For instance, toilet facilities are burdened by the number of people using them which can lead to health risks. The high number of people in the household puts a burden on water resources in home and this result to insufficient water supply and consumption with debilitating implications on hygiene and poses a health risk. The safety of kitchen facilities decreases when they are used in overcrowded homes. The constricted space in the dwellings makes dwellers prone to domestic accidents especially among the children because there is insufficient space to play.

The longer one stays in these crammed household the more susceptible to the effects of overcrowding. Length of stay can also be a reflection of level of tolerance or ignorance of the associated vulnerability or inability to get a better place to stay. How soon do respondents plan to quit further measure perception or disposition they have about their living condition. It is also intended to see efforts made or intended to, so as to free themselves by moving to better houses/neighbourhood and decongest the slum areas.

Nearly all the respondents in all the study areas opined that domestic accidents are common expect 24% and 25.6% of Ibadan and Ado-Ekiti. Overcrowded dwellings/neighborhoods are characterized by narrowness of passages, haphazardly positioned luggage, unnecessary regular human contacts among others. The rates at which accidents occur translate to the possibility of vulnerability to injury on the most valuable asset (the physical bodies) of the poor resident of slum environment (Corbart, 1998) as cited by (Chambers, 2006).

Many accidental injuries arise from poor quality overcrowded housing units. There are often four or more persons in each small room in shelters made of flammable materials and that there is little chance of providing occupants (especially children) with protection from open fires or stoves/gas-burner (Satterthwaite, 1995). An injured poor slum dweller will firstly stop making money for feeding, spend any other resources that may be available, sell all what he/she can sell and start borrowing, later becomes a destitute homeless and may even die.



Augment, disagreement, conflicts relating to the use of space and facilities, sanitation, water, noise and so on results in social strifes, tension and stress among families and individuals. Conflicts arise often in the camps due to irritations from noise, lack of privacy, the proximity of neighbours, and lack of playgrounds or parks (Mona, 1999). It can therefore be inferred that dwellers are vulnerable to the consequences of breakdown of social cohesion, cooperation and peaceful coexistence which may result in physiological, social and health disturbances. It has been found that anxiety and hostility tend to intensify over time in situations of overcrowding (Zeedyk *et al.*, 1983).

A total of 78.5% in Ibadan, 60.8% in Akure, 60.1% in Ado-Ekiti etc. share the same view on the effects of overcrowding on children academic performance. According to Dominique (2005), children in large families perform much less than children in small families, because they live in more overcrowded homes. He further argued that environments that are over-rich in stimuli (including high population-density environments) may overload a person's cognitive processes, leading to a decline in performance. Karlin *et al.* (2005) also concluded that female students were more adversely affected than males because the male students tend to spend more time away from their accommodation, lessening the impact of their overcrowded conditions.

Similarly, the performances of teachers are affected by pupils' noise, inability to move round the class and accord each pupil individual attention, teachers also use more time to control the overcrowded classes and overstressed, assessment is also poorly conducted in such a situation. All these culminate in sub-standard education. With poor education, the expected bright future is doubtful. It can therefore be inferred that the generation of the dwellers may remain continuously vulnerable to cyclic poverty for life.

A lot of respondents in all study areas (60-76%) made it clear that overcrowding is a stressor and it results in depression. The direct and indirect psychological effects that result from overcrowding include lack of privacy often linked to depression and other negative psychological outcomes; crowded condition contributes to psychological frustrations which, in turn, have a bearing on behavioral responses and residents' ability to cope with the conditions (Fuller *et al.*, 1996). Residents' perception of options and future prospects is detrimentally affected by overcrowding (Gove *et al.*, 1983). According to Liam (2005) stress, tension, and sometimes family break-up do result from overcrowding.

Intrusion into the private life of an individual without sufficient reason is against social, moral, physiological and legal standards of our society. Adolescence is the phase in which people begin to develop a strong sense of privacy, and psychologists believe that allowing adolescents to create safe spaces of privacy where others are not allowed to enter without permission is a necessity. Denial of privacy may result in a violation of personal boundaries and a loss of trust, not only to the invader but often with the victim's own ability to set up and maintain boundaries to protect self-privacy which is difficult in overcrowded household. A person whose privacy is constantly being invaded is vulnerable to serious psychological and emotional consequences, including paranoia, anxiety, depression and broken trust. He/she may feel unsafe and out of control in life.

Normal daily routine of slum residents is hindered by inadequate living space also known as overcrowding; taking birth, cooking, resting/relaxing, having private time with one's spouse, praying, washing and other household activities. Residents are therefore vulnerable to anxiety, stress, hunger, tension in the family and possible family breakup. Residents have teenagers sharing rooms and other household facilities that should guarantee privacy the teenagers require much privacy, the years that much privacy is required. Sharing rooms, birth rooms/toilets at this age make them vulnerable to immorality, incest, viral diseases and teenage pregnancies which do result in child-motherhood and subsequently translate to cyclic poverty and the lives of slum residents continues to remain precarious.

About 60% of the respondents do not have open space, park or any of such facility in their neighborhood which is one of the physical parameters of measuring the degree of crowdedness in any neighbourhood. Others are availability of needed open space, air space, playground, set back. The less of these we have, the more crowded the neighbourhood may be. The effects of overcrowding are worse when other problems with poor housing and unhygienic neighbourhoods are present. The overcrowded area only areas for children to play are breeding grounds for flies, cockroaches and rats; increasing the health risks for many people. The health of children without access to a playground is stressful for them (Liam 2005). Equally, accessibility in these kind of environment is hindered, hence, the resident are susceptible to massive destructions in case of any disaster like fire outbreak, flood, building collapse or sickness or any other health related emergencies.

The responses on effects of overcrowding on health are not skewed. Residents' level of awareness plays a significant role in the expressed opinions. An average of 50% believed overcrowding affects health while 25% in average did not agree with it and others are indifferent. Overcrowding does contribute to the generalized frustration of residents with their plight; spatial constraints reinforce the constriction of the future. Overcrowding poses serious direct and indirect health risks to all segments of the population, particularly the elderly, young children, and the disabled. Overcrowding results in insufficient ventilation in homes, causing or exacerbating respiratory illness, susceptibility to diseases, the severity of diseases, the spreading of illness, and the mortality due to disease all increase as a result of social and physical overcrowding Zeedyk-Ryan *et al.*, (1983).



Overcrowding exacerbates health risks, inadequate water safe and poor water supply, poor sanitation, spread the rate of spreads of communicable diseases and domestic accidents in the homes. Overcrowding results in physical and emotional overburden to mothers and other caregivers, increasing health risks, overcrowding directly impacts on the physical development and psychological wellbeing of disabled students (World Bank, 2023).

4. SUMMARY, CONCLUSION AND RECOMMENDATION

Overcrowded neighbourhood negates basic principles of planning; convenience, livability and beauty. It discourages free movement in the dwellings of slum neighborhoods. An overcrowded household makes the residents vulnerable to health, psychological and social risks which include increased frustration level, lack of privacy, decreased ability to concentrate on schooling or training, increasing expenses as a result of greater health risks, inability to invite friend over misunderstanding among children and adult alike, health risks and as a result of poor ventilation, spread of diseases and other psychological effects (Liam, 2005).

Crowded living conditions increase the risk of the spread of infectious diseases, such as meningococcal disease, rheumatic fever, tuberculosis and respiratory infections. In a crowded house, it can be difficult to have enough sleep and adequate access to health hardware/facilities. Regular bodies' contacts, with non-related family members, shearing of household utilities like spoons, plates and facilities like dirty toilets, rooms, beds and so on do make lives of residents susceptible.

There must be a paradigm shift from the Yoruba traditional concept of "More hands, more money" that propelled farming families to bear more children in the past. The consideration of 'obsolete or ultimate costs' of education in a convoluted economy like ours is a compelling reason. Public enlightenment/education against having large families that further impoverished the people is a necessity. With education, (including sex education) the threats of overpopulation and subsequent vulnerability would reduce significantly. Encouragement, raising awareness and enforcement of family planning can certainly help.

"One child" family concept could be borrowed from China. This is a situation whereby families were encouraged to have just a child. Registered parents receive monetary assistance at the birth of their first and second child, after which they pay heavy fine for any other child born. Couples abstaining from procreation could be given the fund in its entirety upon attaining a medically recommended age or undergoing family planning procedures. Adoption rather than procreation may also be encouraged.

Provision of bigger, better and more affordable housing in planned environments could help in coping with overcrowding. Such housing units should be designed for peak populations and include additional sleeping areas, ensuring the facilities and health hardware in the houses in a community is functioning regularly. Most of the study areas are core city centers; where economic activities concentrate; these economic activities are pull factors, removing and relocating the central market out of the core area will literally translate to population and vulnerability reduction since people will prefer to stay close to the means of their livelihood. People should endeavour to get affordable accommodation somewhere else to decongest slum areas. Teenagers or children could be asked to stay with willing family members while young adults start work and separate from family early

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APPENDICES

Table 2: Level of Overcrowding

i) Frequency and percentages

Responses	Ibadan		Osogbo		Abeokuta		Lagos		Akure		Ado-Ekiti	
	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%
S/ Agreed	147	73.5	97	57.1	106	60.2	117	61.3	95	59.4	111	69.4
Agreed	49	24.5	73	42.9	70	39.8	74	38.7	65	40.6	49	30.6
Disagreed	4	2.0	00	00	00	00	00	00	00	00	00	00
Total	200	100	170	100	176	100	191	100	160	100	160	100

ii) Summary of respondents opinion on crowded homes

Groups	Count	Sum	Average	Variance
Ibadan	3	200	66.66667	4545.333
Osogbo	2	170	85	288
Abeokuta	2	198	99	0
Lagos	3	196	65.33333	2826.333
Akure	2	160	80	200
Ado-Ekiti	3	166	55.33333	2030.333

iii) ANOVA

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	2969.333	5	593.8667	0.277047	0.914379	3.481659
Within Groups	19292	9	2143.556			
Total	22261.33	14				

Authors' Compilation, 2025) SPSS computer printout at 0.05 while P=value = 0.914379. P=value is greater than a (0.05); therefore, there is no statistically significant difference in the levels of overcrowding in the study areas.

Table 3: Effects of Overcrowding on Sleep

i) Frequencies and percentages

Responses	Ibadan		Osogbo		Abeokuta		Lagos		Akure		Ado-Ekiti	
	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%
S/ Agreed	74	37.0	50	29.4	51	29.0	62	32.5	71	44.4	62	38.8
Agreed	93	46.5	67	39.4	69	39.2	69	36.1	60	37.5	69	43.1
Disagreed	4	2.0	53	31.2	56	31.8	60	31.4	29	18.1	29	18.1
S/disagreed	29	14.5	00	00	00	00	00	00	00	00	00	00
Total	200	100	170	100	176	100	191	100	160	100	160	100

ii) Summary of effect of overcrowding of residents sleep

Groups	Count	Sum	Average	Variance		
Ibadan	4	200	50	1778		
Osogbo	3	170	56.66667	401.3333		
Abeokuta	3	176	58.66667	450.3333		
Lagos	3	191	63.66667	410.3333		
Akure	3	160	53.33333	44.33333		
Ado-Ekiti	3	160	53.33333	224.3333		
ANOVA						
Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	383.0877	5	76.61754	0.118641	0.985898	3.025438
Within Groups	8395.333	13	645.7949			
Total	8778.421	18				

Source: Fieldwork, (2025) SPSS computer printout at 0.05 while $P=$ value = 0.985898. $P=$ value is greater than α (0.05); therefore, there is no statistically significant difference between the effects of overcrowding on residents' sleep in the study area.

Table 3: Rate of spread of Diseases

i) Frequencies and percentages

Responses	Ibadan		Osogbo		Abeokuta		Lagos		Akure		Ado-Ekiti	
	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%
S/ Agreed	78	39.0	52	30.6	53	30.1	64	33.5	64	40.0	64	40.0
Agreed	34	17.0	17	10.0	17	9.7	17	8.9	15	9.4	17	10.6
Disagreed	59	29.5	48	28.2	50	28.4	50	26.2	52	32.5	50	31.3
S/disagreed	29	14.5	53	31.2	56	31.8	60	31.4	29	18.1	29	18.1
Total	200	100	170	100	176	100	191	100	160	100	160	100

ii) Summary of the rate changes of the spread of diseases

Groups	Count	Sum	Average	Variance		
Ibadan	3	200	66.66667	2586.333		
Osogbo	3	170	56.66667	486.3333		
Abeokuta	3	176	58.66667	500.3333		
Lagos	3	191	63.66667	330.3333		
Akure	3	160	53.33333	900.3333		
Ado-Ekiti	3	160	53.33333	826.3333		
ii) ANOVA						
Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	449.6111	5	89.92222	0.095832	0.991147	3.105875
Within Groups	11260	12	938.3333			
Total	11709.61	17				

Source: Fieldwork, (2025). SPSS computer printout (2017) at 0.05 while $P=$ value = 0.991147. $P=$ value is greater than α (0.05); therefore, there is no statistically significant difference in the rate at which disease spread in the study areas.

Table 4: Occurrence of Changes in the Extent Overcrowding

i) Frequency and percentages

Cities	Ibadan		Osogbo		Abeokuta		Lagos		Akure		Ado-Ekiti	
Responses	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%
S/ Agreed	70	35.0	48	28.2	49	27.8	60	31.4	60	37.5	60	37.5
Agreed	67	33.5	50	29.4	51	29.0	51	26.7	50	31.3	41	25.6
Disagreed	42	21.0	31	18.2	32	18.2	32	16.8	33	20.6	42	26.3
S/disagreed	21	10.5	41	24.1	44	25.0	48	25.1	17	10.6	17	10.6
Total	200	100	170	100	176	100	191	100	160	100	160	100

ii) Summary of observed canes in overcrowding overtime

Groups	Count	Sum	Average	Variance
Ibadan	4	200	50	531.3333
Osogbo	4	170	42.5	73.66667
Abeokuta	4	176	44	72.66667
Lagos	4	191	47.75	136.25
Akure	4	160	40	359.3333
Ado-Ekiti	4	160	40	311.3333

iii) ANOVA

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	337.2083	5	67.44167	0.272568	0.922197	2.772853
Within Groups	4453.75	18	247.4306			
Total	4790.958	23				

Source SPSS computer printout (2025) at 0.05 while $P=0.922197$. $P=0.922197$ is greater than $\alpha (0.05)$; therefore, there is no statistically significant difference in the occurrence of changes in overcrowding over time in the study areas.

Table 5: Effects of Overcrowding on Safety

i) Frequencies and percentages

	Ibadan		Osogbo		Abeokuta		Lagos		Akure		Ado-Ekiti	
Responses	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%
S/ Agreed	70	35.0	48	28.2	49	27.8	60	31.4	69	43.1	60	37.5
Agreed	63	31.5	36	21.2	37	21.0	37	19.4	28	17.5	37	23.1
Undecided	16	8.0	16	9.4	16	9.1	16	8.4	16	10.0	16	10.0
Disagreed	19	9.5	18	10.6	19	10.8	19	9.9	19	11.9	19	11.9
S/disagreed	32	16.0	52	30.6	55	31.3	59	30.9	28	17.5	28	17.5
Total	200	100	170	100	176	100	191	100	160	100	160	100

ii) Summary of effects of overcrowding on safety

Groups	Count	Sum	Average	Variance
Ibadan	3	200	66.66667	3345.333
Osogbo	2	170	85	2178
Abeokuta	2	176	88	2450
Lagos	2	191	95.5	1984.5
Akure	2	160	80	98
Ado-Ekiti	2	160	80	512

ii) ANOVA

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	1169.603	5	233.9205	0.11769	0.984213	3.971523
Within Groups	13913.17	7	1987.595			
Total	15082.77	12				

Source: Fieldwork, (2025) SPSS computer printout at 0.05 while P -value = 0.984213. P -value is greater than α (0.05); therefore, there is no statistically significant difference in the levels of insecurity created by overcrowding in the study areas.

Table 6: Effects of Overcrowding on Occurrence of Domestic Accidents

i) Frequencies and percentages

Cities	Ibadan		Osogbo		Abeokuta		Lagos		Akure		Ado-Ekiti	
Responses	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%
S/ Agreed	25	12.5	31	18.2	32	18.2	38	19.9	25	15.6	25	15.6
Agreed	123	61.5	68	40.0	69	39.2	74	38.7	83	51.9	87	54.4
Agreed	4	2.0	71	41.8	75	42.6	79	41.4	11	6.9	48	30.0
S/Disagreed	48	24.0	00	00	00	00	00	00	41	25.6	00	00
Total	200	100	170	100	176	100	191	100	160	100	160	100

i) Summary of responses on occurrence domestic accident

Groups	Count	Sum	Average	Variance
Ibadan	3	200	66.66667	9029.333
Osogbo	2	170	85	4802
Abeokuta	2	176	88	4802
Lagos	2	191	95.5	5512.5
Akure	2	160	80	5000
Ado-Ekiti	2	160	80	7200

ii) ANOVA

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	1169.603	5	233.9205	0.036087	0.998961	3.971523
Within Groups	45375.17	7	6482.167			
Total	46544.77	12				

Source: Fieldwork, 2025. SPSS computer printout (2025) at 0.05 while P -value = 0.998961. P -value is greater than α (0.05); therefore,

there is no statistically significant difference in the occurrence of domestic accidents between dwellers in the study areas.

Table 7: Overcrowding Affects Children's Academic Performances

i) Frequency and percentage

	Ibadan		Osogbo		Abeokuta		Lagos		Akure		Ado-Ekiti	
Responses	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%
S/ Agreed	32	16.0	29	17.1	29	16.5	32	16.8	32	20.0	32	20.0
Agreed	105	52.5	66	38.8	68	38.6	76	39.8	78	48.8	69	43.1
Disagreed	28	14.0	16	9.4	17	9.7	17	8.9	15	9.4	24	15.0
S/disagreed	35	17.5	59	34.7	62	35.2	66	34.6	35	21.9	35	21.9
Total	200	100	170	100	176	100	191	100	160	100	160	100

ii) Summary of effects of overcrowding on children academic

Groups	Count	Sum	Average	Variance
Ibadan	5	200	40	1009
Osogbo	5	170	34	82
Abeokuta	5	176	35.2	85.2



Lagos	5	191	38.2	116.2		
Akure	5	160	32	236.5		
Ado-Ekiti	5	160	32	275.5		
iii) ANOVA						
Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	269.7667	5	53.95333	0.179406	0.96769	2.620654
Within Groups	7217.6	24	300.7333			
Total	7487.367	29				

Source: Fieldwork, 2025. SPSS computer printout (2025) at 0.05 while $P=$ value = 0.96769. $P=$ value is greater than α (0.05); therefore, there is no statistically significant difference in the responses of respondents on effects of overcrowding on the children's academic performance in the study areas.

Table 8: Occurrence of Depression and Anxiety

i) Frequency and percentages

Cities	Ibadan		Osogbo		Abeokuta		Lagos		Akure		Ado-Ekiti	
Responses	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%
S/ Agreed	70	35.0	48	28.2	49	27.8	60	31.4	60	37.5	60	37.5
Agreed	67	33.5	50	29.4	51	29.0	51	26.7	50	31.3	41	25.6
Disagreed	42	21.0	31	18.2	32	18.2	32	16.8	33	20.6	42	26.3
S/disagreed	21	10.5	41	24.1	44	25.0	48	25.1	17	10.6	17	10.6
Total	200	100	170	100	176	100	191	100	160	100	160	100

ii) Summary of occurrence of depression and anxiety

Groups	Count	Sum	Average	Variance
Ibadan	3	200	66.66667	3009.333
Osogbo	2	170	85	722
Abeokuta	2	176	88	882
Lagos	2	191	95.5	612.5
Akure	2	160	80	8
Ado-Ekiti	2	160	80	8

iii) ANOVA

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	1169.603	5	233.9205	0.19845	0.953143	3.971523
Within Groups	8251.167	7	1178.738			
Total	9420.769	12				

Source: Fieldwork, (2025) SPSS computer printout at 0.05 while $P=$ value = 0.953143. $P=$ value is greater than α (0.05); therefore, there is no statistically significant difference in the responses on overcrowding resulting in depression and anxiety of respondents in the study areas.

Table 9: Effects overcrowding on personal privacy

i) Frequency and percentages

Cities	Ibadan		Osogbo		Abeokuta		Lagos		Akure		Ado-Ekiti	
Responses	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%
S/ Agreed	54	27.0	29	17.1	29	16.5	32	16.8	32	20.0	32	20.0
Agreed	86	43.0	69	40.6	71	40.3	79	41.4	86	53.8	79	49.4
Disagreed	30	15.0	40	23.5	41	23.3	41	21.5	27	16.9	34	21.3
S/disagreed	30	15.0	32	18.8	35	19.9	39	20.4	15	9.4	15	9.4
Total	200	100	170	100	176	100	191	100	160	100	160	100



ii) Summary of responses on denial of privacy

Groups	Count	Sum	Average	Variance		
Ibadan	3	200	66.66667	3906.333		
Osogbo	2	170	85	288		
Abeokuta	4	169	42.25	777.5833		
Lagos	2	191	95.5	420.5		
Akure	4	160	40	1179.333		
Ado-Ekiti	3	146	48.66667	1656.333		
i) ANOVA						
Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	7041.861	5	1408.372	0.954581	0.481915	3.105875
Within Groups	17704.58	12	1475.382			
Total	24746.44	17				

Source: Fieldwork, (2025). SPSS computer printout (2025) at 0.05 while $P=$ value = 0.481915. $P=$ value is greater than α (0.05); therefore, there is no statistically significant difference between the responses of respondents on effects of overcrowding on the children's academic performance in the study areas.

Table 10: Effects of Overcrowding on Daily Routine

i) Frequencies and percentages

Cities	Ibadan		Osogbo		Abeokuta		Lagos		Akure		Ado-Ekiti	
Responses	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%
S/ Agreed	34	17.0	29	17.1	30	17.0	34	17.8	34	21.3	34	21.3
Agreed	70	35.0	36	21.2	36	20.5	43	22.5	52	32.5	43	26.9
Undecided	45	22.5	58	34.1	60	34.1	60	31.4	32	20.0	36	22.5
Disagreed	23	11.5	16	9.4	16	9.1	16	8.4	18	11.3	23	14.4
S/disagreed	28	14.0	31	18.2	34	19.3	38	19.9	24	15.0	24	15.0
Total	200	100	170	100	176	100	191	100	160	100	160	100

ii) Summary of hindrances of routine of residents

Groups	Count	Sum	Average	Variance		
Ibadan	4	200	50	1922		
Osogbo	4	170	42.5	333.6667		
Abeokuta	4	176	44	348		
Lagos	4	191	47.75	448.9167		
Akure	4	160	40	991.3333		
Ado-Ekiti	4	160	40	748.6667		
ANOVA						
Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	337.2083	5	67.44167	0.084433	0.993809	2.772853
Within Groups	14377.75	18	798.7639			
Total	14714.96	23				

Source: Fieldwork, 2025. SPSS computer printout (2025) at 0.05 while $P=$ value = 0.993809. $P=$ value is greater than α (0.05); therefore, there is no statistically significant difference between the rate at which overcrowding affects peoples' daily routine in the study areas.



Table 11: No Open Space/Park and Playground

i) Frequencies and percentages

Responses	Ibadan		Osogbo		Abeokuta		Lagos		Akure		Ado-Ekiti	
	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%
S/ Agreed	32	16.0	29	17.1	29	16.5	32	16.8	32	20.0	32	20.0
Agreed	105	52.5	66	38.8	68	38.6	76	39.8	78	48.8	69	43.1
Disagreed	28	14.0	16	9.4	17	9.7	17	8.9	15	9.4	24	15.0
S/disagreed	35	17.5	59	34.7	62	35.2	66	34.6	35	21.9	35	21.9
Total	200	100	170	100	176	100	191	100	160	100	160	100

iii) Summary of responses on availability of open space and playing ground

Groups	Count	Sum	Average	Variance
Ibadan	3	200	66.66667	3521.333
Osogbo	2	170	85	288
Abeokuta	2	176	88	338
Lagos	2	191	95.5	180.5
Akure	2	160	80	72
Ado-Ekiti	2	160	80	72

iv) ANOVA

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	1169.603	5	233.9205	0.204855	0.950113	3.971523
Within Groups	7993.167	7	1141.881			
Total	9162.769	12				

Source: Fieldwork, 2025. SPSS computer printout at 0.05 while $P=0.950113$. P -value is greater than α (0.05); therefore, there is no statistically significant difference in the overcrowding effects on peoples' daily routine in the study areas.

Table 12: Effects of Overcrowding on health

i) Frequencies and percentages

Cities	Ibadan		Osogbo		Abeokuta		Lagos		Akure		Ado-Ekiti	
	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%	Frq	%
S/ Agreed	34	17.0	29	17.1	30	17.0	34	17.8	34	21.3	34	21.3
Agreed	70	35.0	36	21.2	36	20.5	43	22.5	52	32.5	43	26.9
Undecided	45	22.5	58	34.1	60	34.1	60	31.4	32	20.0	36	22.5
Disagreed	23	11.5	16	9.4	16	9.1	16	8.4	18	11.3	23	14.4
S/disagreed	28	14.0	31	18.2	34	19.3	38	19.9	24	15.0	24	15.0
Total	200	100	170	100	176	100	191	100	160	100	160	100

ii) Summary of responses on effects of overcrowding on health

Groups	Count	Sum	Average	Variance
Ibadan	5	200	40	1009
Osogbo	5	170	34	82
Abeokuta	5	176	35.2	85.2
Lagos	5	191	38.2	116.2



Akure	5	160	32	236.5		
Ado-Ekiti	5	160	32	275.5		
iii) ANOVA						
Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	269.7667	5	53.95333	0.179406	0.96769	2.620654
Within Groups	7217.6	24	300.7333			
Total	7487.367	29				

Source: Fieldwork, (2025). SPSS computer printout (2017) at 0.05 while P -value = 0.96769. P -value is greater than a (0.05); therefore, there is no statistically significant difference in the effects of overcrowding on the health of residents in the study areas.

Table 13: Summary of Comparison of Vulnerability to Inadequate Living space/Overcrowding in the Study Areas

Dwellings are overcrowded	0.914379	No sig. differ.
Overcrowding affect sleep	0.985898	No sig. differ.
Overcrowding affect children's health	0.984213	No sig. differ.
Illnesses spread quickly in our area	0.991147	No sig. differ.
Level of overcrowding changes	0.922197	No sig. differ.
Overcrowding made our house unsafe	0.984213	No sig. differ.
Length of stay in the study areas	0.98734	No sig. differ.
Occurrence of domestic accidents	0.998961	No sig. differ.
Regular occurrence of quarrel	0.981915	No sig. differ.
Overcrowding affect children's education	0.96769	No sig. differ.
Depression/anxiety is common	0.953143	No sig. differ.
Overcrowding denies personal privacy	0.992577	No sig. differ.
Teenagers of opposite sex share room	0.993809	No sig. differ.
Overcrowding hinders daily routine	0.987282	No sig. differ.
No open space park/playground	0.950113	No sig. differ.

Source: Fieldwork, (2025). SPSS computer printout at 0.05 while P -values of are all greater than a (0.05); therefore, there is no statistically significant difference in the consequences of overcrowding in the study areas